

Caregivers Perceived Factors Associated With Relapse in Patients with Mental Health Disorders Inneuro-Psychiatric Facilities Benin City, South-South Nigeria, Nigeria

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Abstract

The study explored caregivers (Nurses and patient's family) perceived factors associated with relapse of patients with mental health disorders in Neuro-Psychiatric Facilities in Benin-City, Nigeria. The specific objectives include to ascertain the association between demographic, medication related and social factors on one hand and relapse in mental health disorders on the other. A mixed concurrent method (quantitative and qualitative) was adopted, comprising the survey of 339 patients' family caregivers and qualitative interview/discussion of 22 psychiatric-mental health Nurses. The reliability of the survey instrument yielded an index of 0.8 and the qualitative instrument passed the rigor test of true value, consistency, neutrality and applicability. The qualitative data were analyzed and grouped into themes, while the quantitative data were analyzed using frequency counts, percentages and charts. Pearson products moments correlation coefficient and chi square were used to test the hypothesis. Both instruments were triangulated at the point of data interpretation. The results of the analysis yielded four major themes associated with relapse; socio-demographic factors, socio-environmental factors, patients' personal factors and health workers factors. Quantitatively, the younger the age of onset corresponds with a higher number of times the patient is admitted due to relapse. Also, relationship exist between non-drug compliance and relapse in mental health disorders. Finally, there is a relationship between living conditions and relapse in mental health disorders. The study concludes that Factors associated with relapse in mental health disorders are varied and related. Adequate and continuous education is recommended to halt the rate of relapse

Date of Submission: 26-03-2022

Date of Acceptance: 06-04-2022

I. Introduction

Background to the Study

Mental health disorder constitutes the highest burden of disease in the world with relapse being one of the pertinent barriers to recovery and rehabilitation (WHO, 2010) and in spite of the availability of various treatment modalities relapse rate among patients with mental disorder is relatively high. Reports among those with schizophrenia has put relapse rate between, 50% and 92% (Kazadi, Moosa & Jeenah, 2008 as cited by Armstrong, 2018).

Mental health disorders have negative effects on both the patients and their family emotionally, socially and financially (Shibre, Kebede, Alem, Negash, Deyessa, Fekadu, Fekadu, Jacobsson & Kullgren, 2003 as cited by Izibeloko & Amiengheme, 2012). Although most of these disorders can be successfully treated, most often relapse occur. Psychotic relapse results in recurrent hospitalization and impacts negatively on the clinical prognosis of the patients. Global data on the prevalence of relapse among patients in neuro psychiatric hospitals is scary and Nigeria including the Edo state is not exempted from this scary statistics.

Families of patients face the arduous task of looking after the patients through constrained social activities and economic difficulties, Ascher-Svanum (2010). Relapse places a huge financial burden on the

patients and their families and also on hospital and community services, Ascher-Svanum (2010). The cost of managing relapse cases is four times higher than that of the cost of managing other non-relapse cases, Ascher-Svanum (2010). Relapse cases result in hospital re-admissions. The financial burden of hospitalization is roughly one- to two- third of the entire cost of caring for an individual with schizophrenia, (Capdevielle, Boulenger, Villebram & Ritchie, 2009 as cited by Munirat, Adebisi, Kolawole, Omolala, Oyeyemi & Olajumo, 2018).

Relapses may equally result in the patient staying on medication for a long period (Kocerginski & Arshoff, 2011). A local Ethiopian study found that, families of patients with schizophrenia spent 16.52 dollars out-of-pocket and on average spent 3.12 (SD = 4.54) days off work to provide one-month care to the patients (Mahlet, Mawitwos & Garumma, 2016). The effect of such a high relapse rate is an increased economic burden (Capdevielle, Boulenger, Villebram & Ritchie, 2009 as cited by Harvey, 2013; Gbiri, Badru, Ladapo & Gbiri, 2011). It also leads to high morbidity, high readmission rate and a heavy burden on the health care delivery system and community services (Capdevielle *et al.*, 2009 as cited by Harvey, 2013).

Besides, it increases the tendency for stigmatization of patients thereby reducing their chances of being reintegrated into the society (Fikreyesus, Feyisa & Soboka, 2016). Apart from these, relapse also leads to increased disability among patients (Gbiri *et al.*, 2011) and increases the risk of the future episodes (Fikreyesus, Feyissa & Soboka, 2016).

Fikreyesus *et al.* (2016) confirm the prevalence of relapse among patients with psychotic disorders. Out of 95 participants, 24.6% suffer from at least one instance of relapse within the last 6 months, 14.8% of participants suffer from only relapse while the number that had more than one relapse issue.

Relapse and hospitalizations are widely observed among patients with severe mental disorders (SMDs) like schizophrenia, bipolar disorder, schizo-affective disorder and depressive psychosis. While the relapse rate in these patients is roughly 1-2%, the conditions are linked with enhanced risk of relapse and hospitalizations (Csernansky & Schuchar, 2002 as cited by Thomas & Robert, 2010; Ayano, 2017).

Relapse constitutes a heavy burden to patients with schizophrenia. Schizophrenia patients often suffer from exacerbated psychosis which frequently results in hospitalization. The risk of relapse for schizophrenic patients is roughly 3.5% monthly, and approximately 40% of such patients suffer from a relapse in one year after hospital admission (Hogarty & Ulrich, 1998 as cited by Philip, Janicak, Ziad, Sarah & Hugh, 2011). Both relapse and hospitalizations were found to be a bit higher in patients with bipolar disorder and schizophrenia (Ayanor and Bereket, 2017). Comorbid substance use disorder also more frequently affects patients who have relapse and hospitalization history compared to those without history of relapse and hospitalizations. Roughly 90 percent of patients with bipolar disorder suffer from at least one relapse case once in their life, with 0.6 average relapses annually. And after mood episode treatment, roughly 50 percent of patients suffer from one relapse case bi-annually have a relapse within 2 years (Capdevielle *et al.*, 2009 as cited by Harvey, 2013).

Relapse of mood episodes, delay recovery and remaining symptoms commonly result in hospitalization, improved risk of suicide and/or psychosocial recovery. Regular bipolar relapses or hospitalization for bipolar episodes can disrupt the patients' capacity for continual commitments and can as a result minimize the ability of the patient to function properly socially. Poor social function will act as a further risk factor for recurrent relapses (Capdevielle *et al.*, 2009 as cited by Harvey, 2013).

Evidence shows that patients with schizophrenia and bipolar disorder are at higher risk of relapse and hospitalizations. However, in low- and middle-income countries, like Ethiopia and Nigeria there is limited research concerning relapse and the factors affecting such relapse among patients in neuro-psychiatric hospitals.

Relapse and hospitalization are widespread among patients with schizophrenia and bipolar disorder and places a heavy burden on, patients with schizophrenia and bipolar disorder (Ayano, 2017).

Drug abuse among psychiatric inpatients is a widely recognized issue. Also, co-morbid patient's response to treatment is normally poor. The rates of recurrence and treatment of non-adherence is poor (Almond, Knapp, Francois, Toumi & Brugh, 2004 as cited by Chris & Sam, 2010).

Although substance use disorders affect the generality of the public, the frequency of occurrence is more among college students, and this affects the lives, work, academic performance of the individuals involved and increases their risks of contracting HIV and other sexually transmitted diseases. Accidents, intoxication at work, absenteeism, violent crime, robbery and psychiatric symptoms, like lethargy, hopelessness and insomnia are also very common among individuals with substance abuse disorder (Almond *et al.*, 2004 as cited by Chris Abbott & Sam Keith, 2010; Capdevielle *et al.*, 2009 as cited by Harvey, 2013)

The 2010 WHO-AIMS report on mental health system in Nigeria made some telling revelations. It reports that "there is considerable neglect of mental health issues in the country. The existing Mental Health Policy document in Nigeria was formulated in 1991. Since its formulation, no revision has taken place and no formal assessment of how much it has been implemented. No desk exists in the Ministries at any level for mental health issues and only four per cent of government expenditures on health is earmarked for mental health. It also unearthed other issues related to mental health. These include non-availability of essential

medicines at health centers, unavailability of physicians to run primary health care centers and the lack or restrictions to the prescription of psychotropic medications. It also identified that there are only a few non-governmental organizations involved in individual assistance activities such as counseling, housing, or support groups.

The high rate of mental disorder and the rate of relapse among patients, and their effects on the course of mental disorders and treatment, has made identification of factors contributing to such relapse a high priority. The frequency of patients having readmission into the hospital over the last few years has become a problem.

The objectives of this study, therefore, is to discover the factors that contribute to relapse so that concerned stakeholders can be properly educated to assist them to develop appropriate interventions. This study is, therefore, considered a significant area for scholarly engagement because understanding these factors will facilitate development of modalities for the prevention of relapse among this group of patients especially in Federal Neuro-Psychiatric Hospital Benin City, Nigeria.

Statement of the problem

In South Africa, Mahamba (2009) observed that there is a rise in the relapse rate of psychiatric outpatients in rural communities of Eastern Cape Province. According to Mahamba, the reason for this sad development is the lack of resources for nurses to conduct home visiting in Community Psychiatry. But Gbiri et al (2011) observed that there is a general increase in relapse of psychiatric cases in Nigeria. Benin city is in Nigeria and Erute et al (2014) also agreed that there is an upsurge in the rate of relapse cases in the patients receiving treatment in the Federal Neuro-Psychiatric Hospital (FNPH) Uselu Benin, and their conclusion was that non-adherence to anti-psychotic medication was the main cause of the increase in the relapse rate. But from the medical records of the hospital, the relapse rate has since increased from 2% in 2014 to 2.5% in 2020. Secondly, the findings of the research were limited to non-adherence to drugs without investigating the actual factors that contributed to the non-adherence. Thirdly, the conclusion could not be generalized since, FNPH Uselu is not the only Mental Health Facility in Benin City. This study therefore intends to fill in the gap by looking at the social, economic and demographic factors as possible contributors to the relapse among patients with mental health disorders in Neuro-Psychiatric facilities in Benin City, Edo State.

Objectives of the study

1. To find out if there is any relationship between age and relapse of patients with mental health disorders.
2. To examine the relationship between medication compliance and the relapse of patients with mental health disorders.
3. To find out if there is any relationship between the living condition of the patient with mental health disorders and his relapse.

1.5 Research Questions

1. Is there any relationship between the age of a mental health patient and his relapse?
2. Is there any relationship between medication compliance and the relapse of a mental health patient?
3. Is there any relationship between the living condition of a mental health patient and his relapse?

Research Hypothesis

1. There is no significant relationship between age of onset and the frequency of relapse among mental health patients.
2. There is no significant association between duration of illness and relapse among patients with mental health disorders.
3. There is no significant association between living condition and relapse in patients with mental health disorder.

Scope of study

The scope of this study covers the psychiatric Nurses and caregivers of the patients with mental health disorders in Federal Neuro-Psychiatric Hospital Benin City and Mental health department of the University of Benin Teaching Hospital Benin City. The research is restricted to patients in Federal Neuro-Psychiatric Hospital, Benin City and Mental health department of University of Benin Teaching Hospital Benin City because the data obtained from these facilities will likely replicate the situation in other psychiatric hospitals/psychiatric units in the country. The Result of the study apart from helping the patients and their caregivers would equally impact on the education of nurses and in the overall improvement of care in psychiatric hospitals.

Conceptual Review (Mental Health Disorder)

According to the Centre for Disease Control and Prevention (CDC), mental health disorders are conditions that affect a person's thinking, mood, feeling or behavior such as anxiety, depression, bipolar affective disorder or schizophrenia. Such conditions may be occasional or long-lasting (chronic) and affects the person's ability to relate to others and function each day. Wanda (2009) as cited in (Tempelaar, Otjes, Bun, 2014) defined mental health disorder as health conditions marked by alterations in mood or behavior that causes disorders, impair ability to function or both. According to Sreevani (2015) mental health disorder is a mal-adjustment in living which produces a disharmony in the person's ability to meet human needs - effectively and function within a culture. The DSMW-TR (American Psychiatric Association (APA), 2007 as cited in Townsend, 2009), defined mental health disorder as a clinically significant behavioral or psychological syndrome or pattern that occurs in a person and that is associated with present distress or disability, or with a significantly increased risk of suffering, death, pain, disability or an important loss of freedom.

According to Kessler, Aguilar-Gaxiola, Alonso, Chatterji, Lee, Ormel, Ustun & Wang (2009) as cited by Maroufizadeh, Omani-Samani, Hosseine, Almasi-Hashiani, Sepidarkish & Amini (2019), mental health disorders are among the prevalent non-communicable diseases worldwide. Mental health negatively affects both the patient and the family members financially and socially. The stigma attached to mental health disorders creates a vicious cycle of discrimination leading to social isolation, unemployment, drug abuse, long lasting institutionalization or even homelessness, which further decreases the chances of recovery. Families of patients carry the burden of caring for patients through restricted social activities and economic problem.

The Prevalence of Mental Health Disorder

In Nigeria, an estimated 20%–30% of our population are believed to suffer from mental disorders (Onyemelukwe, 2016). This is a very significant number considering Nigeria has an estimated population of over 200 million. Unfortunately, the attention given to mental health disorders in Nigeria is at best, fleeting; the level of awareness of the Nigerian public on mental health issues is also understandably poor, and the misconceptions regarding mental health have continued to flourish

Treatment of Common Types of Mental Health Disorder

Mental disorders demand the development of effective treatments and management strategies as soon as we are able. In their various forms they negatively affect the lives of hundreds of millions of individuals, and represent a significant proportion of the global burden of disease (Walker, Druss, 2015; Whiteford, Ferrari, Degenhardt, Feigin & Voss *et al.*, (2010); World Health Organisation [WHO], 2016). Even if not affected ourselves, the vast majority of us will know someone who carries the weight of a mental health disorder with him.

Mental health well-being is closely associated to several Millennium Development Goals and economic development sectors including education, labor force participation, and productivity. Limited access to mental health care increases patient and family suffering. Unmet mental health needs have a negative effect on poverty reduction initiatives and economic development. Untreated mental conditions contribute to economic loss because they increase school and work absenteeism and dropout rates, healthcare expenditure, and unemployment. Addressing unmet mental health needs will require development of better mental health infrastructure and workforce and overall integration of mental and physical health services with primary care, especially in the developing nations. Treatment for mental health disorders differs according to type but almost always involves psychiatric counselling. Sometimes medication may be prescribed as well.

Clinical depression

The mainstay of treatment is usually medication, talk therapy or a combination of the two. Increasingly, research suggests that these treatments may normalise brain changes associated with depression (Olfson, Blanco & Marcus, 2016; Timonen & Liukkonen, 2008 as cited in Silverstone, 2017)

Concept of Relapse

Relapse according to Collins English Dictionary (2011), is to become ill again after apparent recovery or the return of ill health after an apparent or partial recovery. Relapse is the re-occurrence of any disease condition after it has gone into remission or recovery (avalomal-ibu.com, 2019). Among individuals with mental disorders, relapse refers to a return of symptoms after a period of improvement or recovery (Chaurotia, et al 2016). Relapse may also be expressed in terms of functionality and need for greater intervention Rickwood, (2016). Mwaba and Molamu (2012) define relapse as "a worsening condition of a psychiatric outpatient". Simonelli-Collen (2015) suggests that the concept of relapse is a complex, multidimensional phenomenon that is not uniformly defined in the research literature. However, it is commonly understood as the re-emergence or worsening of signs and symptoms in individuals previously treated for psychoses Birchwood & Spencer, (2011).

It is particularly significant in mental health due to the relevance of mental stability in holistic health (WHO, 2013), thus relapse is an issue of global concern (WHO, 2009). Costs for relapse cases were ‘four times higher than that of non-relapse cases; relapse cases are associated with hospital admissions. Relapses may also lead the patients to stay on medication for a longer period of time (Capdevielle *et al.*, 2009 as cited in Varie, Marin, Faffard, Richard, Capdevielle, Boulenger, Jonathan & Benoit, 2012)

Psycho social Factors and Effective Interventions

The chance of relapse in patients with schizophrenia living at home depends heavily on the emotional environment provided by the family. The concept of expressed emotion has evolved as an index of the quality of this environment. Expressed emotion covers many of the emotional responses by a key relative, usually the spouse or parent, towards the patient. The key relative's level of expressed emotion is classed as high or low on the basis of the frequency of critical comments and the intensity of hostility and emotional over-involvement elicited during a structured interview.

Factors associated with relapse include co-morbidity, poor treatment compliance, substance use, stressful life events, medication side effect, living alone, poor socioeconomic status, poor social support, delay in seeking care (Fikreyesus, Soboka & Feyissa, 2016; Owens, Johnstone, Miller, Macmillan, & Crow, 2010). Other studies have reported lack of home visits, the stigma attached to mental disorder, side effects of psychotropic drugs, and unavailability of psychotropic drugs (Nosipho, 2009 as cited by Appiah, 2014).

Socio-economic factors and association to cases of relapse among relapsed patients admitted in a Nigerian mental health institution

Relapse in psychiatric disorder is highly distressing, costly and has negative impact not only on the lives of the patients, but also on the family and society at large (Ngui, Khasakhala, Ndeti and Robert, 2010). Since the dramatic decline in long-term hospitalization and consequent reductions and closures of state-operated hospitals, readmission rates have increased in the industrialized countries. However, there has not been consensus on reasons for the increase in relapse and readmission rates in psychiatric disorders. Some authors proposed that these could be due to deinstitutionalization and failure of the community mental health reform in most countries. Nevertheless, it was proposed that the phenomenon could be seen as a result of failure of previous hospitalization or too short inpatient treatment. However, others concluded that neither poor hospital outcome nor hasty hospital discharge is a risk factor for either relapse or readmission in psychiatric disorders.

Lack of transport to conduct home visits

Clark (2012) describes home visits as a traditional health nursing approach to caring for individuals and families. During home visits, the nurse has an opportunity to experience the client's situation and factors that could affect the client's health. In this section of the review, the researcher identified only one study conducted in SA's primary health care system dealing with transportation as a problem to the care of patients with mental disorder in the community. The study was conducted by Thipanyana and Mavundla (2012). The aim of this study was to evaluate the provision of Primary Health Care in the rural Eastern Cape Province. The findings revealed that unavailability of transport for nurses to conduct home visits, negatively affected the provision of Primary Health Care (PHC). These findings are supported by Kgosidintsi (2010), who describes lack of transport as a problem, obstructs health care givers in performing their duties effectively. Lack of transport hinders psychiatric nurses from observing the factors in the home environment that could negatively affect the health of psychiatric patients, which, in turn, could lead to relapse.

