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Community-Based Study Of The Socio-Demographic Determinants Of Relapse And Relapse Risks In Persons Living With Serious Mental Illnesses (Smis).

Ebenezer Asamoah[1]
Institutional Affiliation: Ankaful Psychiatric Hospital, Ghana

Frank Mensah Gamado[1]
Institutional Affiliation: Ankaful Psychiatric Hospital, Ghana

Mustapha Karikari[1,2,3]
Institutional Affiliation: Mampong Nursing And Midwifery Training College, Ghana

Emma Sename Baxey[1,2]
Institutional Affiliation: Pantang Psychiatric Hospital, Ghana

Lawrence Asamoah[1,3]
Institutional Affiliation: Cygnet Health Care, United Kingdom

Victor Adeleke[1,3]
Institutional Affiliation: Phoenix Care Centre, Dublin- Ireland

Akunna Jane Okafor[1,3]
Institutional Affiliation: Phoenix Care Centre, Dublin- Ireland

Abstract
Background: *Mental health concerns intersect with the human growth and development, with their onset mostly during adolescence (Babatunde et al., 2021). Numerous biopsychosocial factors including genetic predisposition, stress, poverty, and armed conflict increase the vulnerability to poor mental health. Relapse in mentally ill patients varies across studies with a prevalence ranging between 52% and 92% in schizophrenia, 65% and 73% in patients with mood disorders, and 50% and 90% in substance abusers (Agenagnew and kassaw, 2020). Given that many individuals have their first episode during adolescence, determining the risk factors of relapse in adolescents with mental illness may ameliorate the quality of life of adults with mental illness. However, the relapse rate of mental illness at a young age and adolescence has not been deeply estimated, despite few studies which showed that more than one-third of patients with pediatric depression or anxiety need a long-term intake of medication (Malik and Azeem, 2017). The consequences of not addressing adolescent mental health conditions extend to adulthood (B.D. Kennard* et al. 2018*), given that half of all mental health conditions start by 14 years of age, but most cases are not fully treated in low-income countries (K. Geerts* et al.,2020*).*
Objective: *The study explored the relapse risk factors and associated socio-demographic determinants among mentally ill patients (participants). The study specifically explored the prevalence of relapse, relapse risks factors and the relationship among socio-demographic variables such as age, gender, marital status, employment status and illness duration with regards to relapse risk factors.*
Methods: *A cross-sectional survey was adopted for the study. The purposive and convenience sampling techniques were used to select 40 participants for the study. The Relapse Assessment for Schizophrenia Patients (RASP) instrument was adopted for data collection. Data was analysed using Frequencies, Percentages, Means, Standard deviation and Pearson Moment Correlations.*
Results: *Findings revealed that the prevalence of relapse among mentally ill patients was generally high. Additionally, variables such as restlessness, irritability, worrying, being nervous, loneliness, lack of sleep were the significant risk factors to relapse. Again, such factors as Lack of Family Support, Stressful life Events, and Non-Adherence to Medication were the leading cause of relapse. In furtherance, the findings established a significant correlation between employment status, gender, and relapse risk factors.*

Conclusion: *Conclusively, both patients and family caregivers require psychoeducation to enable them to adopt proper coping measures, prevent and/or reduce the rate of relapse and enhance recovery. Education should include information about the disease course, treatment regimens, support systems and life management skills. Additionally, mentally ill (psychiatric patients) patients must be supported to be able to identify specific individual factors that predispose them to relapse after recovery as well as how to manage them accordingly.*

Keywords*: Biopsychosocial factors, Relapse risk, Relapse prevention, Serious mental illness, Family support, Psychoeducation, Psychotropic medication, Mental health services.*

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I. INTRODUCTION

Background to the Study

Mental illness is a major public health problem worldwide and describes any condition that significantly affects the cognition, behaviour, perception, and emotions of affected persons whiles interfering with their social, occupational, and other important areas of functioning (WHO 2017). Kessler et al (2005) posited that an individual is said to have mental illness (acute or severe) when he/she experiences mild to serious functional and role impairment with resultant work disability. These disorders are usually associated with significant distress or disability in social, occupational, or other important activities (American Psychiatric Association, 2013). Examples include depression, schizophrenia, anxiety disorders, bipolar and affective disorder.