Non-adherence to Psychotropic Drugs

Csernansky and Schruchart (2012) contend that the most essential component of a successful long-term treatment programme is adherence to treatment. In a study on the effect of patient and family education, in a sample of Chinese patients with schizophrenia, Li & Arthur (2015) compared the relapse and adherence after discharge amongst patients who adhered to medication and those who did not adhere.

Nine months after discharge, the relapse rate among the patients who did not adhere to medication was 37% and 16% among those who did adhere. This indicates that lack of adherence to medication may be a profound problem that hinders recovery.

In addition to non-adherence to medication, Csernansky and Schruchart (2012) found that a previous history of non-adherence, combined with a history of substance abuse, poor insight into the nature of the disorder and poor relationships between patients, family and care providers precipitated the non-adherence with treatment. Adverse effects of psychotropic drugs such as weight gain, risk of heart disease, vascular disease, and diabetes cited as some factors that led to psychiatric patients' non-adherence to treatment. The risk of non-adherence leads to a risk of relapse.

Apart from the effects of non-adherence to medication is the issue of the gender of patients. Beebe (2012) points out that psychiatric medication can cause uncomfortable side effects. Treatment non-adherence in males can be related to the absence of therapeutic response and positive relationship with health care givers. Beebe (2012) adds that a poor relationship between patients and staff while in hospital is another factor precipitating non-adherence which results in relapse. Beebe (2012) refers to Castle and Murray (2011) who maintain that generally men have a more severe and a relapsing form of schizophrenia, male patients with paranoid hallucinatory symptoms were more likely to develop complications characterized by severe impairments. Hospitalization reduces social skills and functioning. Men are hospitalized more often than women, which could account for social difficulties encountered by men in various social services.

In addition to gender is the maintenance of therapeutic levels of medication in patients. Kirkmayer (2011) found that 53% of South East Asian patients with depression and post-traumatic stress disorders claimed to be taking medication, but had no detectable blood levels of drugs taken, and only 16% had blood levels within the therapeutic levels. Low blood levels are frequently the outcome of refusal to take medication due to its potency or the stigma attached to psychiatric treatment. Mwaba and Molamu (2012) associated the default of psychiatric treatment to side effects experienced due to taking drugs. In this study, patients further reported the lack of family commitment at home and the lack of supervision.

In an effort to elaborate on side effects suffered by patients, Ntongana (2010) explored non-compliance with treatment schedules in chronic psychiatric patients, with two previous admissions. He found that 70% of the respondents experienced dry mouth; 65% experienced tremors; 50% experienced stiffness, and 52% had increased salivation. The patients refused to comply with medication because of the experience of the side effects. Moreover, 65% of the respondents' non-adherence to treatment because their parents did not allow them to attend clinic or their employers refused their request for permission for time off to attend the out-patient's clinic. Kniesel (1988) cited in Ntongana (2010) found that side effects caused by psychotropic drugs frustrate the psychiatric patients, leading to non-compliance and resulting in relapse. Gray, Leese, Bindman, Becker, Burti, Davi, Gournay, Kikkert, Koeter, Puschne, Schene, Thornicroft and Tansella (2016) cited Nose *et al.* (2013) stating that non adherence rates for prescribed anti-psychotic medication are estimated at 50%. Robison *et al.* (2009) as cited by Gray *et al.* (2016), stated that relapse rates have been shown to be five times higher in people with schizophrenia who are non-adherent to medication compared with adherent persons resulting in a significant economic burden.

In an effort to address problems associated with non-adherence to medication among patients with chronic mental disorders, Li and Arthur (2015) studied the effect of patient and family psycho education in a sample of Chinese people with schizophrenia. The education programme was designed to educate families and patients about schizophrenia and its treatment and to teach skills to help patients and families cope more effectively with the disruptive results of the illness. They found that the shorter the duration of illness, the less the families knew and the more they longed to acquire information. The longer the patient's illness, relatives gained more time to formulate their own way of dealing with it. Patient and family education in addition to hospital treatment was found to be effective in the early admission period. Moreover, there was a significant correlation between medication adherence and relapse. Muller & Fisher (2015) categorized standards for the mental health care of people with severe psychiatric disorders into core standards, standards for service delivery, and standards for specific settings. Patient and caregiver participation are categorized under core standards, which indicates the importance of involvement of both parties in achieving positive results or the intended goal, namely a well-maintained mental health user. Caregivers can achieve this by supervising psychiatric patients when taking medication and reminding them of follow-up dates. Rathbone, Zhang, Zhang, Xia, Lui, Yang & Adams (2017) conducted a study on evaluating Chinese herbal medicine for schizophrenia and the results suggested that combining Chinese herbal medicine with anti-psychotic drugs was beneficial to the patients.

Mental Disorder Stigma

Otsman and Kjellin (2012) describe the stigma of mental disorders as undesirable characteristics that causes loss of reputation. The stigmatization of mentally ill people leads to prohibition of full acceptance by others e.g. friends or public. There are various theories that describe the existence of stigma in people with mental illness. Corrigan (2010), in explaining social cognitive paradigms of stigma, is of the opinion that people with mental disorders portray symptoms that provoke stereotypes on the part of public and such stereotypes lead to discriminatory practices. Corrigan (2012), Crocker and Lutsky (2011) mention two paradigms that explain the stigma of mental disorders as socio-cultural perspectives - defined as stigmas that develop to justify existing social injustices and motivational biases - stigma that develops to meet basic psychological needs. Corrigan (2010) conceptualizes stigma as a set of prejudicial attitudes, stereotypes, discriminatory behaviors and biased social structures endorsed by a sizeable group about a discredited subgroup.

Stigma by Association

Stigma affects not only the persons with mental disorders, but their families as well. Associated stigma is a process whereby a person or a relative is stigmatized because of being associated with or related to the stigmatized individual (Otsman & Kjellin, 2012). It is important to note that such stigma may also be termed affiliate stigma (Mak & Cheung 2008). They further define affiliated stigma as the extent of self-stigmatization amongst the associates of the targeted minorities.

In their study of stigma by association and psychological factors in relatives of people with mental illness, Otsman and Kjellin (2012) found that 83% of relatives are burdened by one of the psychological factors; 72% of women thought the sick relative would have been better off dead; 33% wished that the patient or they themselves had never been born; spouses did not believe that the patient would be better off dead; 51% of relatives and 47% of the spouses reported that the patient's mental health disorder had affected them negatively and they could not have company of their own. It also affected the mental health of relatives. Phillips, Pearson, Li, Xu and Yang (2012) state that the Chinese believe that mental health disorder is a punishment for unbecoming behavior or the family's misconduct. The Chinese people also believe that mental disorder is genetically transmitted and leads to the discrimination of the patients' family members (Phillip, *et al* 2012). Solombela and Uys (2010) cited in Bengu (1985) found that in the Black culture in Africa, mental health disorder is not taken as punishment but as an affliction that necessitates the intervention of a traditional healer.

Stuart and Sudeen (1987) found that some families keep the person's illness a secret. This causes additional stress because they fear that the truth will be discovered at some time. An act of this nature shows that the family is shameful about the illness and shares the prejudice of the community. Lee, Lee, Chiu and Kleinman (2015) conducted a study aiming at comparing interpersonal experiences of stigma in patients with schizophrenia and patients with diabetes mellitus in Hong Kong. Results from data collected from outpatients with schizophrenia (n=320) and diabetes (n=160) were as follows: more patients with schizophrenia (>50%) than diabetes (average 15%) experienced stigma from family members, partners, friends and colleagues. Over 40% anticipated stigma and about 55% concealed their illness, dysphoria occurred in over half.

Social exclusion and social income

With regard to social inclusion, social quality and mental disorder, Huxley & Thornicroft (2013) found that people's level of income enabled them to participate in community leisure (recreational) activities. Huxley and Thornicroft (2013) pointed out that the nature of mental disorder, health problems and discrimination against them could cause interpersonal relationships to deteriorate, leading to reduced social contacts. They are unlikely to have any close friends and many may have no one to turn to for help. Mwaba and Molamu (2012) found out that the stigma attached to mental disorder made psychiatric patients feel rejected by their families and the community. Consequently, they had few friends or relatives who cared for them and they felt lonely and isolated.

Employment

Discrimination against the patient with mental disorder makes it difficult for a psychiatric patient to be productive in a work situation. Stromwall (2012) cites Orlin (1995) who holds that social agencies as employers should have law or legislations prohibiting discrimination of persons with mental disorders at work. Mwaba and Molamu (2012) found that employers discriminated against persons with mental disorder because they were labelled as unstable and dangerous even though they could function well in a job situation.

The employment level of psychiatric patients rarely reaches more than 10% and they work more than four hours and earn only two-thirds of the average national hourly rate (Huxley & Thornicroft, 2013). Stromwall (2012) states that mental health consumers face numerous hindrances at work; for example, harassment from coworkers and stigmatizing attitudes. According to Beebe (2012), psychiatric patients' job-related problems encompass conflicts with co-workers or supervisors and the inability to be productive according to stipulated time.

Cost-effectiveness of relapse prevention

Lam, McCrone, Wright and Kerr, (2015) refer to Rice and Miller (1995), Gupta (2012) and Patel (2013), who state that bipolar disorders evidenced by relapses often cause a high economic burden on society. Lam, Hayward, Watkins, Wright & Kerr (2015) conducted a 30-month study on cost effectiveness of relapse prevention cognitive therapy for bipolar disorder. The primary measure of cost effectiveness was the number of days without a bipolar episode. The standard care treatment comprised mood stabilizers, psychiatric follow-up and psychiatric in-patient care. Cognitive therapy was combined with mood stabilizers. The group receiving cognitive therapy during the first 12 months and the whole period of 30 months had lower service costs compared to the comparison group. The most expensive care was the in-patient. The findings indicated that in bipolar disorder, adding cognitive therapy to mood stabilizers could prevent relapse at a lesser cost.

Combination of cognitive therapy and mood stabilizers was superior to mood stabilizers alone in terms of clinical outcome and cost effectiveness for those with frequent relapses of bipolar disorders.

Stress

Stress can be one of the leading triggers in relapse. While we typically think of stress stemming from negative situations, it can also arrive from positive situations, as well. Whether you got a promotion at work, are dealing with financial burdens, are entering a new relationship, or coping with the loss of a loved one, all of these scenarios deal with change, which is always stressful in one way or another. Stress makes you more vulnerable to relapse (Lam *et al.*, 2015). There is no way to completely avoid stress in life - but you can put the pieces into place to deal with it effectively. Talk with a sponsor, therapist, counselor or close friends in recovery, attend meetings, and avoid making major life changes in early recovery.

Overconfidence

Self-confidence is a powerful tool in recovery from mental health disorder. However, there is a fine line between holding your head high and knowing your boundaries – and justifying that you are in complete control. By allowing your self-image to become distorted, you may become overconfident and indulge in irrational thoughts. In recovery, it's important to build a healthy balance of self-esteem — and humility.

Self-Pity

It's a fact of life that all of us, at one point or another, will feel bad for ourselves. It's when we become obsessed with these feelings that we start to focus on our past: Things we may have done wrong, our blame on others, our poor circumstances or mistreatment. These can become dangerous thoughts. It's difficult to focus on your future and improving yourself when you're caught up in negative thoughts about the past (Lam *et al.*, 2015).

Unrealistic Expectations: A friend of mine in recovery with a good sense of humor described it best: "Everyday isn't sunshine and unicorns. But even if today is hard, it'll all be worth it tomorrow." Recovery is a lifelong process. Receiving psychiatric treatment does not guarantee instant cure. It will give you the foundation for your recovery and the tools to live a balanced life. It's up to you to use those tools and exhibit patience and put forth the effort each day. Understand that recovery won't be easy every single day. It will be hard work because you're fighting for your life. And — it will be worth it.

High Expectations of Others: Holding realistic expectations doesn't just apply to your own life— it applies to other's lives, as well. When we expect too much on our spouses, our parents, children, loved ones, friends, acquaintances or co-workers, we set ourselves up for disappointment. Understand that everyone can and does make mistakes in daily life. Instead of holding your loved ones to unrealistic expectations, focus on healing and rebuilding your relationships one day at a time (Lam *et al.*, 2015).

Self-awareness is one of the most important tools to learn and use in mental illness recovery, and can be critical in avoiding triggers for relapse. Even if you've found yourself experiencing one of the above triggers, or are in the midst of a relapse — know that it's not a failure. Your recovery is worth trying over and over again. After all, it's a lifelong commitment to your life.

The Family Members of Patients with Mental Health Disorder and their Contribution to Relapse

Families may play an important role in the lives of people with experience of mental illness. People with experience of mental disorder often rely on family members as part of their support mechanisms. The relationships with family members may be the closest relationships that we have. A recent survey of discrimination against people with experience of mental illness in New Zealand (Peterson, Russell, Sheehan & Surgenor, 2004 as cited by Brazdău, 2011), however, showed that more people reported discrimination occurring from their friends and family than from any other source. This means that while families are an important feature in the lives of the patients with mental disorder, their attitudes and behaviours, whether they intend them or not, are not always effective in supporting people with experience of mental health disorder.

The literature that explored family attitudes towards people with experience of mental illness further and looked at the views and attitudes held by families of people with experience of mental disorder, family beliefs about the cause of mental disorders, the exact nature of discrimination perpetuated by family members found that families of people with mental disorder contribute to mental disorders - either as causing it or aggravating it (Riebschleger, 2001 as cited by Graeme & Martin, 2010; Solomon, Marshall & Mannion 2003 as cited by Robert, 2018).

They have, at various times in the history of mental disorder supported institutionalization by sending their relatives to psychiatric institutions (Jones, 2002 as cited by Jones & Romer, 2010), or been major players in deinstitutionalization (more recently). Many families have assumed a caring role for people who experience mental health disorders (Mason, 1996 as cited by Cody, 2015). Many mental health professionals view families as an 'irritation' (Angermeyer, Sculze & Dietrich, 2003 as cited by Pugh, 2015). Families are considered by mental health professionals to be interfering and over-protective (Rethink, 2003 as cited by Peveler, 2018), and are regarded as being uninformed about mental disorder and treatment (Riebschleger, 2001 as cited by Strand, 2014).

Family members also reported a strained relationship with mental health professionals, who are perceived as being discriminatory towards family members (Angermeyer & Schulze, 2003 as cited by Chan, 2011). This may be because families are perceived by health professionals to be contributing to their relative's mental disorder. There is a large number of stereotypes about families of people with experience of mental disorder including their being dysfunctional, incompetent, burdened or brave Rössler (2016). The British Columbia Minister of Health's Advisory Council on Mental Health (2002) reports that these stereotypes have an impact - families of people with experience of mental disorder have strained relationships with others, and experience fear, violence, anxiety, conflict, lowered self-esteem and guilt. While mental health services have changed in the last ten years or so, the 'burden' placed on family members has not lessened (Ostman & Hansson, 2000 as cited by Graham *et al.*, 2010).

Angermeyer and Shulze (2003) as cited by Boyle (2014) state succinctly that family members of people with experience of mental disorder are characterized by 'responsibility'. That is "they act as the major caretaker, and have a special emotional closeness" (Angermeyer & Schulze, 2003, as cited by Boyle, 2014). The caring role that family members sometimes find themselves in has certain implications. People report a reduction in income (Dore & Romans 2001 as cited by Bauer, 2011) – this study was limited to those with bipolar disorder, and major costs were incurred as a result of this mental disorder, as well as family members needing to take time off work. Dore and Romans (2001) as cited by Bauer (2011) also found that there were difficulties in the relationship with families and their family member with experience of mental disorder. Family members often feel ashamed and helpless (Angermeyer *et al.*, 2003 as cited by Boyle, 2014), and feel guilty, as if they are the cause of a person's mental disorder. They may feel that they somehow have to compensate for their family member's difficulties and social deficits (Perlick, Rosenheck, Clarkin, Sirey, Salahi & Struening, 2001 as cited by Corrigan & Druss, 2014).

Families' Perceptions of the Causes of Mental Disorder

When deciding on what they believe to be the causes of mental disorder, family members tend to think specifically about their own situation and that of their relative - taking an individual approach - rather than the causes of mental disorder in general (Magliano *et al.*, 2004 as cited by Zulkifluargungu *et al.*, 2020). There are differing views as to how families perceive the causes of mental disorder. Some researchers believe that families are strong proponents of a medical model of mental disorder (Jones, 2016) – that mental disorder is caused by a brain disease. Other researchers state that families more frequently adhere to a psychological model of mental disorder (Magliano, Guarneri, Fiorillo, Marasco, Malangnone & Maj, 2004 as cited by Falck., Davis, Riley & Crockett, 2013; Magliano *et al.*, 2004 as cited by Winstanley, 2011). Solomon *et al.* (2003) as cited by Corrigan (2012) report that family members hold both biological and family causations beliefs about mental disorder simultaneously, with families tending to blame themselves in the early stages of the recovery of their relative. Scheurich (2002) as cited by Willey (2012) comments that family members tend to believe in the 'power of positive thinking' as a way of dealing with mental disorder, implying that people are able to control their symptoms and behaviour. There is a lack of information available in a New Zealand context that describes the beliefs that family members have about the causes of mental disorder. The available research cited here about family beliefs of causation of mental disorder comes from the UK and Italy (Marshall & Solomon, 2003; Magliano *et al.*, 2004 as cited by Winstanley, 2011) and there are possibly different cultural influences that may be at play in New Zealand.

Discrimination against people with experience of mental disorder

Discrimination against, and the stigma of people with experience of mental disorder is widespread (Sayce, 1998 as cited by Emerald Group publishing Limited, 2014 pp 169-185; Crips, Gelder, Rix, Meltzer & Rowlands, 2018). It has an impact on the self-esteem (Link, Struening, Perlick, Sirey., Hellman & Herman, 2001 as cited by Ringland, Nicholas., Kornfield & Reddy, 2019) and recovery (Perlick, Rosenheck, Sirey, Salahi, Struening & Link, 2001 as cited by Tyszkowska, 2014) of people with experience of mental health disorder, as well as affecting all aspects of people's lives (Klin & Lemish, 2008 as cited by Pavelko & Mtrick, 2020).

Discrimination occurs when a person is treated differently from another person in the same or similar circumstances. It is a result of belief in the stereotypes of people with experience of mental disorder leading to prejudice, which in turn leads to discrimination (Schumacher, Corrigan & Dejong, 2003 as cited by Caputo & Rouner, 2011). For discrimination to occur however, the person with the prejudice must be in a position of power, which must then be exercised (Link *et al.*, 2001 as cited by Ringland *et al.*, 2019). It is clear from the literature that any understanding of stigma and discrimination must include an analysis of power. Whilst many people in this world face discrimination on the basis of gender, race, disability amongst others (Gordon, Tantillo, Feldman, Kristin & McGovern, 2004 as cited by Lindau, Amin, Zambon & Scior, 2017) reported that discrimination against people with mental health disorder or intellectual disability seems to evoke the most negative attitudes out of all the disabilities surveyed. Findings from the New Zealand discrimination survey (Russell, Sheehan, Surgenor & Garl, 2004 as cited by Brazadau, 2011) suggested that discrimination against

people with experience of mental disorder is an issue no matter what ethnic or cultural group the person identifies with. Families share much of the discrimination that people with experience of mental disorder face, by being associated with them (Angermeyer & Schulze, 2003; Saif, Shakhoori, Nooh & Jahrami, 2019) this is discrimination by association (Minister of Health's Advisory Council on Mental Health, 2002; Ostman & Kjellin, 2002 as cited in the study by Beth, Vayshenker, Deluca, Bustle & Yanos, 2018) Many families tend to treat mental health disorder as a source of shame and embarrassment (Wahl, 1999 as cited by Hing & Russell, 2017). When talking about discrimination and mental health disorder, Angermeyer and Schulze (2003) as cited by Al Saif, Al Shakhoori, Nooh and Jahrami (2019) reported that families tend to talk about their relatives' experiences of discrimination, rather than their own. Some of the literature has recognized that not only are families discriminated against due to their relative's experience of mental disorder, they are also an important source of that discrimination (Wahl, 1999 cited by Hing & Russell, 2017; De Ponte, Bird & Wright, 2000 as cited by Kumar, Macharapu, Reddy & Babu, 2019; Dickerson, Sommerville, Origoni, Ringel & Parente, 2002 as cited by Yin, Zhag, Hu, Jia, Li, Xu, Zhao, Guo, Tian & Qu, 2014; Peterson, Deborah, Russell, Lynne, Sheehan, Nancy, Surgenor & Gael, 2004 as cited by Brazdau, (2011) Tsang, Phodias, Chan & Cheung (2003) as cited by Dieddre, Tayler & Tarazi (2020), concluded in their study based in Hong Kong that "stigmatization of patients families and blaming the victim were so prevalent that even the relatives themselves held those beliefs"(Tsang *et al.*, 2003 p127). The figures range from 51 percent of people with experience of mental illness reporting discrimination from family (De Ponte, Bird & Wright, 2000 as cited by Kumar, Macharapu, Reddy & Babu, (2019) to 21 percent (Dickerson, Sommerville, Origoni, Ringel & Parente, (2002) as cited by Yin *et al.*, 2014). Wahl (1999) as cited by Hing & Russell (2017) found that discrimination from family was the second most cited cause of discrimination.

The New Zealand discrimination survey (Peterson, Russell, Sheehan, Surgenor & Gael, (2004) as cited by Brazdău, (2011) found that 59 percent of people with experience of mental illness reported discrimination from friends and family. Good, Berenbaum & Nisenson (2000) as cited by Pakama (2017) reported that not all families are discriminatory – that those with high levels of 'expressed emotion' are more likely to have negative interactions with their family member. It seems clear, however, that a significant amount of discrimination against those with experience of mental illness comes from family members.

A World Health Organization report states that the beliefs and attitudes held by members of community may influence many facets of mental health care. It was also noted that a favorable social environment contributes to improvement and reintegration while an unfavorable one may encourage stigma against persons with mental illness according to page-press mental illness journal. Communities are now viewed as a foundational aspect of mental health systems growth and play an important part in ensuring that persons with mental disabilities receive care.

It is known that successful treatment and rehabilitation of persons with mental illnesses is influenced by community attitudes and belief. A survey on beliefs of relatives of persons with schizophrenia from Bali, a developing country, showed that 64% endorsed supernatural causation as being most important as revealed by Page press journal. In Nigeria, it is believed that 70% of persons with mental disorders access care from unorthodox sources whose beliefs about the cause of the illness may be similar to those of individuals in the society.

How do families discriminate?

The Study of Magliano, Guarneri, Fiorillo, Marasco, Malangone, and Maj (2004) as cited by Falck, Davis, Best & Crockett (2013) shows that family members of people with experience of mental illness do not acknowledge those people's civil rights to the same extent as the general public and mental health professionals do. This could mean that families are less likely to recognize and uphold those rights, placing people with experience of mental illness at risk of discrimination. Both Bower (1998 cited by Park, 2010) and Phelan, Bromet, and Bruce (1998) as cited by Ergün & Güzel (2019) reported from their respective studies, that family members often try to conceal their relative's mental illness or hospitalization. This is more likely to happen if the person is not living with them, or when the disclosure is avoidable, Phelan, Bromet, and Bruce, (1998) as cited by Ergün & Güzel, (2019).

The implications of this are that family members in this situation may be more likely to withdraw social contact and are less likely to support their relative with their experience of mental illness, Phelan *et al.* (1998) as cited by Ergün & Güzel (2019). Discrimination from family members towards people with experience of mental illness occurs in different forms (De Ponte *et al.*, 2000 as cited by Kumar *et al.*, 2019) mentions the most common forms that this takes. They include distancing themselves, inappropriate or hurtful comments, name calling, behaving as if mental illness is contagious, providing unhelpful or flippant instructions, showing a lack of interest in mental illness and avoiding the topic, not wanting others to know, considering people with experience of mental illness as stupid or unreliable, treating people as children, and blaming the individual for family problems. Tsang *et al* (2003) as cited by Angglin, Tayler and Tarazi (2020) reported people being

distanced by friends and relatives, whilst Wahl (1999a) as cited by Hing and Russell (2017) talks of people being treated as less competent, patronized, devalued and demoralized or experiencing outright rejection. People perceived that their family members lacked confidence in people with experience of mental illness as capable human beings (Wahl, 1999a as cited by Hing & Russell, 2017).

In Peterson, Russell, Sheehan, Surgenor & Gael (2002) as cited by Brazdau (2011), people with experience of mental illness reported being rejected by friends and family, being called names, being treated as if they were incapable or incompetent, and having family members trying to take control of their lives. Magliano, Guarneri, Fiorilloet, Marasco, Malangone and Maj (2001) as cited by Sabanciogullariand (2015) surveyed relatives of people with experience of mental illness in Italy and discovered that 68 percent believed that a person with experience of mental illness should be able to vote, 29 percent thought they should be able to have children, and 45 percent that they should be able to work as a babysitter. Forty percent thought that their relative would not recover further. In another study, Ostman and Kjellin (2002) as cited by Hailemariam, Ghebrehiwet, Baul, Restivo, Shibre, Henderson, Girma, Fekadu, Teferra and Hanlon (2019) and by Wilhelmsson (2011) found that 18 percent of respondents thought that, at times, their relative would be better off dead. De Ponte *et al* (2000) as cited by Kumar *et al* (2019) also reported that in terms of disclosing their experience of mental illness, people found family members easier to talk to if they had similar experiences, some knowledge of mental distress, or if the person's experience of mental distress had happened some years ago.

Interventions to reduce discrimination

Several interventions were suggested in the literature regarding reducing discrimination. Angermeyer & Schulze (2003) as cited by AI Saif *et al.* (2019) made several suggestions. These include communication measures (increasing people's knowledge of mental illness), providing support for people with experience of mental illness and their relatives, changing mental health care (improving the quality of care, as mental health services are also discriminatory) and education and training including mental health professionals, at school level, and lawyers and judges. Phillips, Pearson, LiandXu (2002) as cited by Sha, Wong, Lou and Dong-huiGu (2012) stated that it is the job of mental health professionals to tackle discrimination.

The study by Corrigan, River, Lundin, Penn, Wasowski, Campion, Mathisen, Gagnon, Bergman, Goldstein and Kubiak(2001) as cited by Smith and Applegate (2018) tried three different approaches to reducing discrimination. These were education (about stigma), contact (with people with experience of mental illness), and protest (treating mental health discrimination as a human rights issue). Education and contact were perceived to be effective, whilst protest was not. Corrigan *et al.* (2004) as cited by Reinke, Eddy, Dishion and Reid (2012) explored contact further, and discover that not all contact is effective – contact with people who are regarded as high achievers, or those who are perceived to fit the stereotypes of people with experience of mental illness is not effective. Contact with these types of people was deemed to be ineffective, as people targeted either do not perceive the anti-discrimination messages as credible because the people expressing them are the 'exception to the rule' (high achievers) or because they see the stereotypes of people with experience of mental illness played out in front of them.

Efficiency of Care and Intervention for Patients with Mental Health Disorders

In general terms, several countries in Africa are better resourced than Nigeria in regard to mental health personnel. Countries such as South Africa, Egypt, and Kenya have more psychiatrists per 100,000 persons and also have higher proportions of psychiatric beds. Also, many countries in Africa give better official attention to mental health issues (Ministry of Health, WHO. WHO-AIMS Report on Mental Health System, 2006 in Nigeria as reported by Suleiman, 2016). The above statistics are damning and in the light of the recent suicidal episodes recorded in parts of Lagos (which are obviously a tip of the iceberg), it forces a rethink in our general attitudes to mental health and questions our current maintenance of the status quo.

Considering the current economic recession in the country, it is pertinent to also look at the economic burden of mental health disorders. In the U.S., it is estimated that about 79 billion dollars represent the indirect costs associated with these disorders; of these, 63 billion dollars reflects the loss of productivity due to illness. In Canada, the economic burden of mental health disorder in 2003 was estimated to be about \$34 billion (\$1056 per capita), with depression and schizophrenia accounting for about \$5 billion and \$2.7 billion annually, respectively (Suleiman, 2016). The WHO in 2005 estimated that mental health conditions cost between 3% and 4% of the gross national product in European Union member countries (Suleiman, 2016).

Theoretical Framework

Different models of relapse have been used in research on mental illness and other conditions that involve relapse generally. But this study is hinged on the Psychological models of relapse.

Model of coping with mental illness (schizophrenia) (Thurm & Haefner, 1987)

Thurm and Haefner (1987) proposed a model of relapse in mental illness such as schizophrenia, which placed the individual as an active agent, using coping strategies to decelerate or forestall the process of relapse. Their model emphasized how individuals with schizophrenia face numerous adaptation demands as a consequence of their illness, and that individuals' perception of vulnerability to relapse would be associated with anticipatory coping strategies aimed at reducing relapse risk and regulating cognitive and emotional experience. Thurm and Haefner's (1987) model draws heavily from models of coping developed by Lazarus and co-workers (Lazarus & Launier, 1978; Roskies & Lazarus, 1980; Moos & Tsu, 1977). Lazarus formulated a dynamic transactional model of coping, implying a bi-directional relationship between the person and their environment. Central to this model is the hypothesis that an event is not stressful per se, but the significance of an event is determined by the meaning attributed to it by the process of cognitive appraisal. Primary appraisal can lead to the judging of an event as a threat of loss, harm or challenge. Secondary appraisal implies the judgments of available coping reactions. It is the interaction between primary and secondary appraisal, which determines the perception of threat from an event. In

a model of physical illness, Moos and Tsu, enumerated the various adaptive tasks to be dealt with by the individual. They distinguished between three illness-related tasks and four general tasks. Illness-related tasks were dealing with pain and incapacitation, dealing with the treatment environment, and developing satisfactory relationships with professional staff. The general tasks were preserving emotional wellbeing, preserving a satisfactory self-image, preserving relationships with family and friends, and preparing for an uncertain future. Other important variables in their model are the factors determining cognitive appraisal and the choice of specific coping responses. Moos and Tsu proposed that these fell into three categories: background and personal characteristics (age, intelligence, self-esteem, previous coping experiences), features of the physical and social environment (hospital setting, home milieu, social support), and illness related factors (type and location of symptoms, pain, impairment).

Attributional model of relapse (Birchwood, 1995)

Birchwood (1995) offers a compelling cognitive analysis of early relapse which integrates Maher's (1988) model of delusional formation and Weiner's (1985, 1986) attribution theory. Maher (1988) had offered a cognitive account of delusions, which emphasized the experience of disturbances in perception. He proposed that in the experience of perceptual anomalies such as increased vividness of colors or difficulty in selectively attending to auditory stimuli against background noise, the individual seeks an explanation which is then developed through normal cognitive mechanisms. The explanation or delusion is maintained in the same way as any normal strongly held belief, and that the delusional belief is reinforced by the anxiety reduction, which accompanies the development of an explanation for disturbing and puzzling experiences. Evidence supporting this proposal is cited by Maher & Ross (1984) who noted that delusions occur in a large number of medical and psychological conditions. Secondly, Zimbardo *et al.*, (1981) cited evidence that irrational beliefs can be provoked in the general population under anomalous environmental conditions such as hearing loss. Like Maher (1988), Birchwood proposes that the attributions made by individuals to account for and explain the emergence of disturbing symptoms can serve to either accelerate or retard the process of relapse. In this model, dysphoria is seen as a response to the fear of impending relapse (perhaps for those with previous experience of relapse) or a failure to explain symptoms and experiences (perhaps for those with less experience of relapse). This model might therefore predict that those individuals with extensive prior experience of relapse and its associated negative effects would respond with high levels of fear and perhaps helplessness leading to depression and withdrawal. On the other hand, those with less experience may respond with puzzlement, confusion and perplexity. The model may also help explain the speed at which relapse proceeds by specifying the cognitive mechanisms and associated emotional consequences responsible for acceleration.

Application of models to the study

Hultman *et al.* (1997) examined the role of life events, social support and coping-style in relation to relapse amongst 42 consecutive individuals admitted to an inpatient unit following a relapse of schizophrenia. In this study social support and coping were described and examined as moderating variables serving as protective factors which may mediate the relationship between stresses and relapse. Participants were followed up for 9-months following discharge from hospital. Of this group, 26 (62%) were living alone, the remainder with parents 12 (29%), partner 2 (5%) or friend 2 (5%). During the 9-month follow-up 14 (36%) relapsed. Hultman *et al.*, (1997) found close proximity between the occurrences of life events and relapse. Those participants with few social contacts and a withdrawal-orientated coping-style were more likely to relapse than those who had social contact and a socially orientated coping style. When coping style was considered alone, relapse rates were significantly higher for those participants who withdrew during early relapse ($\chi^2 = 10.19$, $df = 1$, $p < 0.001$). This study provides evidence that individuals coping response to early relapse may accelerate or forestall relapse

itself. Indeed, Birchwood (1995) points out that the individual variations in the nature and timing of early signs may be due to individual variations in coping response. Such variation will therefore act to reduce their apparent amplitude in group studies. Group studies fail to capture the qualitative and quantitative differences between individuals in their early signs. Therefore, it may be more appropriate to think of early signs as an individualized configuration of symptoms which Birchwood refers to as a 'relapse signature'.

Birchwood (1995) accounts for this variation in the nature and timing of early signs by integrating individual's own idiosyncratic response to emerging relapse. This cognitive explanation for the variation in early signs suggests that dysphoric symptoms such as anxiety, tension, withdrawal, depressed mood, suspiciousness, and sleeplessness arise from the way in which individuals explain and interpret internal and external events.

In summary, existing models of relapse in mental illness such as schizophrenia emphasize a number of factors. First, individuals can perceive subjective experience of internal changes in cognitive and attentional processes as indicating increased relapse risk and is accompanied by a search for meaning. Second, the experience of these changes is processed in terms of an evaluation of vulnerability to relapse in terms of available internal and external coping resources. Third, these appraisals are associated with the instigation of active strategies aimed at prevention of relapse and/ or the coping with relapse itself.

Empirical review

Mojtabai, Nicholson and Neesmith (2007) in their study examined the effects of demographics, personal resources, and psychiatric characteristics on relapse risk in patients discharged from two state facilities. Data on 2002 first admissions to an Oklahoma State Hospital and an associated Community Mental Health Centre (CMHC) during a single year, and information on readmissions of these patients to any of the seven state facilities providing inpatient treatment for an additional two years were collected. Data were analyzed by survival analysis with the Cox regression model. Out of the different demographic, social and psychiatric variables, the patients' diagnosis, length of index hospitalization and level of functioning at discharge as well as interaction of employment status and living status and interaction of age and living status were significantly related to relapse rate.

Similarly, Kazadi, Moosa and Jeenah (2008) carried out a study to determine the factors, if any that may be associated with relapse in a group of patients in Johannesburg. Patients were recruited from mental health outpatient clinics in a predominantly residential area during the period January 1995 - June 2005. They were included if a review of their records confirmed a diagnosis of schizophrenia according to the *Diagnostic and Statistical Manual of Mental Disorders* (4th edition) (DSM-IV); they had no other psychotic illness; and they were >18 years old. Patients were excluded if the diagnosis of schizophrenia had first been made in the preceding 6 months. Demographic and clinical characteristics of the patients were obtained from their case notes. The result showed that of the 217 patients who were included in the study, 61.8% (N=134) had a history of at least 1 relapse. There was no significant difference ($p>0.05$) between those who relapsed and those who did not relapse in terms of gender, marital status or employment status. Approximately 46% (N=61) of those who relapsed had co-morbid psychiatric disorders, compared with 10.8% (N=9) in those who did not relapse ($p<0.0001$), but there was no significant difference between the two groups when comparing the presence of co-morbid medical disorder ($p=0.348$). Nearly half (N=63) of patients who relapsed had a history of substance abuse ($p=0.0054$); cannabis was significantly more abused ($p=0.0014$). Two-thirds (N=138) of the study population did not adhere to their treatment, of whom 80.4% (N=107) experienced a relapse ($p<0.0001$). Significant multiple logistic regression models for patients who relapsed included poor adherence due to side-effects (odds ratio (OR)=3.032; $p=0.023$; 95% confidence interval (CI) 1.168 - 7.870); poor adherence due to lack of insight (OR=5.29; $p<0.0001$; 95% CI 2.28 - 12.20), and co-morbid depressed mood (OR=5.33; $p<0.001$; 95% CI 2.32 - 12.22).

Mahamba (2009) carried out a descriptive survey to identify factors influencing relapse of psychiatric outpatients in the rural communities of the Eastern Cape. A questionnaire was used to collect data from family caregivers who were relatives of psychiatric patients receiving their monthly medications from two rural clinics. Data were analyzed using the Statistical Package for Social Sciences (SPSS) version 17. A total number of 92 family caregivers participated. Respondents reported side effects of psychotropic drugs, poor family role, and poor referral system, lack of home visits, non-compliance and stigmatization as major factors contributing to relapse of psychiatric outpatients. Active involvement of caregivers in follow up care of their relatives is effective in fostering collaboration between the psychiatric hospitals and patients with the common goal of relapse avoidance. It is recommended that adequate provision of resources in conjunction with health education is effective in enhancing collaboration towards prevention of relapse in psychiatric patients. This would promote team work among patients, caregivers and health care providers.

Sariah, Outwater and Malima (2014) conducted a study to explore perspectives on risk and protective factors influencing relapse of people with schizophrenia and their caregivers attending Muhimbili National Hospital Psychiatric Out-patient Department, Dar es Salaam, Tanzania. A qualitative study was conducted, involving in-

depth interviews of seven people with schizophrenia who are out-patients and their seven family caregivers at MNH. Purposive sampling procedure was used to select participants for the study. Audio recorded in-depth interviews in Swahili language were conducted with all study participants. The recorded information was transcribed and analyzed using NVivo 9 computer assisted qualitative data analysis software. Personal risk and protective factors for relapse, environmental risk and protective factors for relapse and suggestions to reduce relapse were the main themes that emerged from this study. People with schizophrenia and their caregivers (all of whom were relatives) perceived non adherence to antipsychotic medication as a leading risk factor of relapse; other risks included poor family support, stressful life events and substance use. Family support, adherence to antipsychotic medication, employment and religion were viewed as protective factors. Participants suggested strengthening mental health psycho-education sessions and community home visits conducted by mental health nurses to help reduce relapse. Other suggestions included strengthening the nurse-patient therapeutic relationship in provision of mental health care.

Furthermore, Fikreyesus, Soboka and Feyissa (2016) conducted a cross sectional study to assess the prevalence of relapse among patients with psychotic disorders attending services in Jimma University Specialist Hospital (JUSH) Ethiopia. Data were collected using interviewer administered questionnaire. Medication adherence rating scale (MARS) was used to assess compliance to medication and abnormal involuntary movement scale (AIMS) to detect medication side effects. Logistic regression analysis was used to identify independent predictors of psychotic relapse. All variables with P-value <0.25 in the bivariate analyses were entered into multivariate logistic regression and variables with P-value < 0.05 in the final model were declared to be significantly associated with the outcome variable. The result showed that the prevalence of relapse among patients with psychotic disorder was 24.6 % (n = 95). Of this, 25.4 and 22.4 % were males and females respectively. The odds of developing psychotic relapse among patients living with family was 72 % lower than that of patients living alone (aOR = 0.28, 95 % CI = 0.08, 0.93). The odds of developing psychotic relapse among patients compliant to medication was 69 % lower than that of patients who were not compliant to medications (aOR = 0.31, 95 % CI = 0.12, 0.80). The odds of developing psychotic relapse among patients having high score on social support score was 48 % lower than that of patients who were compliant to medications (aOR=0.52, 95%CI=0.28,0.95).The odds of developing psychotic relapse among patients reporting to have sought religious support was 45% lower than that of patients who have not sought religious support (aOR =0,52,95% sCI =0,31,0,96). On the other hand, the odds of developing psychotic relapse among participants who have experienced medication side effects was 1.83 times higher when compared to those who have never experienced medication side effects (aOR = 1.83, 95 % CI = 1.01,3.31).

Gathaiya, Mwaura and Wagoro (2018) conducted a cross-sectional descriptive study of 209 family members or significant others accompanying patients to ascertain the factors Associated with Relapse in Patients with Schizophrenia at Mathari Hospital, Nairobi Kenya. Patients were selected by random sampling and the study was carried out between June and July 2011. Schizophrenia was diagnosed using Diagnostic and Statistical manual of mental health disorders, 4th edition text revision (DSM-IV-TR) criteria. Data were collected using semi structured questionnaire and analyzed using chi- square statistics. P-value of < 0.05 was significant. The findings indicated that majority of patients (81.8%) were aged between 17-46 years with (54%) of patients having had their first episodes of schizophrenia between ages 17-26 years. The results showed that factors associated with relapse in schizophrenia in Mathari hospital included, non-drug compliance and failure to attend follow-up clinic (67.9%), stressful life events (17.3%), and substance abuse (14.8%). Relapse rate was found to be 58%-97%. The study concluded that intensification of Psycho education to both patients and family members for early recognition of signs of relapse and drug compliance are important the study also recommended that improvement of community mental health services to reach more family members in their homes, encourage drug compliance and community involvement in understanding schizophrenia to reduce stigma. Health policy makers will avail atypical antipsychotic drugs with minimal side effects to reduce the high relapse rate. Future research should focus on clinical factors associated with relapse in schizophrenia.

Adebiyi, Mosaku, Irinoye and Oyelade (2018) conducted a study to determine the rate of relapse and identifying the socio-demographic and clinical factors associated with relapse. A 5-year retrospective study was done involving 219 clients admitted into a mental health care facility in Nigeria. A proforma was designed to collect data on the socio-demographic and clinical variables from the client's case notes after obtaining ethical clearance. Data was fed into SPSS version 16 and analyzed using univariate and bivariate statistics. Multiple logistic regression was performed to ascertain the effect of age at onset of illness, living arrangement, family background, social class, index employment status, educational status, duration of illness and drug compliance on the likelihood of relapse in mental disorder. The model was statistically significant, $X^2(24) = 69.52$, $p <$

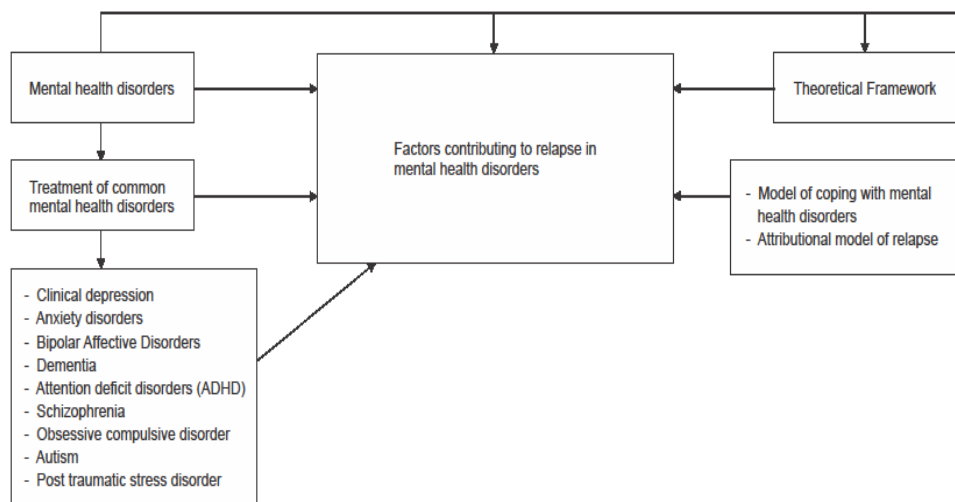
.0005, explained 36.7% (Nagelkerke R^2) of the variance in relapse and correctly classified 74% of the cases. Those with duration of illness greater than five years were 3.43 times more likely to relapse than those with lesser years. Lower age of onset predicts 2.76 times more likelihood of relapse but being employed at the onset of the illness and compliance reduces the likelihood of relapse. This study concluded that socio-demographic and clinical factors were significantly associated with relapse. The study suggested these will help achieve sustainable development goals for this population of patients. The odds for adherence to medications (aOR = 0.52, 95 % CI = 0.28, 0.95). The odds of developing psychotic relapse among patients reporting to have sought religious support was 45 % lower than that of patients who have not sought religious support (aOR = 0.55, 95 % CI = 0.31, 0.96). On the other hand, the odds of developing psychotic relapse among participants who have experienced medication side effects was 1.83 times higher.

II. Summary of Literature Review

It is clear that there is risk of relapse of mental disorder all over the world. The risk of relapse is higher in the developing countries. The study carried out by Oyediran *et al* (2019) in South-Western Nigeria revealed that there is high rate of relapse (67.1%) among mentally disorder patients. Several factors affect the occurrence of relapse in mental disorder which may be internal or external factors. Psychological models of relapse emphasized how individuals with schizophrenia face numerous adaptational demands as a consequence of their illness, and that individuals' perception of vulnerability to relapse would be associated with anticipatory coping strategies aimed at reducing relapse risk and regulating cognitive and emotional experience. The model may also help explain the speed at which relapse proceeds by specifying the cognitive mechanisms and associated emotional consequences responsible for acceleration.

Likert scale questionnaire was used by most researches in gathering data for most of the empirical studies. Most research on relapse and reason for possible readmission in psychiatric disorders are centered on patient's symptoms. Less empirical data is available about other factors like social relationship, family and societal acceptability, economic and environmental factors. So this research aims to do a holistic investigation into the internal and external factors that contribute to relapse among patients with mental disorder.

SCHMATIC DIAGRAM OF CONCEPTUAL FRAMEWORK



Research Design

A cross sectional design is triangulated with a focus group design. It is triangulation because, two different methods and two different instruments were used in the data collection process. That is a questionnaire and focus group interview were used; the questionnaire was used in collecting data at once, while the checklist was used for an in-depth discussion with the focal group.

Area of the Study

The settings that were used for this study were: Federal Neuro-psychiatric Hospital (FNPH) and Mental Health Department of University of Benin Teaching Hospital (UBTH), both in Benin City. The first Centre was Federal Neuro-Psychiatric Hospital (FNPH) Benin City. It is situated along New Lagos road with the permanent site at Idumwovina along Benin /Auchi Road. It is bounded by medical stores Road by its left, Federal Road at its back and GT Bank Road by its right. The permanent site is bigger. The two branches have a total bed space of 270 and 902 workers made up of Psychiatrist, Psychiatric Nurses, Psychologist, Occupational Therapists, EEG Technologists, and Psychiatric Social Workers among others. FNPH Benin City has a total of two hundred and six (206) Psychiatric Nurses. The hospital runs an emergency and out-patient's follow-up clinics. The out-patient's clinic days are Mondays, Tuesdays, Thursdays and Fridays with an average attendance of 100 patients per clinic.

The second site is Mental Health Department of the University of Benin Teaching Hospital (UBTH), Benin City. The hospital is located along New Benin- Lagos Road and shares common boundary with the University of Benin. It is bounded by the Federal Government Girls College Road by its left and stretches at its back to over 500 meters, it has a total bed capacity of over 400 and it is well equipped.

The hospital is made of several departments such as Family medicine, Ear, Nose and Throat, Head and Neck Surgery, Child Health, Community Health, Mental Health amongst others.

The mental health department has seventeen (17) psychiatric Nurses, 31 bed; 16 for males and 15 for females. The clinic days are Mondays, Tuesdays and Thursdays with average of 20 patients in attendance per clinic.

Target Population

The target population for this study were psychiatric Nurses and the care givers of patients with mental health disorders in Federal Neuro-psychiatric Hospital (FNPH) and Mental Health Department of University of Benin Teaching Hospital both in Benin City. Psychiatric Nurses are in a unique position to assist patients in assessing their personal health status. While the care givers live with patients at home and easily take note of changes in the patient's behavior. The number of patients with mental health disorders and their care givers at FNPH and UBTH are above 2097 (**Source:** Medical Health Records Unit/Dept., FNPH & UBTH, 2020).

Sampling Size Determination

The sample size of three hundred and thirty-nine (339) was rounded-off, making a total of three hundred and forty (340) respondents used as the sample size. Out of the total of three hundred and forty (340) respondents used as the sample size, three hundred and eighteen (318) representing 93.5% of the total participants were care givers of patients with Mental Health Disorders while the remaining twenty-two (22) representing 6.5% were Psychiatric Nurses.

Fifty percent (50%) of the total number of relapse cases in each of the facilities (i.e. Federal Neuro-Psychiatric Hospital, Benin (FNPH) and Mental Health Department, University of Benin Teaching Hospital (UBTH)) from January 2019 to December 2020 were used for the sample size. Two group discussions (Focus group discussion) and two individual interviews (In-depth interview) with one in each facility respectively were organized.

Table 1

STATISTICS	FNPH	UBTH	TOTAL
Total number of Psychiatric Nurses	206	18	224
Total number of Admission (2019 – 2020)	2956	733	3689
Total number of Relapse cases (2019 – 2020)	520	116	636

Source: Personnel/Medical Health Record Dept., FNPH & UBTH, 2020

Table 2

Number of Caregivers to Relapse Patients (sampled)	260	58	318
Total number of Psychiatric Nurses (sampled)	11	11	22
Sampled respondents (Caregivers + Psychiatric Nurses)	271	69	340
Percentage of respondents	50%	50%	100%

Sampling Technique

Purposive sampling technique of the convenience method was used. Hence, only the psychiatric Nurses and client relations who were available and willing at the time of visit were sampled in the study.

Instrument for Data Collection

The instruments for data collection are questionnaire and check-list designed by the researcher. The questionnaire is made up of three (3) Sections (A, B and C) all together. Section A is to collect the demographic data of the respondents, section B covers question on medication related factors, and section C covers questions on social factors contributing to relapse in mental health disorders. All thirty (30) questions are formulated to

address the objectives/research questions/hypothesis 1, 2 and 3 respectively. Section A being demographic data, the respondents are expected to select the options that are applicable to them. Sections B and C questions are on a 5-point likert scale rating format of strongly agree (SA) = 5; agree (A) = 4; undecided (UD) = 3; disagree (D) = 2 and strongly disagree (SD) = 1.

The checklist was made up of ten (10) open-ended questions which were structured to address the objectives of the study.

Focus group discussion and in-depth interviews

Focus group discussions (FGDs) and In-depth interviews (IDIs) were conducted with nurses in mental health Department at the University of Benin Teaching Hospital and Psychiatric Nurses in Federal Neuro-psychiatric Hospital Benin City. The Focus group discussions and In-depth interviews complement the survey and also help in gathering more detailed information and facts from respondents. The themes covered in the FGDs and IDIs were based on the objectives of the research. The FGDs and IDIs allows for detailed information as respondents are allowed to express their views and opinions without constraints, thus, helping to shed important light into grey areas of the study. The researcher coordinated the proceedings of the FGD s and IDIs. The matrix below shows the triangulated methods employed to achieve specific objectives of the study.

Table 3

Methods	Objective 1	Objective 2	Objective 3
Survey (Questionnaire)	*	*	*
FGD & IDI	*	*	*

FGD = Focus Group Discussion, IDI = In-depth Interview

Validity of Instrument

The sample questionnaire and check-list on factors contributing to relapse among patients with mental health disorders (FCRAPMHDQ) were presented to an expert in psychometrics in University of Benin who recast some of questions to reflect the face, content and criterion reference validity of the instrument. Face and construct validity of the instrument was done by the researcher’s project supervisor, other lecturers, members of the Ethics and Research Committee of the University of Benin Teaching Hospital and other research experts who scrutinized the instruments, made and corrections, which were effected before they were used.

Reliability of the Instrument

The reliability of the questionnaire on factors contributing to relapse among patients with mental health disorders (FCRAPMHDQ) was established using the split half method of trial-running the instrument in Mental Health Unit in General Hospital, Warri, on Monday 15/06/2020. The permission/approval and assistance of the Ethical Committee of the hospital was obtained before getting 34 volunteers (out-patients’ relatives or caregivers, i.e. >10% of the sample size) who met the inclusion criteria. The 34 participants were divided into two groups of 17 participants per group. Four (4) volunteer psychiatric nurses were engaged in a pilot focus group discussion using the checklist, and data on their responses collated. The questionnaire was also split into two halves and administered to the two groups at once. Data collected was used to calculate the internal consistency of the instrument using "Cronbach's alpha" method. An instrument is reliable if the Cronbach alpha value is greater than 0.5. The Cronbach's alpha of 0.803 was obtained, which confirmed the questionnaire to be reliable. Also, Cronbach alpha as a measure of internal reliability of the checklist was computed which gave a score of 0.77, confirming the checklist to be reliable.

Ethical Considerations

The researchers got a letter of introduction from the Dean of the Faculty of Nursing, Niger Delta University, Wilberforce Island, Bayelsa State. The letter introduced the researchers to the two sites for the research: Federal Neuro-Psychiatric Hospital (FNPH) and University of Benin Teaching Hospital (UBTH), both in Benin City. The researchers then applied for Ethical Approval from the Health Research Ethics Committees of the two hospitals. The respondents were made to understand that the participation in the research was voluntary and they could opt-out of the research at any point in time. The respondents did not disclose their identities and their names were not reflected in the research report. Permission for the use of the research sites were gotten from the Medical Director (MD) of the FNPH Benin City and the Chief Medical Director (CMD) of the UBTH, Benin. An approval was equally gotten from the Research and Ethics committees of the FNPH Uselu and UBTH Benin. A verbal approval from each respondent to participate in the research were for those that were willing to participate in the research. For those that willingly participated in the research, they were thanked after completing the questionnaire.

Method of Data Collection

Four (4) Research Assistants (RAs) were trained and engaged to administer and retrieve the questionnaires from respondents. Two of the RAs were assigned to the UBTH. They were members of staff of the hospital who understood the environment. The other two RAs joined the researcher in FNPH, Benin City. The four of them were given orientation on how to meet and get the cooperation of respondents in each site. Each of them was made to put on mask and encouraged the participants to do same, they were equipped with a bottle of hand sanitizer each, which they used from time to time and encourage the respondents to do same or wash their hands frequently. They explained their mission and emphasize that participation in the data collection process is purely voluntary, that confidentiality and anonymity would be ensured and that the exercise will be purely an academic exercise. The questionnaires were left with them when they were too busy to respond to the questions. The completed questionnaires were retrieved within 45 minutes of administration.

The questionnaires were administered to caregivers of the out patients of the hospital during the various outpatient clinics. The outpatient caregivers were approached immediately after the health talk while the nurses were busy with the patient’s vital signs observation and during the waiting time to see the doctor or collect drugs from the pharmacy department. The questionnaire was intended to be completed by the respondent themselves; however, some were assisted by the interviewer depending on the literacy level of the participant. The filling of the questionnaire took about quarter of an hour (15 minutes).

A focused group interview was conducted among the psychiatric Nurses on clinic free days using the structured interview checklist in four (4) sessions of about 20-30 minutes each. Each of the sessions was made up of 10 psychiatric Nurses. A focus group discussion and an In-depth interview were conducted at each of the two facilities (FNPH and UBTH) Benin City. The field work took about four (4) weeks.

Method of Data Analysis

In processing the data collected, the researcher used the Statistical Package for Social Sciences (SPSS 23.0) quantitative tools for data processing. Upon administration and retrieval of the instrument, administered copies were screened, coded and inputted into the computer system for processing using the SPSS version 23.0. The qualitative data were analyzed using NVivo version 11. Thoughts, catch-phrase and expressions that are similar were identified, grouped and coded to underscore findings from the qualitative data. Thus, emerging themes that are similar were grouped with major themes. Descriptive statistics such as simple percentage and frequency table and charts were used to present and analyze the socio-demographic characteristics of respondents as well as other responses to items on the research instrument. The research questions were subjected to cross-tabulations of factors and frequency of relapse, while chi-square and Pearson Product Moment Correlation Coefficient (PPMCC) was employed to test the hypotheses. **Response Rate**

A sample of 340 was drawn from the study population with mental health caregivers to patients accounting for 318 while the Focus group discussion and In-depth interview was made up of 22 discussants. The questionnaires were administered to respondents (mental health caregivers to patients) and 310 were completely filled and found usable.

Table 4 Questionnaire Response Rate

Number of copies of Questionnaire Administered	Number of copies of Questionnaire Retrieved and usable	Percentage of copies of Questionnaire Retrieved and usable
318	310	97.5%

Table 4 shows the questionnaire response rate from the table, it was shown that a total of 318 copies of questionnaire were administered and retrieved but 310 copies corresponding to 97.5% were found usable for analysis. From the analysis of the questionnaire response rate, it is evident that the response rate of the respondents was high.

Demographic Characteristics of the Respondents

Table 5: Socio-Demographic Characteristics of Respondents (N=310)

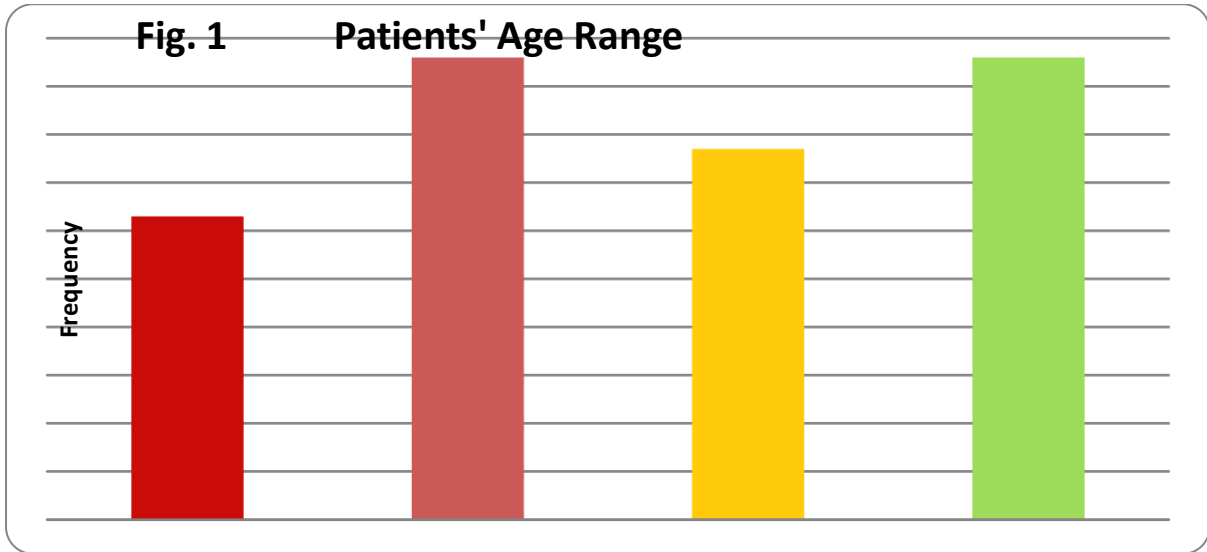
Variable	Frequency (n = 310)	Percentage (%)
Patient’s Age Range		
20 yrs & below	59	19.0
21 – 30 yrs	90	28.9
31 – 40 yrs	72	23.2
41 yrs & above	90	28.9
Patients’ Gender		
Male	141	45.5
Female	169	54.5

Patients' Educ. Level		
No formal education	58	18.7
Primary	40	13.0
Secondary	101	32.5
Tertiary	111	35.8
Patients' Marital Status		
Single	145	46.7
Co-habiting/Married	85	27.4
Separated	29	9.3
Divorced	23	7.5
Widowed/widower	28	9.0
Patients' Occupation		
Civil Servant	64	20.8
Self-employed/Business	119	38.3
Unemployment	78	25.0
Student	49	16.0
Patients' earnings per month		
No earnings	97	31.4
18,000 – 35,000	96	31.0
36,000 – 70,000	65	21.1
71,000 – 100,000	40	13.0
101,000 & above	11	3.6
Who pays for patients' drugs		
Self	74	23.8
Relatives	201	64.8
Donors	35	11.4
Patients' Residence category		
High class residential area	37	12.0
Middle class residential area	163	52.7
Low class residential area	109	35.2
Patients' living arrangement		
Living alone	50	16.3
Living with family	190	61.1
Living with relations	45	14.5
Living with friends	25	8.1
Do you live in the same house with patient?		
Yes	78	25.0
No	233	75.0
Patients' age when the illness started		
2 – 5 yrs	31	9.9
6 – 12 yrs	40	13.0
13 – 18 yrs	67	21.7
19 – 30 yrs	130	41.9
31 – 40 yrs	30	9.6
41 yrs & above	12	3.9
How long has this illness been on?		
Less than one year	49	16.0
1 – 3 years	91	29.2
3 - 5 years	63	20.5
5 years & above	106	34.3
Time taken before patients' visit to hospital following onset of illness		
1 – 4 weeks	128	41.3
5 – 8 weeks	96	31.0
9 – 12 weeks	47	15.1
13 weeks & above	39	12.7

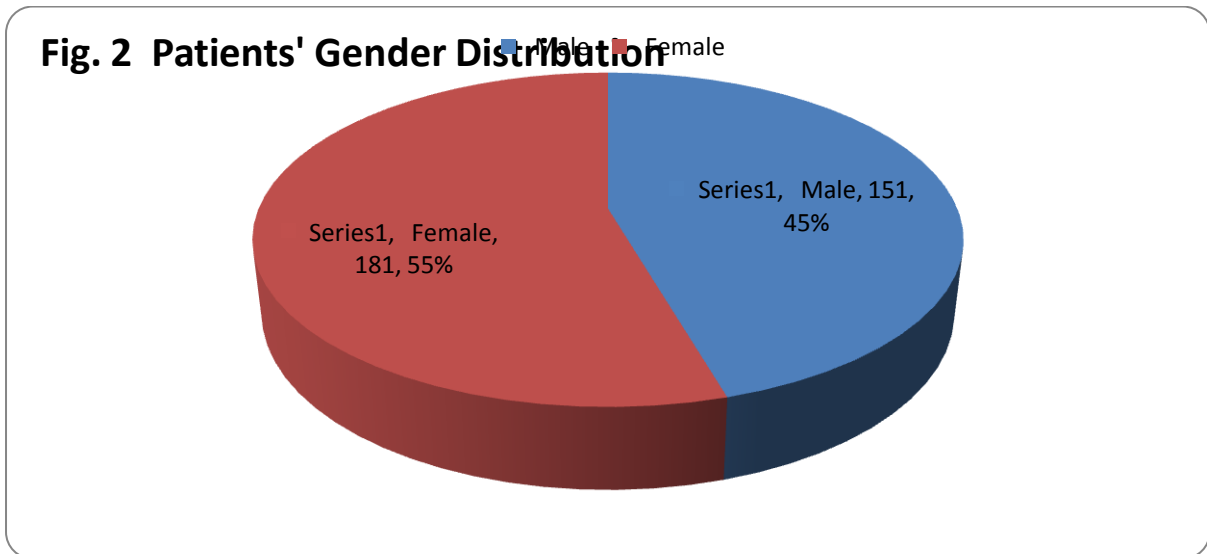
Table 6: Socio-Demographic Characteristics of Respondents Continues..

No. of admissions due to relapse		
1 – 2 times	145	46.7
3 – 4 times	116	37.3
5 times & above	49	16.0

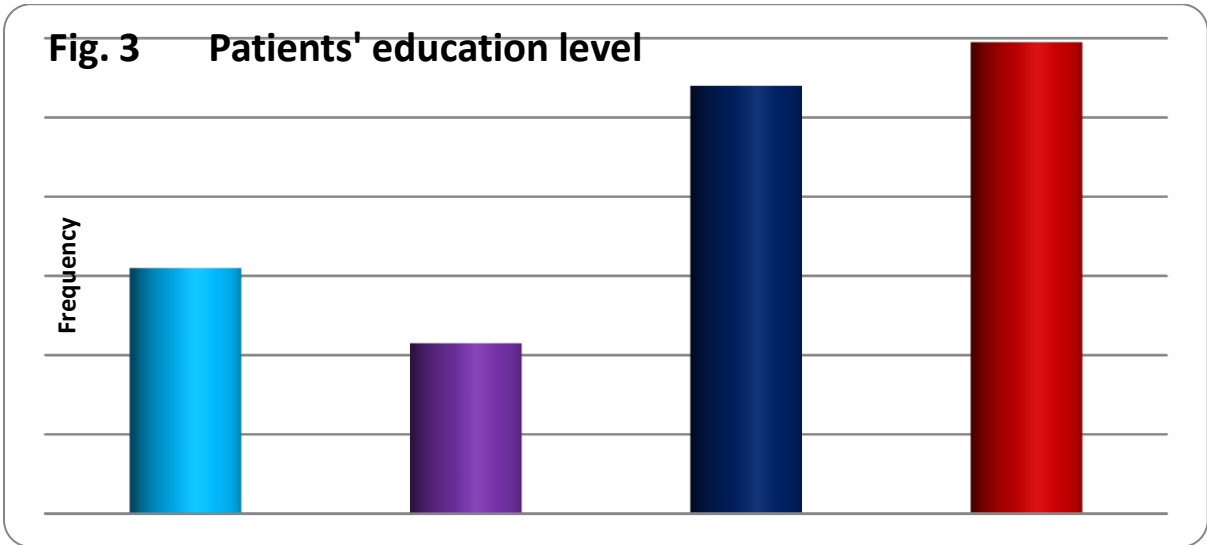
Source: Field Work, 2020



The age range of the respondents as illustrated in data in Table 5 and fig.1 showed that majority of the respondents representing 28.9% and 28.9% fall equally within the age ranges of 21-30 years and 41 years & above respectively. These groups are followed by 31 – 40 years representing 23.2% while the least 19.0% belongs to the 20 years and below. This implies that the majority of the respondents were within the 21-30 years and 41 years and above respectively.



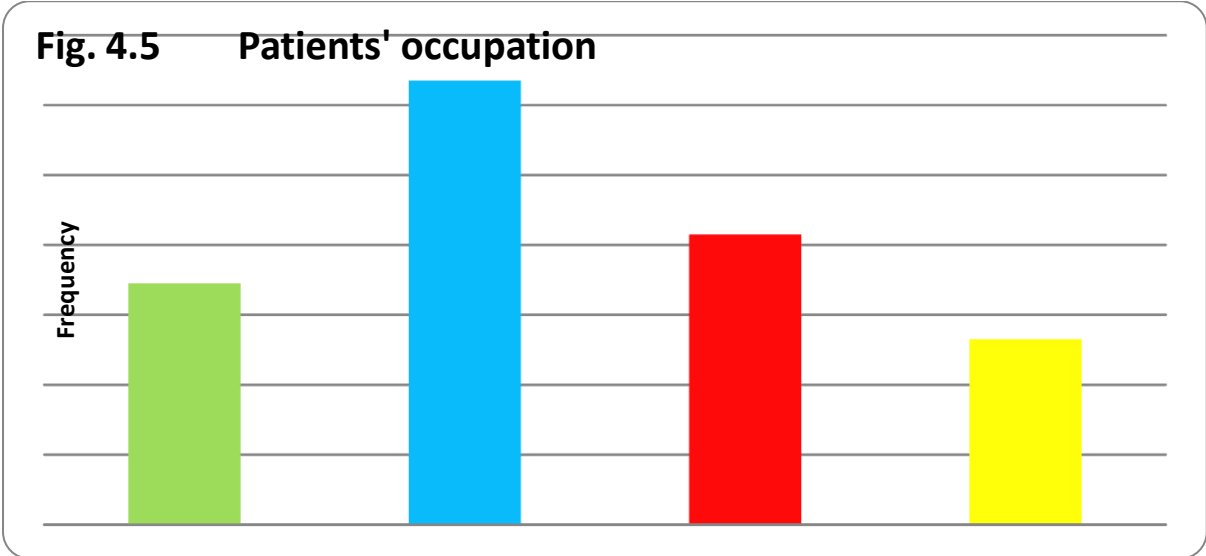
Data in Table 5 revealed gender distribution of the respondents, in which male respondent accounts for 45.0% while 55.0% represents the female respondents. This implies that majority of the respondents were females.



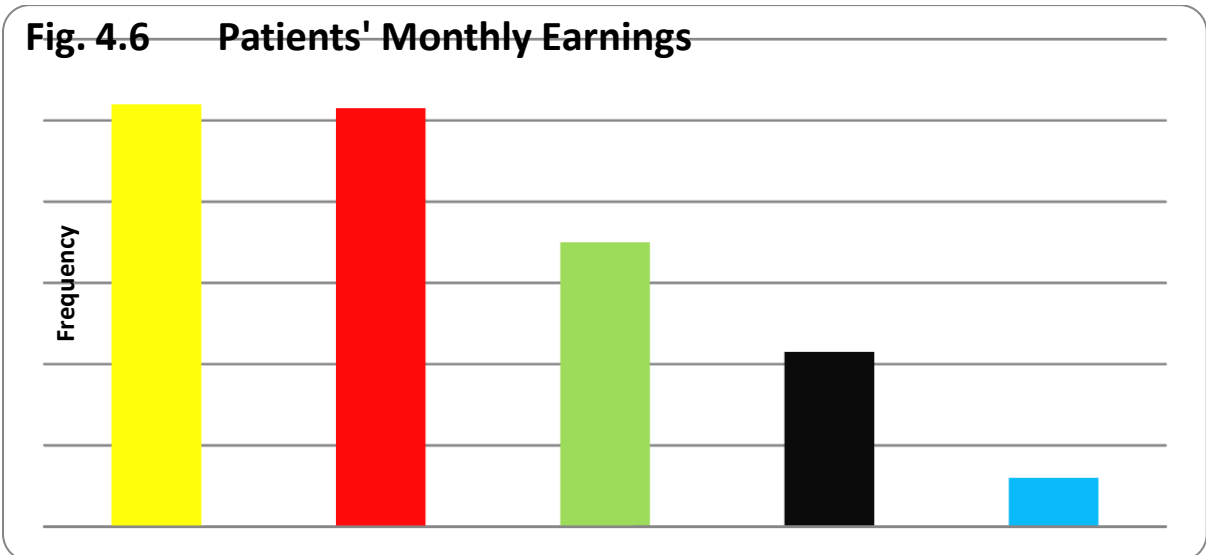
The chart Fig 3, show that majority of the respondents 35.8% possesses Tertiary qualification, followed 7 by Secondary, 32.5%, No formal education, 18.7 while the least 13.0% represents Primary. The distribution indicates that majority possess tertiary educational qualification.



The marital status of respondents was analyzed. Data in Table 6 shows the marital status distribution of the respondents indicates majority of the respondents 46.7% were single, followed by co-habiting/married with 27.4%, Separated with 9.3% and widowed/widower 9.0%, while the least 7.5% represents the divorced. Clearly, majority of the respondents were single.

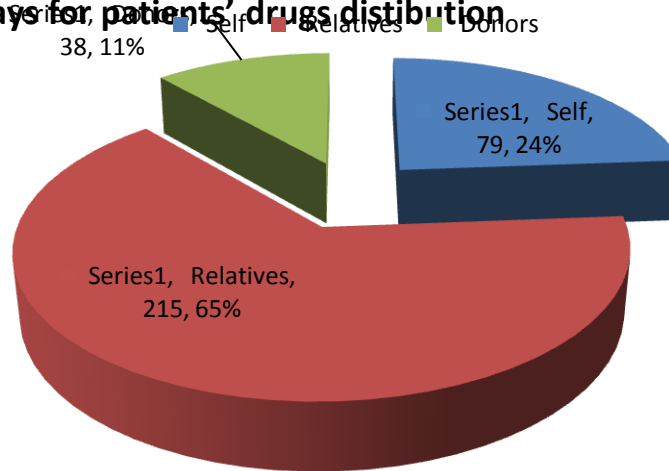


Occupation distribution of the respondents on data in Table 6: shows that majority of the respondents 38.3% were self-employed/Business. This is followed by unemployed category representing 25.0% percent and then civil servant representing 20.8% while the least with 16.0% represents the Student category.



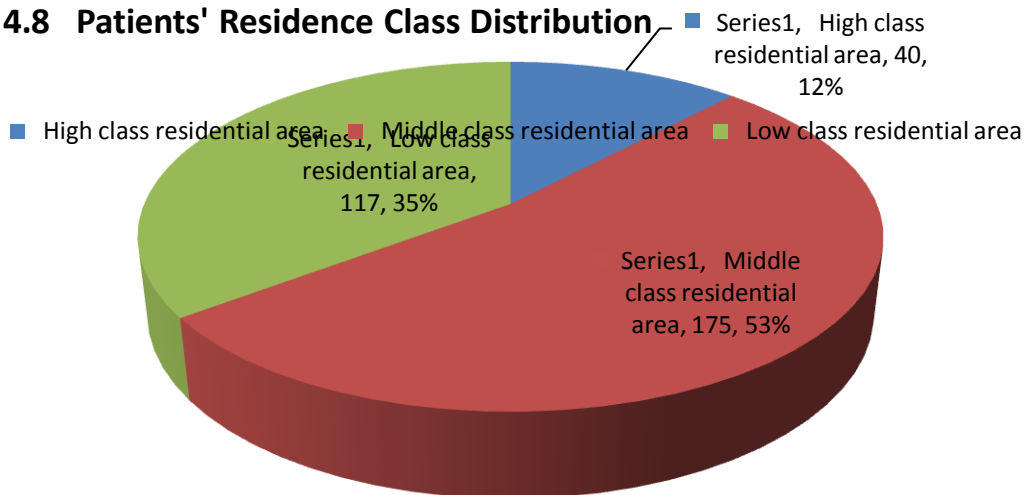
Patients' estimated income per month distribution of the respondents on data in Table 6 shows that the majority of the respondents 31.4% belong to no earnings category. This is followed by 18,000 -35,000 category at 31.0%, next is the 36,000 – 70,000 category at 21.1%, then 71,000 – 100,000 category at 13.0%, while the least 101,000 & above category represents 3.6%.

Fig. 4.7 Who pays for patients' drugs distribution



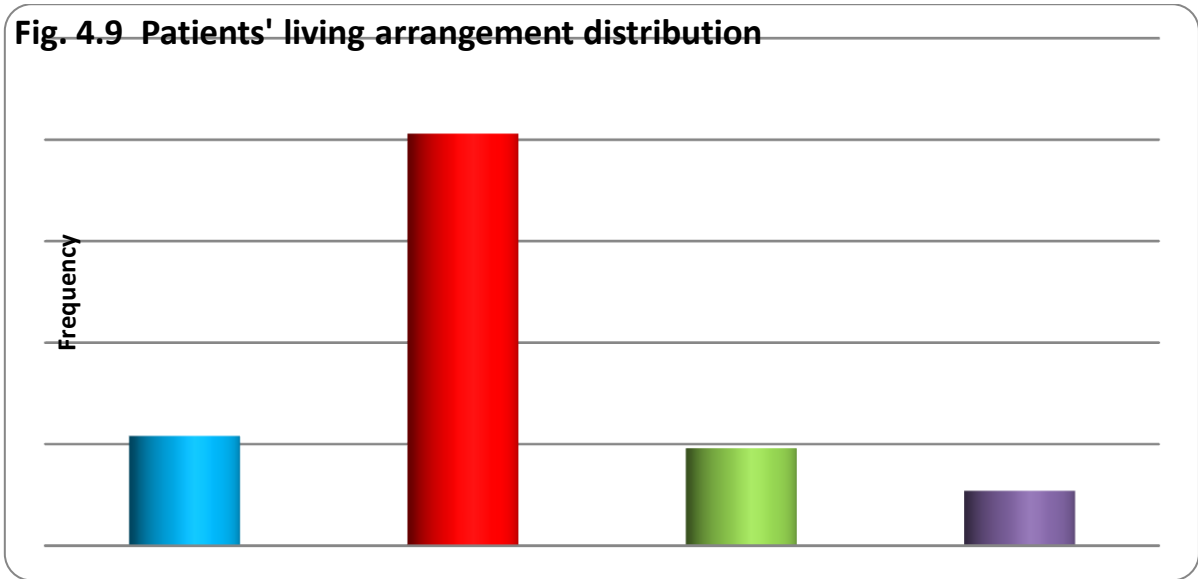
Who pays for patients' drug distribution of the respondents on data in Table 6 indicates that majority of the respondents 65.0% were paid for by Relatives. This is followed by Donors representing 24% while self-had 11.0% .

Fig. 4.8 Patients' Residence Class Distribution



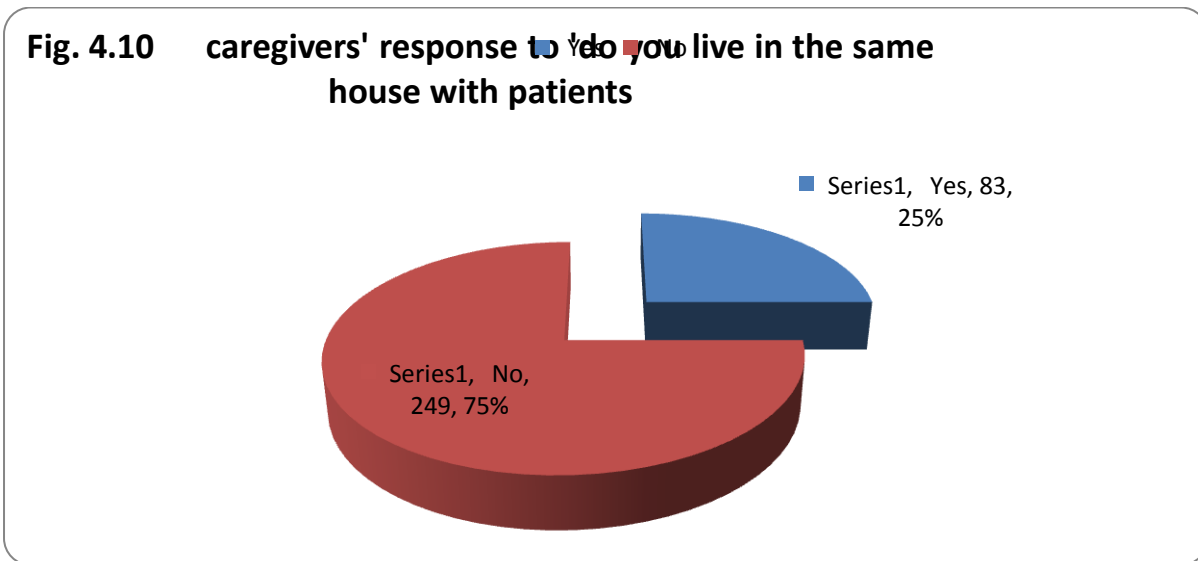
Patients 'residence distribution of the respondents on data in Table 6 indicates that majority of the respondents 53.0% were middle class residence. This is followed by low class residence representing 35% while high class residence had 12.0%

Fig. 4.9 Patients' living arrangement distribution



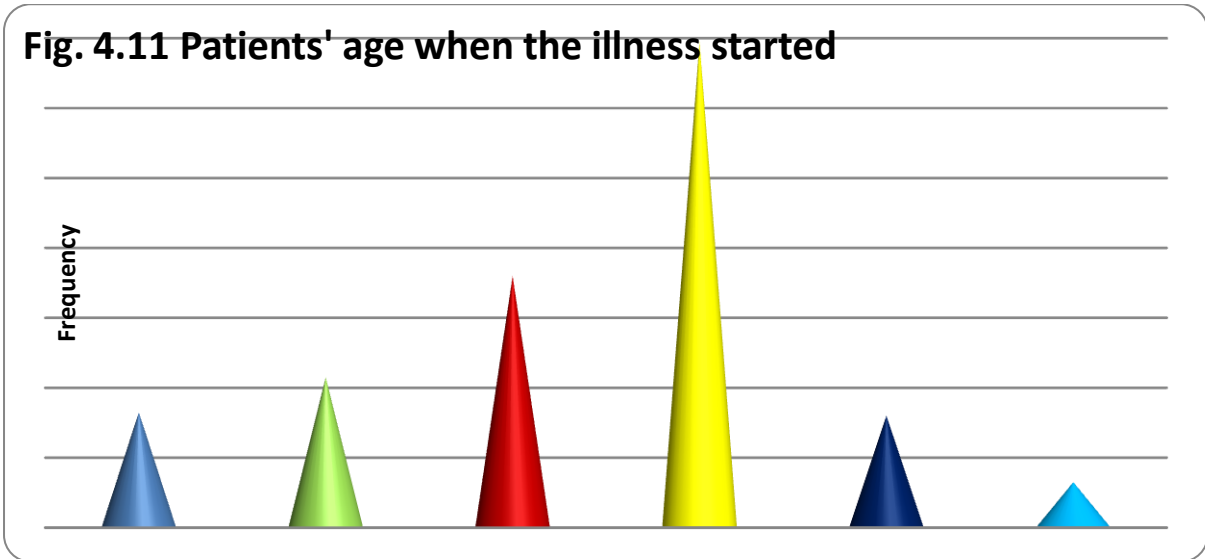
Patients' living arrangement distribution of the respondents on data in Table 6 shows that majority of the respondents 61.1% were living with family. This is followed by living alone category representing 16.3% percent and then living with relation category representing 14.5% while the least with 8.1% represents living with friends category.

Fig. 4.10 caregivers' response to 'do you live in the same house with patients'



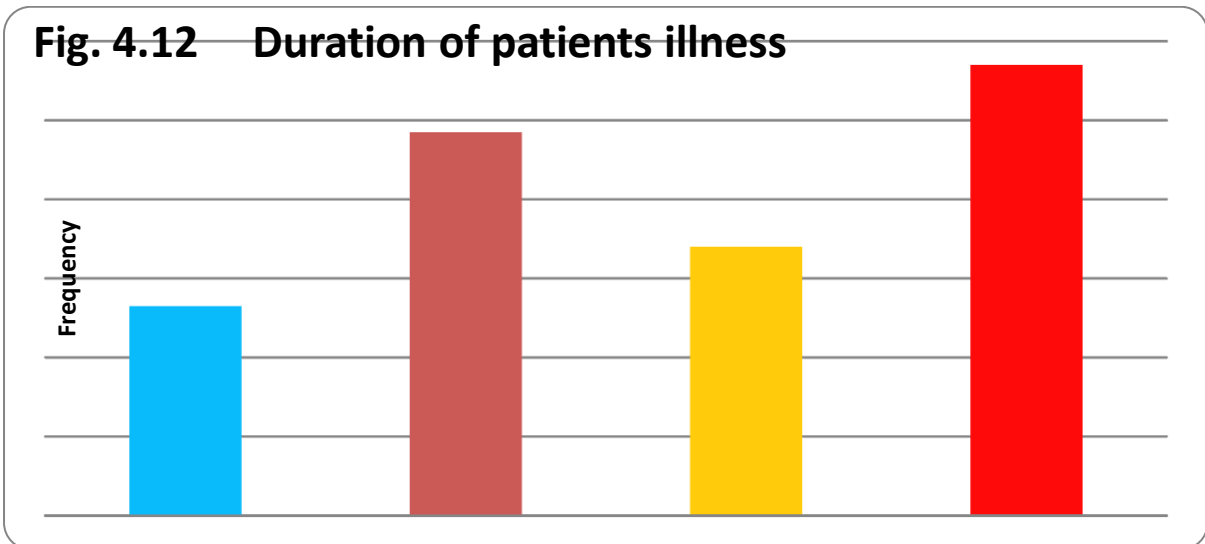
Caregivers' response to 'do you live in the same house with patient distribution of the respondents on data in Table 6 shows that majority of the respondents 75% were 'No' while 25% responded 'yes'.

Fig. 4.11 Patients' age when the illness started



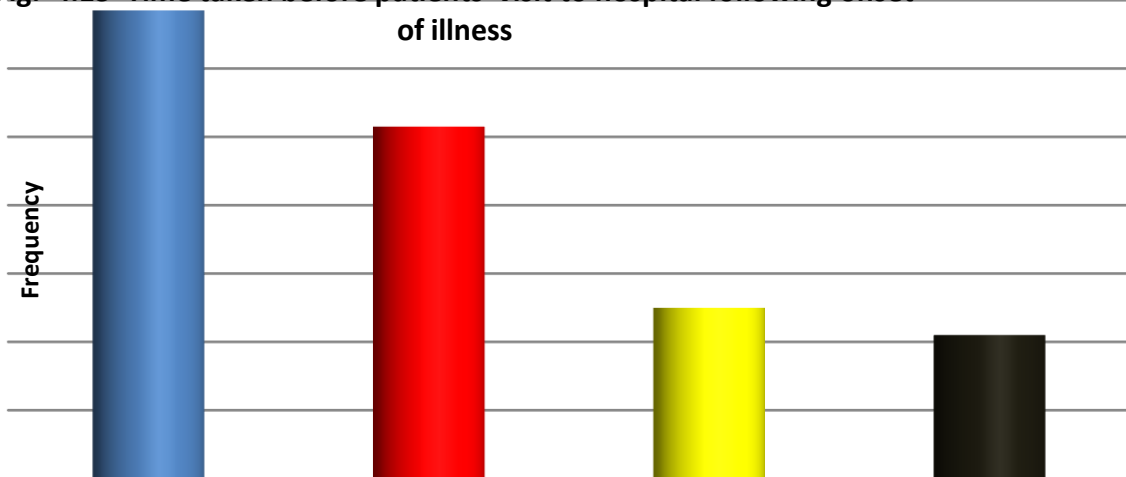
Patients' age when illness started distribution of the respondents on data in Table 6: shows that majority of patients' illness started within 19 – 30 years (41.9%). This is followed by 13 – 18 years (21.7%), 6 – 12 years (13.0%), 2 – 5 years (9.9%) and 31 – 40 years (9.6%) while the least with 3.9% was 41 years and above category

Fig. 4.12 Duration of patients illness



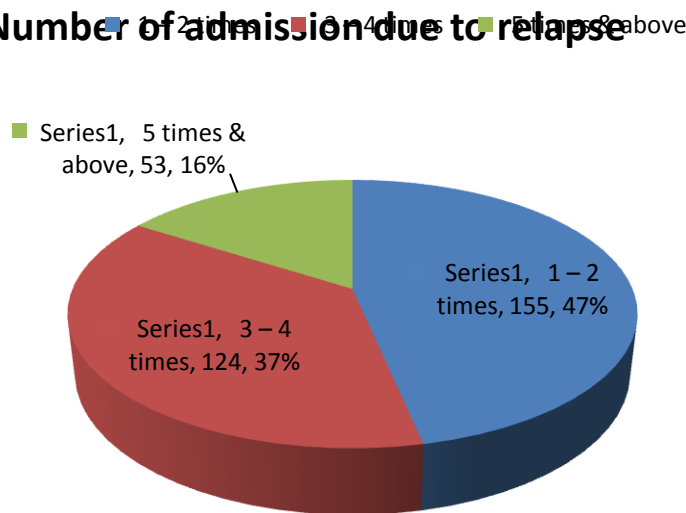
Duration of patients' illness distribution of the respondents on data in Table 6 shows that majority of the patients 34.3% have been ill for duration of 5 years and above. This is followed by those with duration of 1 – 3 years representing 29.2% and the 3 – 5 years duration representing 20.5% while the least duration is the less than one year representing 16.0%.

Fig. 4.13 Time taken before patients' visit to hospital following onset of illness



Time taken before patients' visit to hospital following onset of illness distribution of the respondents on data in Table 6: shows that majority of the respondents 41.3% were 1 – 4 weeks. This is followed by 5 – 8 weeks (31.0%) and then 9 – 12 weeks (15.1%) while the least with 12.7% was 13 weeks and above category.

Fig. 4.14 Number of admission due to relapse



Number of admissions due to relapse distribution of the respondents on data in Table 7 indicates that majority were 1 – 2 times corresponds to 47% the respondents. This is followed by 3 – 4 times (37%) while 5 times and above had 16.0%

Presentation of results

Table 7: Medication Related Factors.

S/N		SA	A	UD	DA	SDA
1.	Side effects of medication may lead patient to poor drug compliance.	132 (25.9%)	147 (47.3%)	21 (6.6%)	8 (2.7%)	3 (0.9%)
2.	Not taking antipsychotic drugs as prescribed may lead to re-occurrence of mental health challenge.	180 (58.1%)	111 (35.8%)	13 (4.2%)	5 (1.5%)	1 (0.3%)
3.	Non availability of prescribed anti-psychotic drugs in the hospital may lead to relapse.	129 (41.6%)	134 (43.1%)	27 (8.7%)	13 (4.2%)	7 (2.4%)
4.	Re-occurrence of mental health sometimes occurs in spite of taking antipsychotic drugs as prescribed.	114 (36.7%)	127 (41.0%)	32 (10.2%)	26 (8.4%)	11 (3.6%)
5.	Patient needs to be reminded before he takes his drugs.	101 (32.5%)	134 (43.1%)	27 (8.7%)	40 (13.0%)	8 (2.7%)
6.	Lack of knowledge about the management of side effects of	145	131	26	5	4

	anti-psychotic drugs may contribute to re-occurrence of mental health challenge.	(46.7%)	(42.2%)	(8.4%)	(1.5%)	(1.2%)
7.	The use of alcohol, cannabis and other substances may trigger re-occurrence of mental health challenge.	178 (57.5%)	100 (32.2%)	20 (6.3%)	8 (2.7%)	4 (1.4%)
8.	High cost of drugs may contribute to reoccurrence of the illness	138 (44.6%)	131 (42.2%)	20 (6.3%)	18 (5.7%)	4 (1.2%)

Table 7 revealed medication related factors (MRF) contributing to relapse in patients with mental health disorder. The cumulative additions of affirmations (strongly agree and agree), retracts (disagree and strongly disagree) or neutral (undecided) to medication related factors indicated that nearly all respondents affirmed to all statements on the medication related factors. “Not taking antipsychotic drugs as prescribed may lead to re- occurrence of mental health challenge” representing (93.9%) account for the most common MFR, followed by “The use of alcohol, cannabis and other substances may trigger re-occurrence of mental health challenge” (89.7%), “Lack of knowledge about the management of side effects of anti-psychotic drugs may contribute to re-occurrence of mental health challenge “ (88.9%), “High cost of drugs may contribute to reoccurrence of the illness” (86.8%), “Non availability of prescribed anti-psychotic drugs in the hospital may lead to relapse” (84.7%), “Re-occurrence of mental health sometimes occurs in spite of taking antipsychotic drugs as prescribed” (77.7%), “Patient needs to be reminded before he takes his drugs” (75.6%) and “Side effects of medication may lead patient to poor drug compliance” (73.2%).

Table 8 Social Factors

S/N		SA	A	UD	DA	SDA
1.	Lack of home visit by Hospital Staff may cause re-occurrence of mental health challenge.	80 (25.9%)	118 (38.0%)	50 (16.3%)	41 (13.3%)	21 (6.6%)
2.	Lack of support from the family may contribute to re-occurrence of mental health challenge.	163 (52.7%)	95 (30.7%)	26 (8.4%)	22 (7.2%)	3 (0.9%)
3.	Not having stable job with regular income may contribute to re-occurrence of mental health challenge.	127 (41.0%)	107 (34.6%)	29 (9.3%)	31 (9.9%)	16 (5.1%)
4.	Unsatisfactory relationship with friends and family may lead to re-occurrence of mental health challenge.	145 (46.7%)	111 (35.8%)	30 (9.6%)	18 (5.7%)	7 (2.1%)
5.	Not keeping to hospital appointment may lead to re-occurrence of mental health challenge.	174 (56.0%)	103 (33.1%)	17 (5.4%)	12 (3.9%)	5 (1.5%)
6.	Stigmatization and social isolation of the patient may lead to re-occurrence of mental health challenge.	173 (55.7%)	94 (30.4%)	25 (8.1%)	12 (3.9%)	6 (1.8%)
7.	Unrealistic goals/expectations may contribute to re-occurrence of mental health challenge.	139 (44.9%)	114 (36.7%)	37 (12.0%)	16 (5.1%)	4 (1.2%)
8.	Longer time before recovery from mental health disorder may make it come back.	88 (28.3%)	87 (28.0%)	65 (21.1%)	47 (15.1%)	23 (7.5%)

Table 8 revealed Social factors (SF) contributing to relapse in patients with mental health disorder. The cumulative additions of affirmations (strongly agree and agree), retracts (disagree and strongly disagree) or neutral (undecided) to social factors indicated that nearly all respondents affirmed to all statements on the social factors. “Not keeping to hospital appointment may lead to re-occurrence of mental health challenge” representing (89.1%) account for the most common SF, followed by “Stigmatization and social isolation of the patient may lead to re-occurrence of mental health challenge” (86.1%), “Lack of support from the family may contribute to re-occurrence of mental health challenge “ (83.4%), “Unsatisfactory relationship with friends and family may lead to re-occurrence of mental health challenge” (82.5%), “Unrealistic goals/expectations may contribute to re-occurrence of mental health challenge” (81.6%), “Not having stable job with regular income may contribute to re-occurrence of mental health challenge” (75.6%), “Lack of home visit by Hospital Staff may cause re-occurrence of mental health challenge” (63.9%) and “Longer time before recovery from mental health disorder may make it come back” (56.3%).

Research Objectives

This section investigates the research objectives in line with research questions. This was achieved using quantitative and qualitative data analysis.

Research Question One: What is the association between demographic factors and relapse among patients with mental health disorders?

In determining the association of demographic factors and relapse among patients with mental health disorder, demographic characteristics of patients such as age, gender, level of education, marital status, occupation, earnings per month, who pays for drugs, residence category/class and living arrangement were cross tabulated with number of admissions due to re-occurrence of mental health challenge to reveal chi square statistic as measure of association.

Table 9: Association between demographic factors and relapse among patients with mental health disorders (N=332)

Demographic factor	1 – 2 times	3 – 4 times	5 times & above	χ^2 (df)	P-value
Patient's Age Range				20.45 (6)	0.002
20 yrs & below	36	18	5		
21 – 30 yrs	50	28	11		
31 – 40 yrs	26	34	12		
41 yrs & above	32	36	21		
Patients' Gender				4.12 (2)	0.127
Male	58	56	27		
Female	87	60	22		
Patients' Educ. Level				6.41 (6)	0.378
No formal education	24	21	13		
Primary	22	13	5		
Secondary	50	39	11		
Tertiary	48	43	21		
Patients' Marital Status				12.33 (8)	0.137
Single	78	49	17		
Co-habiting/Married	36	34	15		
Separated	11	9	8		
Divorced	9	11	3		
Widowed/widower	9	12	7		
Patients' Occupation				7.71 (6)	0.260
Civil Servant	26	29	9		
Self employed/Business	49	49	21		
Unemployment	41	22	14		
Student	28	16	6		
Patients' earnings per month				24.77 (8)	0.002
No earnings	51	29	17		
18,000 – 35,000	52	36	7		
36,000 – 70,000	26	27	12		
71,000 – 100,000	12	21	7		
101,000 & above	3	3	6		
Who pays for patients' drugs				5.72 (4)	0.221
Self	29	29	16		
Relatives	94	77	30		
Donors	21	10	4		
Patients' Residence category				13.97 (4)	0.007
High class residential area	11	14	12		
Middle class residential area	73	65	25		
Low class residential area	61	36	12		
Patients' living arrangement				9.32 (6)	0.157
Living alone	21	20	9		
Living with family	90	74	26		
Living with relations	21	18	6		
Living with friends	12	5	8		

Bold type is significant p-value (p<0.05)

Table 9 above showed the association between demographic factors and relapse among patients with mental disorder. From the table, Patients' age range (p = 0.002), patients' earnings per month (p = 0.002) and patients' residence category (p = 0.007) were significantly associated with relapse among patients with mental disorder. Other demographic factors such as patients' gender, patients' educational level, patients' marital status, patients' occupation, who pays for patients' drugs and patients' living arrangement, were not significantly associated with relapse among patients with mental disorder. This was corroborated by the analysis of the Focus Group Discussion (FGD) and In-depth Interview (IDI) with deeper insight on the subject matter. Respondents opine that:

SOCIO-DEMOGRAPHIC FACTORS AND RELAPSE

Themes	Illustrative Statements
AGE and non-compliance to drug	<i>“Age of the patient can contribute to frequent relapses. Depending on the age of the person; you find out that among the aged, or the adults...some of them feel ‘I am an adult, I know what to do’. You tell them to go for checkup or take their drugs, they will refuse. Under the aged too; some of them want to claim they are old enough to take care of themselves, because of that, they are difficult to control. So, age do contribute.”(FGD1: A psychiatric Nurse at Federal Neuropsychiatric Hospital)</i>
AGE and use of hard drugs	<i>“Well, age will have an effect when it comes to drug abuse; age will become a factor when it comes to drug-related cases...” (FGD 1)</i>

“Then we now come to the issue of the age, the age in terms of... peers. The youth generally have these tendencies to abuse, by the time they see their peers, they want to belong. So, because of the age group they are in, they easily are easily drawn to into this drug over and over again.” (IDI 1: Director of Nursing Service, Federal Neuropsychiatric Hospital)

FINANCE and non-compliance to drug *“Cost of the drug. If the drug is too expensive for the patient, and he can't foot the bill, it can cause a relapse.” (FGD 1)*

“You know that something like Clozapine is a bit expensive, and you now follow it with laboratory investigation, many patients can't cope with this cost...”(FGD 1)

“So, when there is no money to buy drugs or feed, it will make the patient to breakdown down and relapse.” (IDI 1)

“...once there's no money there's no way the patient can come for checkup or to even buy the drugs to maintain the maintain his health” (IDI 2: Head of Depth., Mental Health Department, UBTH)

GENDER and use of hard drugs *“...what she is trying to say is that the male gender has more pressure on them to abuse substances. Relapse is also more common among them since they often go back to substance use to keep up.” (FGD 1)*

GENDER and coping with stress *“She will now have lot of stresses that come on her; females are expected to serve their husband, and her children, if peradventure she is not able to meet up, the husband will take it on her, that will make her to breakdown.”(IDI 1)*

GENDER and awareness of mental health *“Yes, gender is a contributory factor to relapse in mental health patient because men tend to understand the meaning of mental illness and most of them as well take care of themselves more than female.”(IDI 2)*

Marital status *“...if a female is within the age bracket to get married and husband is not forthcoming, she can suffer from depression, and this will increase the frequency of relapse. The same thing is still applicable to men.”(FGD 1)*

Marital crisis *“...in marital factors, when there is no peace between the husband and the wife, maybe one of the partners have negative thought towards the other and this can lead to divorce. When divorce come, there is bound to be a relapse in that situation” (IDI 2)*

OCCUPATION and use of hard drugs *“The occupation is also a factor. The kind of occupation one engages in may also be a factor in drug related cases. For instance, those that are into entertainment, they are so exposed, the nature of their business too makes them easily get addicted to these stuffs....by this reason, majority of individuals who are into the entertainment industry are easily prone to drug addiction. So, occupation can also be taken as one of the factors.” (FGD 1)*

FAMILY and lack of support *“Attitude of relatives sometimes because these patients come up with this issue once, the attitude of the relatives is far from encouraging. They don't offer the necessary support and attributes for every misbehavior from the patient with mental health. This will eventually lead to relapse...” (FGD 2: A nurse of the Mental Health Department UBTH)*

RELIGIOSITY and non-compliance to drug *“Then religion of the patient matters a lot; excessive religiosity. You see some individuals, when they get back home after being discharged, they will tell you that ‘my pastor says I should not take drugs, God has healed me’ and as a result of that won't take the drugs again. That is one of the reasons why some of these patients relapse on time.” (FGD 1)*

RELIGIOSITY and marital crisis *“...the religiousness of the patient, and third, the home condition. Not to tell a story, but I know of a particular family that the husband...was a very religious person and the wife was a free thinker... So, the wife has been treated and discharged from the hospital; the man will be tormenting her, saying ‘you are my problem, I would have been so this in the church or in my career, but because you don't believe, you don't follow with me, I am not promoted.’ You see that type of home condition, the home front.” (IDI 1)*

III. Summary Socio-Demographic Factors And Relapse

With respect to the socio-demographic factors that potentially contribute to a patient's relapse, the participants on the focus groups and interview highlighted that age can be confounded by the patients' non-compliance to drug and use of hard drugs; the discussion unraveled that elderly mental health patients believe they can be responsible for themselves, hence, leading to their self-will to not comply with the prescribed drugs use; age was also mentioned to interact with use of hard drugs, as a couple of the participant exposed that the youths are likely to fall victim of hard drug usage, which consequently leads them to relapse. The financial status of the patients, as a socio-demographic factor, was also linked to patients' non-compliance to drug; as exemplified in cases where a patient cannot afford the cost of the prescribed drugs over time.

Gender of the patients was discussed to confound with use of hard-drugs, ability to cope with stress and awareness of mental health. The participants on the study discussed the tendency of the male patients to abuse hard drugs and substances over their female counterpart; the lower ability of females to cope with stress was also highlighted as one of the factors that could trigger relapse among female patients; one of the participants on the in-depth interview opined that gender could contribute to relapse in aspect of awareness of mental health, as he believed male mental health patients had the tendency to understand the meaning of mental illness better than the females.

Some of the participants shared their opinion on how marriage expectations after attaining an age can be a recipe for relapse among female patients; crisis within the marriage sect was also reported as one of the factors that can potentially contribute to relapse. A few participants expressed their thoughts on how occupation could potentially confound with use of hard drugs among affected patients, owing to the belief that drugs enhances performance drive on the job.

Lack of support from the immediate family is believed to severely impact the patients' chances of relapsing, in a situation where the family members put up with attitudes that do not encourage the patient's recovery. A few of the participants expressed their thoughts on how religiosity impacts non-compliance to drugs, and consequently contributing to relapse; holding on to beliefs that a patient has been healed and, by so, can halt the prescribed drugs was described as one of the possible outcomes among patients who behave very religiously. Religiosity was also linked to marital crisis, in situations where the couples maintain different religious standards.

Research Question Two: What is the association between medication-related factors and relapse among patients with mental health disorders?

In determining the association between medication-related factors (MRFs) and relapse among patients with mental health disorder, each MRF (on Table 10) was cross tabulated with number of admissions due to re-occurrence of mental health challenge.

Table 10 Association between medication-related factors and relapse among patients with mental health disorders (N=332)

Demographic factor	1 – 2 times	3 – 4 times	5 times & above	χ^2 (df)	P-value
MRF1				1.56 (8)	0.992
Strongly disagree	2	1	0		
Disagree	3	3	2		
Undecided	9	9	3		
Agree	68	58	21		
Strongly agree					
MRF2				17.01 (8)	0.030
Strongly disagree	0	0	1		
Disagree	3	2	0		
Undecided	5	3	5		
Agree	46	48	17		
Strongly agree	94	64	22		
MRF3				11.13 (8)	0.194
Strongly disagree	2	4	1		
Disagree	5	7	1		
Undecided	9	11	7		
Agree	68	52	14		
Strongly agree	64	42	23		
MRF4				8.51 (8)	0.385
Strongly disagree	7	4	0		
Disagree	14	9	3		
Undecided	14	9	9		
Agree	61	51	15		
Strongly agree	50	44	20		
MRF5				15.89 (8)	0.044
Strongly disagree	4	1	3		
Disagree	11	21	8		
Undecided	11	13	3		
Agree	71	51	12		
Strongly agree	50	32	19		
MRF6				2.19 (8)	0.975
Strongly disagree	2	1	1		
Disagree	3	2	0		
Undecided	13	10	3		
Agree	60	50	21		
Strongly agree	70	53	22		
MRF7				5.49 (8)	0.704
Strongly disagree	2	1	1		
Disagree	4	2	2		

Undecided	8	8	4		
Agree	53	38	9		
Strongly agree	81	65	32		
MRF8				6.24 (8)	0.620
Strongly disagree	2	1	1		
Disagree	10	6	2		
Undecided	6	8	6		
Agree	62	53	16		
Strongly agree	68	48	22		

Bold type is significant p-value (p<0.05)

Table 10 above showed the association between medication-related factors (MRFs) and relapse among patients with mental health disorder. From the table, medication related factors such as “Not taking antipsychotic drugs as prescribed may lead to re- occurrence of mental health challenge “ (i.e MRF2) (p = 0.030) and “Patient needs to be reminded before he takes his drugs” (i.e MRF5) (p = 0.002) were significantly associated with relapse among patients with mental disorder. Other medication related factors were not significantly associated with relapse among patients with mental disorder. The Focus Group Discussions (FGDs) and In-depth Interviews (IDIs) further substantiated these findings with deeper exposé by subdividing Medication Related Factors into two distinct sub factors viz; Patient’s Personal Factors and Health-worker Factors. Respondents opine that:

PATIENT’S PERSONAL FACTORS

Themes	Illustrative Statements
Lack of awareness on signs and symptoms of relapse	<p><i>“If the patient does not know the signs and symptoms of the illness, it will contribute to relapse...he will relapse and go back to admission...that alone will make such person take his or her drugs. So, awareness is very important.”(FGD 1)</i></p> <p><i>“...apart from the patient... those that the patient is living with, the caregivers, should be educated too, so they can know when the signs and symptoms are coming up and urge the patient back to the hospital.”(FGD 1)</i></p> <p><i>“...if the patient does not know the signs and symptoms of relapse, he or she is not yet educated, it can lead to relapse... especially having the warning sign that the patient has not been sleeping having insomnia or patients is restless and talkative... and probably, the relatives have no knowledge about this and they will start insulting him/her for that; the patient will relapse.”(IDI 2)</i></p> <p><i>“...I think if the patient and the relatives are aware of these signs and symptoms, it will help them to be proactive and take the necessary remedial step to prevent a full-blown relapse, knowing fully well the cost implications of a full-blown relapse.”(FGD 2)</i></p>
Lack of knowledge on the effect of non-compliance to drug	<p><i>“...many cases of relapse, is borne of the fact that many patients cannot come to term with the realization that they will have to take the drug for the rest part of their lives.” (FGD 1)</i></p> <p><i>“...when they are discharged, they feel the illness is all over, there is no longer need to take their drugs. Whereas, the patient is supposed to be on drug for a life time, so lack of awareness.” (FGD 1)</i></p>
Addiction to use of hard drugs	<p><i>“...you see the benefits of tramadol apart from the mental aspect of it...in my ward majority of the patients are MBD. They will tell you they take it because of the benefits. [They believe] when they take tramadol, they can go 2, 3, 4 rounds of sex, they can perform very well. And for them to leave, it will be hard. They need it to satisfy their wives and girlfriends. That is why some of them keep relapsing because they will never say no to that drug”(FGD 1)</i></p> <p><i>“Someone that is on hard drug and also receiving anti-psychotropic drug; he is discharged and at home. When the person takes hard drug, it will alter his judgmental ability to reason; he should be taking his drugs; but because he is taking hard drugs, he will never see any reason why he should take his drug. The hard drug makes them feel euphoric.” (FGD 1)</i></p> <p><i>“...you will find out that these hard drugs, the individual who is involved in it, maybe after treatment, the person gets well and he goes back home. You find out that the person is definitely going to need a higher dose of these hard drugs... you and I know that the chemical substances in these hard drugs have negative effects on the brain cells and this person will need a higher dose of these hard drugs to get the original effect he or she had at the very beginning, and inability to reach that peak. Definitely there is going to be a relapse.” (FGD 1)</i></p>

“...when we talk about hard drug, we are talking about Cocaine, Heroin, Indian hemp; and a drug like Indian hemp, for example, which come in different forms, depending on the usage pattern; they take it as cannabis, or monkey tail when mixed with hot drink or hot gin. That drug in itself causes mental illness by causing disorganization of the chain – normal chain in the cerebrum– causing mental disorder; we now have mental disorder related to that drug.”(IDI 1)

“...hard drug and psychotropic drug cannot go together, there is no relationship. You will see that a patient that take hard drug – for instance, like cannabis, heroin, cocaine – these drugs stimulate their moods, stimulate their emotions; and the effects of psychotropic drug is to cause a calming effect and the other is causing stimulation. When there is excess stimulation, there will be a release of dopamine in the system and that will trigger the patient into relapse.”(IDI 2)

“By the time patient start taking it, all those cannabises, heroin, cocaine, tramadol, these one will now lead to relapse. There are some patients, by the time you treat them initially, they are okay, but when they go home, they go back to those drugs and relapse will set in.”(FGD 2)

“...one of the attributes of these hard drugs is that it inhibits the sleep center of the brain. You and I know that sleep is medicinal to the body... if an individual is not taking minimum of 6-hours rest because of the effect of the drug he is taking, definitely the body will give up soon and relapse.” (FGD 2)

HEALTH-WORKERS FACTORS

Themes	Illustrative Statements
No or poor visitation of patients by health-workers (i.e., psychiatrists)	<p>“When the psychiatric team visit, they will be able to know exactly what is happening at home...when psychiatrists get there, they will be able to know what exactly is happening at home and curb it before it leads to relapse.”(FGD 1)</p> <p>“...home visiting is part of care; it is an extension of care. In other words, if the patient is not able to come to the hospital to access treatment, this community service is a way taking the treatment to the individual, to their doorstep. It makes it easier, faster, and accessible. So, it is a contributory factor if there is no visiting.” (FGD 1)</p> <p>“When we have a home visit, that is kind of caring for a mentally ill person in his or her natural environment. If and when such visit is done by the already trained healthcare giver, it will help to prolong or elongate if at all. At least, they would be able to address some social problem could have contributed to the patient relapse without coming back to the hospital, right there at home, they nip it at the bud.” (IDI 1)</p> <p>“...looking at the situation of things in this country, one can see that there are many things going on in the brain and we tend to forget things, even the date for appointment. So, there is the need to actually visit the patient or put call across to remind the person. You see, sometimes when that is done, that is when [the patients] actually remember their day of appointment and they start making preparation to come. Assuming there is no call or visitation, the patient will miss his appointment and that can gradually lead to relapse.” (IDI 2)</p> <p>“it is way to make the patient feel he is being accepted in the society. It also gives the patient room to tell you what is bothering him or her. You can also use the medium to health educate the family, and if there is any problem, the patient will be able to discuss with you even the relatives will be able talk to you about it and you can proffer the solutions you can and pass the one you can't to management” (FGD 2)</p>

SUMMARY PATIENT’S PERSONAL AND HEALTH-WORKER FACTORS

In relation to the factors directly attributable to the patients who suffer from mental health; the study participants expressed their opinion on how lack of patient’s awareness on signs of relapse could be a predisposing factor to relapse. Some of the participants emphatically stated that, it is essential for both the patient and his relatives to be fully informed on the signs, to aid taking the necessary steps before the emergence of a full-blown relapse.

Not knowing the effect of non-compliance to drug among the patients was also discussed in one of the focus groups; it was emphasized that, mental health patients need to accept the fact that the prescribed drugs would be taken for the rest of their lives, as of drugs following temporal reliefs following discharge from hospital are not enough reasons to discontinue the prescribed drugs.

The high prevalence of drug abuse and addiction among mental health patients was elaborately by participants in the two focus groups and the two participants on the in-depth interview. One of the participants on the focus groups shared his views on how hard drugs and the prescribed anti-psychotropic cannot be combined together in the same system; he cited the euphoric effects derived from the hard drug. Another participant described the stimulating effect caused by hard drugs and the counter calming effect the anti-psychotropic drugs have on the human system. Given the opposing effects derived from both drugs, a patient will certainly fall into a relapse if he cannot do away with the hard drugs, while on his way to full recovery from mental illness. One of the participants on the in-depth interview explained that how hard drugs disorganize the normal chain in the cerebrum, which in turn is consequential to a mental disorder. Besides the aforementioned, other negative effects of the hard drugs include – release of dopamine in the system, sue to excess stimulation, which in turn leads to relapse; inhibition of the sleep center of the brain, which prevents the mental health patient from sleeping, and consequently, over time, the body system will be intolerable to inadequate sleep, hence bringing about relapse.

The study revealed the impact of not visiting at all or infrequent visit to the patient’s home following discharge. The participants, across the focus groups and interviews, unanimously maintained the position that visitation by psychiatric team cannot be left out, in the journey to recovery of a patient with mental health illness. A participant from one of the focus groups emphasized that, paying visit to the patient after discharge

keeps the psychiatrists informed on the progress and happenings around the patient; another participant on the same group branded visitation as a way of taking the treatment to the patient’s doorstep. Other benefits from paying visit to these patients shared during the interviews include – provision of avenue to resolve social problems the patients may be going through (e.g., stigmatization, abandonment and lack of acceptance), creates avenue to remind the patient of his/her next appointment at the clinic, and also makes the patient feel accepted, as well as creating an avenue for the medical team to educate the relatives on what to do over pertinent issues the patients may have displayed after discharge.

Research Question Three: What are the social factors contributing to relapse among patients with mental health disorders?

Social factors (SFs) on Table 11 were cross tabulated with number of admissions due to re-occurrence of mental health challenge in order to isolate those factors significantly contributing to relapse in mental health.

Table 11 Social factors contributing to relapse among patients with mental health disorders (N=332)

Demographic factor	1 – 2 times	3 – 4 times	5 times & above	χ^2 (df)	P-value
SF1				3.56 (8)	0.894
Strongly disagree	10	9	2		
Disagree	22	14	5		
Undecided	24	20	6		
Agree	52	47	19		
Strongly agree	40	26	14		
SF2				16.20 (8)	0.040
Strongly disagree	3	0	0		
Disagree	14	6	2		
Undecided	9	13	4		
Agree	56	29	10		
Strongly agree	65	68	30		
SF3				5.99 (8)	0.649
Strongly disagree	7	6	3		
Disagree	18	10	3		
Undecided	11	11	7		
Agree	48	46	13		
Strongly agree	63	44	20		
SF4				6.76 (8)	0.563
Strongly disagree	5	1	1		
Disagree	7	6	5		
Undecided	12	13	5		
Agree	60	39	12		
Strongly agree	65	57	23		
SF5				8.68 (8)	0.370
Strongly disagree	3	1	1		
Disagree	2	6	4		
Undecided	7	7	3		
Agree	56	36	11		
Strongly agree	81	67	26		
SF6				9.20 (8)	0.326
Strongly disagree	4	1	1		
Disagree	4	6	2		
Undecided	9	8	8		
Agree	46	40	8		
Strongly agree	84	62	27		
SF7				6.65 (8)	0.575
Strongly disagree	3	0	1		
Disagree	6	6	4		
Undecided	18	13	6		
Agree	61	39	14		
Strongly agree	60	59	20		
SF8				13.92 (8)	0.084
Strongly disagree	9	13	1		
Disagree	20	21	6		
Undecided	27	24	14		
Agree	41	35	11		
Strongly agree	51	22	15		

Bold type is significant p-value (p<0.05)

Table 11 above showed the Social Factors (SFs) contributing to relapse among patients with mental health disorder. From the table, social factor of “Lack of support from the family may contribute to re-occurrence of mental health challenge “ (i.e SF2) (p = 0.040) significantly contributed to relapse among patients

Caregivers Perceived Factors Associated With Relapse in Patients with Mental Health ..

with mental disorder. Other Social Factors do not significantly contribute to relapse among patients with mental disorder. Finding from the qualitative analysis provided deeper insight as respondents opine that:

Themes	Illustrative Statements
ABANDONMENT by family	<i>"When a patient feels abandoned by the family, that can contribute to relapse." (IDI 1)</i>
Unhealthy environment	<i>"...an environment in which the atmosphere is full of rancor, trouble all the time, is not an ideal pace for children to grow, let alone someone that already has mental health problem. It will trigger relapse."(FGD 1)</i>
REUNION WITH PEERS and non-compliance to drug	<i>"...if you have friends, peers who can easily come around and say 'Common, what is it? Forget about treatment they gave to you. You just come and let us go.' This is very common with drug patients; friends can easily make them to relapse back into the old habits."(IDI 1)</i>
LACK OF AWARENESS and non-compliance to drug	<i>"...when they are discharged, they feel the illness is all over. There is no more need to take their drugs, whereas the patient is supposed to be on drug for a life time. So, lack of awareness."(FGD 1)</i>
LACK OF AWARENESS and other social factors	<i>"...when a patient does not know the cause of the mental illness and does not know the importance of taking the drugs, such patient will relapse."(FGD 1)</i> <i>"...when the patient, and even the caregivers, lack the basic knowledge of mental health; they tend to neglect, stigmatize or mismanagement the whole situation. This can easily lead to relapse..."(IDI 2)</i>
Loss of someone important	<i>"someone that is bereaved, a psychiatric patient who has been treated and discharged, such bereavement will make the person unhappy and already predisposed. The bereavement is already a trigger, and maybe has a weak constitutional make-up. Therefore, may not be able to cope from the stress of that bereavement, hence may relapse."(FGD 1)</i>
Family or marital crisis	<i>"...let me say a woman needs a man, and the man is not available. So, she is going to be worried, she is going to be disturbed... Now you tell me in such a situation whereby you now find out the woman needs the man, the man is maybe out, that is a social factor that is going to affect the woman. And vice versa the man too."(IDI 1)</i> <i>"At other times, you may have family intruders, on either side; the husband or the wife could experience that their family is intruding. ... a social factor which not well handled it could even lead to mental illness in itself, not to talk of someone who already has mental illness... experiencing family pressure from the mother in-law, father in-law, brothers and sisters of the man or the woman. All these are factors that will make her to have breakdown."(IDI 1)</i>
Themes	Illustrative Statements
PEER REUNION and use of hard drugs	<i>"So, whenever they get back to their peer group, especially the musician. You tell them smoking will cause relapse, they will go back, and once they get back to their community, they say nurses and the doctors are jokers, and they go back smoking." (FGD 1)</i> <i>"...when a patient, after hospital care goes back to stays in an environment where there are lot of triggers – like people smoking Indian hemp and his cohorts are there, he can easily breakdown." (FGD 1)</i> <i>"An alcoholic, for example, comes, gets treated, and goes back home. He is going to relapse when he passes through that environment or meet with friends who are going to lure him back into it." (IDI 1)</i>
Post-traumatic disorder	<i>"Peer pressure play a part, in the sense that, somebody who is willing to stop, after treatment, the person goes back to the society and if he is living among his peers who doesn't really understand or accept the mental illness as a disease, they would always influence him, causing relapse." (IDI 2)</i> <i>"...we had a patient in the ward... she was raped 3 consecutive times. Because of the flashback, the patient has vowed in her life never to have anything to do with men. So, the psychologists worked on her all to no avail."(FGD 1)</i> <i>"Still on the traumatic stress, like the ENDSARS protest that just ended; people are being killed, maybe 2 to 3 from the same family. If such [person] has a mental challenge before, how will he cope?" (FGD 1)</i>
Stigmatization	<i>"...most of the patients; they are not accepted by their relatives at home. We just ended psychotherapy here, the patient said, she feels like staying in the hospital if they can allow her, it will be better for her." (FGD 1)</i> <i>"Stigmatization: the concept of 'I don't want to associate or to be associated with this person'. A patient said, 'it is better I stay here where they will accept me than go back home where they will not accept me'." (FGD 1)</i> <i>"When patients leave the hospital, the relatives should accept what that patient is doing. They should give that patient leverage sometimes and not to be over involved in whatever the patient is doing. Sometimes, he or she does something, whereby they should just correct him in love, but they overreact. Those attitudes can easily make a patient relapse and before long, the patient is back in the hospital."(FGD 1)</i> <i>"I know of some patient who feels they are laughing at them. That can trigger such. [As a patient] you feel that, I am this, I am that. That can also trigger such relapse among the patients."(IDI 1)</i> <i>"A patient you granted leave goes back home, maybe he is saying the rightful thing not even on the top of his voice, and the relatives are saying 'you don start again o'; whereas, the patient is on his rightful track, this can cause relapse." (FGD 2)</i>

IV. Summary Social, Environmental Factors And Relapse

Several social and environmental factors were discussed to directly or indirectly trigger relapse among mental health patients. Some of the mentioned lone factors were abandonment by patient’s family, living in an unhealthy environment, loss of an important family member, victimization of family or marital crisis, post-traumatic stress disorder and stigmatization towards the patients. One of the participants on the in-depth interview remarked that relapse can set in when the mental health patients feels abandoned; another participant from the focus group discussion stressed about the effect of staying in an unhealthy and un-ideal environment for a patient nearing recovery from mental health; family crisis, such as, unavailability of the significant other and intrusion of extended family members into the immediate family matters, were mentioned by one of the participant who gave his opinion during the in-depth interview; several participants on the two focus groups emphasized on stigmatization faced by mental health patients, by family members and relatives at home, and people in the society.

Reunion with peers was described to lead to tendency of non-compliance to prescribed drugs among patients, which can consequently be responsible for relapse; one of the participants on the in-depth interview discussed the possibility of a patient keeping friends with individuals who can dissuade him from adhering to the prescribed drugs. A patients’ lack of awareness, and that of his caregivers, could also confound with the patients’ non-compliance to prescribed drugs, as the participants stressed the beliefs that not knowing the importance of the lifetime drugs can lead to stoppage, which consequently triggers relapse. A patient reuniting with his old peers was further discussed as a major factor capable of making a mental health patient replace; the pressure that comes after rejoining old friends and mates in communities where use of hard drugs and consumption of alcohol is rife was discussed as a major trigger for relapse among affected patients.

Research Hypotheses

Research Hypothesis One: There is no significant relationship between age of onset and the frequency of relapse among mental health disorder patients

Table 12 Correlation test between age at onset of illness and relapse among patients with mental health disorder

		how long did it take you to bring the patient to this hospital following onset of the illness	how many times has patient been admitted due to reoccurrence of mental health challenge
how long did it take you to bring the patient to this hospital following onset of the illness	Pearson Correlation		1
	Sig. (2-tailed)		.356**
	N	310	332
how many times has patient been admitted due to reoccurrence of mental health challenge	Pearson Correlation	.356**	1
	Sig. (2-tailed)	.000	
	N	310	332

** . Correlation is significant at the 0.01 level (2-tailed).

The Pearson Product Moment Correlation Coefficient (PPMC) results from table 4.8: $r = 0.356$, $p < 0.001$, $N = 310$. The correlation coefficient (r) value shows a moderate positive correlation indicating that the longer it takes to bring the patient to the hospital following onset of illness corresponds to a higher number of times patient would be admitted due to reoccurrence of mental challenge. Conversely, the shorter it takes to bring the patient to the hospital following onset of illness, the lower the number of times patient would be admitted due to reoccurrence of mental challenge. The p-value ($p = 0.000$) was found to be less than the threshold value of 0.01, this implies a statistical significance that the correlation coefficient was unlikely to have occurred by chance. In other words, the statistical significance confirms the interpretation of the correlation value (r) therefore the null hypothesis (H_{01}) is rejected. Hence we conclude that there is a significant relationship between age of onset of mental illness and the frequency of relapse among mental health disorder.

Research Hypothesis Two: There is no significant association between duration of illness and relapse among patients with mental health disorder

Table 13 Chi square test between duration of illness and relapse among patients with mental health disorder

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	54.273 ^a	6	.000
Likelihood Ratio	55.776	6	.000
Linear-by-Linear Association	46.620	1	.000
N of Valid Cases	310		

Chi square is significant at the 0.05 level (2-tailed).

The Chi square results from table 13: $X^2 = 54.27$, $p < 0.001$, $df = 6$, $N = 310$. It shows that there was a significant association between duration of illness and relapse among patients with mental health disorder. The p-value ($p = 0.000$) was found to be less than the threshold value of 0.05, this implies a statistical significance that the chi square test of the association between the variables (duration of illness and relapse among patients with mental health disorder) was unlikely to have occurred by chance. Therefore the null hypothesis (H_0) is rejected. Hence we conclude that there is a statistically significant association between duration of illness and relapse among patients with mental health disorder.

Research Hypothesis Three: There is no significant association between living condition and relapse in patients with mental health disorder

Table 14 Chi square test between living condition and relapse among patients with mental health disorder

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.316 ^a	6	.157
Likelihood Ratio	8.726	6	.190
Linear-by-Linear Association	.070	1	.792
N of Valid Cases	310		

The Chi square results from table 14: $X^2 = 9.32$, $p = 0.157$, $df = 6$, $N = 310$. The p-value ($p = 0.157$) was found to be larger than the threshold value of 0.05, this implies a statistical non significance that the chi square test of the association between the variables (living condition and relapse among patients with mental health disorder) was likely to have occurred by chance. Therefore the null hypothesis (H_0) is accepted. Hence we conclude that there is no statistically significant association between living condition and relapse among patients with mental health disorder.

V. Discussion of findings

Findings from both the quantitative and qualitative analysis show that demographic factors, medication related factors and social factors contribute to relapse among mental health disorder patients. Among the demographic factors, age influenced non adherence and age group (peers pressure and belongingness feeling) were attractive factors to the use of hard drugs leading to relapse among patients. This finding is in line with Kazadi et. al (2008) and Rollins et. al (2005). Gender in conjunction with the use of hard drugs, mental health awareness and coping with stress was partly implicated in the qualitative interviews. Finance in terms of non adherence to medication and occupation type induce use of hard drugs are factors contributing to relapse. This finding agrees with the work of Dunn, T. (2018) titled: “The Association between Medication Adherence in Mental illness and Substance use Disorder Relapse in Patients”. Marital status, marriage crisis and lack of family support are triggers of mental health disorder relapse, over religiosity also plays a role, Hayes et.al (2019) and Vaughn (1976).

The Medication related factors contribution to relapse were found to be related to the patient attitude and practices, such lack of awareness on signs of relapse, non-adherence to medication and use of hard drugs. Staring et.al. (2010), Hayes et.al (2019) and Clutterback et.al. (2009) observed similar traits in their respective works. Also, health workers induced cases of relapse; included administering the wrong drugs to a mental health patient, and abuse of drugs and substances, Drake et.al. (2005). No or infrequent home visitation of patients by the psychiatric team of caregivers results in relapse.

The social factors encompassed reunion with unhealthy environment, reunion with peers with bad influence, stigmatization and lack of acceptance from family and neighbors, feelings of abandonment, loss of an intimate person, family upbringing, post trauma stress disorder of patients, and inability to bear the pains of a business failure. Mwaba & Molamu (1998).

Morken et. al. (2008) agrees with the findings that that the age of onset of mental illness was significantly associated with the frequency of relapse among patients with mental health disorder. Also, Morken et. al. (2008) is in concord with the findings that duration of illness and relapse among patients with mental health disorder were related. However, Liyew & Chalachew (2020) disagree with the findings that there is no association between living conditions and relapse in patients with mental health disorder.

VI. Summary

This study examined factors contributing to relapse among patients with mental health disorders in Neuro-Psychiatric Facilities in Benin City, Edo State, Nigeria. A sample of 340 students was drawn comprising 300 mental health disorder patients’ Caregivers and 40 psychiatric nurses from FNPB and UBTH. Three research questions and hypotheses were formulated and tested in this study. A 97.6% response rate was obtained from the administered questionnaire. The data collected were analyzed using quantitative and

qualitative techniques such as frequency counts, percentage, correlation, chi-square and content analysis of FGDs & IDIs study show that:

- i. Female (54.5%) were more predisposed to relapse than male (45.5%) among patients with mental health disorder both at the Department of mental health UBTH and Federal Neuropsychiatric Hospital Benin city. Also ages 21-30 yrs and 41yrs & above equally with 28.9% respectively, forms majority of the patients with mental health disorder relapse.
- ii. Tertiary education qualification (35.8%), Single marital status (46.7%) and occupation of self-employed/ business (38.3%) were in the majority among patients with mental health disorder both at the Department of mental health UBTH and Federal Neuropsychiatric Hospital Benin city. relative pays for drugs
- iii. No earning per month (31.4%), (65%), patients live in middleclass residence (53%), patients live with family (61.5%), 19 – 30yrs (41.9%) age at onset of illness, 5 yrs. duration of illness (34.3%), 1 – 2 times (47%) admissions due to relapse were in the majority among patients with mental health disorder both at the Department of mental health UBTH and Federal Neuropsychiatric Hospital Benin city.
- iv. There was a moderate positive correlation indicating that the longer it takes to bring the patient to the hospital following onset of illness corresponds to a higher number of times patient would be admitted due to reoccurrence of mental disorder.
- v. There was a significant association between duration of illness and relapse among patients with mental health disorder.
- vi. There was no statistically significant association between living condition and relapse among patients with mental health disorder.
- vii. The analysis of the qualitative aspect of the study revealed four major themes that were derived on factors contributing to relapse among mental health patients; which includes socio-demographic related factors, socio-environmental related factors, patient personal factors, and health workers' factors
- viii. The sub-themes from the socio-demographic factors covers – the financial status of the patients/family, religion and religiousness, marital status of the patients, experience of marital crisis, age of patients, gender, occupation, educational level of the parents, patient's loss of job, and separation between parents.
- ix. The sub-themes from the socio-environmental factors encompass – reunion with unhealthy environment, reunion with peers with bad influence, stigmatization and lack of acceptance from family and neighbors, feelings of abandonment, loss of an intimate person, family upbringing, post trauma stress disorder of patients, and inability to bear the pains of a business failure.
- x. Other factors reported to have a contribution on relapse were related to the patient attitude and practices, as well as the health workers'; these include poor drug compliance of the patients, use of hard drugs and substances, patients' lack of awareness on signs of relapse, no or infrequent visitation of patients from the mental health therapist, and lastly, administering the wrong drugs to a mental health patient.

VII. Conclusion

The study concludes that Factor contributing to relapse among patients with mental health disorder in Neuro-psychiatric facilities in Benin City, Edo State, Nigeria were varied and related. These factors goes beyond the initial postulation of demographic, medication related and social factor to socio-demographic, socio-environmental, patients personal factor and health worker factor.

VIII. Recommendations

It is recommended that adequate, regular and continuous education or enlightenment of patients including patients' relatives concerning factors contributing to relapse be carried out by the medical team. The Community psychiatric team of nurses, doctors, social welfare officers, clinical psychologist should be specially commissioned for regular home visitations in order to implement medication adherence and other educational therapies or measures to prevent relapses.

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