Globally, it was estimated that over 970 million people worldwide had a mental or substance use disorders (Ritchie & Roser, 2019). Mental illness has been estimated to account for over 7% (ranked 5th) of the global disease burden, though some argue this is a gross underestimation (Vigo, Thornicroft & Atun, 2016). Some reports suggest that in Africa, the lifetime prevalence range from 3·3% to 9·8% for mood disorders, from 5·7% to 15·8% for anxiety disorders, from 3·7% to 13·3% for substance use disorders, and from 1·0% to 4·4% for psychotic disorders (M. Claire Greene et al., 2021).

In Ghana, the WHO estimated approximately 2.6 million people lived with mental illness (WHO, 2014). Prior report indicates that 650,000 are suffering from a severe mental disorder and a further 216,600 are suffering from a moderate to mild mental disorder (Mental Health Authority, Ghana, 2020). Furthermore, in Ghana the treatment gap (defined as the number of people whose illness goes untreated) stands at 98 percent (Mental Health Authority, Ghana, 2020). This indicates that most Ghanaians suffering from mental illness may not encounter a psychiatrist or mental institution. Doku et al (2012) estimated the prevalence of mental disorders in Ghana to be approximately 13% whiles the prevalence of severe mental disorders like major depression and schizophrenia was estimated at 3%. Moreover, empirical evidence by Read and Doku (2019) and Ofori-Atta et al (2020) indicated that Ghana's mental health care system faces many challenges including insufficient number of mental health professionals, aging infrastructure, widespread stigma, inadequate funding, inadequate supply of effective and affordable medication and an inequitable geographical distribution of services. These disparities in the mental health care system in the country couple with other factors may account for a major setback in the total recovery of the mentally ill in Ghana.

Mental illness constitutes the highest burden of disease in the world with relapse being one of the most pertinent barriers to recovery and rehabilitation (WHO, 2008). Relapse is a common phenomenon among the mentally ill and it is particularly significant in mental health due to the relevance of mental stability in holistic health (WHO, 2013). Importantly, the WHO (2008) opined that relapse is an issue of global concern. Chaurotia and colleagues (2016) defined relapse among the mentally ill as a return of symptoms after a period of improvement or recovery.

Research findings indicates that relapse rates among the mentally ill is relatively high, in spite of the availability of various treatment modalities. For instance, among patients with schizophrenia relapse rate is estimated between 50% and 92% (Kazadi et al., 2008; Suzuki et al., 2003; Thiam et al., 2002). Similarly, Xiao and colleagues (2015) also observed that frequent relapses are common among mentally ill patients and are associated with exacerbate psychopathology, poor prognosis and impaired function which not only affects patient's quality of life and social functioning but puts a heavy burden on the family and society. Other negative consequences of relapse include rehospitalization, treatment resistance, cognitive impairment due to progressive structural brain damage and personal distress incarceration and interference with rehabilitation efforts (Piggot et al., 2003). Notwithstanding, Sariah (2014) identified that few studies regarding relapse and mental illness has been conducted in Africa. Furthermore, Akpalu et al (2010) in a study that aimed at finding strategies to improve state psychiatric hospitals in Ghana found that between 75% to 90% of psychiatric patients are readmitted due to relapse. In assessing factors responsible for relapse in South Africa, Kazadi and colleagues (2018) found that presence of a co-morbid depressed mood, poor medication adherence due to lack of patient insight and side

effects are some factors that predisposes patients with Schizophrenia to relapse.

Again, some studies have identified such factors as poor medication efficacy, adverse drug reactions, unavailability of medications, preference for complementary and alternative medicine, spirituality, personality traits of patients, distance of hospital from home, displeasure with treatment, degree of insight the patient has into their illness, and medication non-compliance to be strongly associated with relapse. (Oppong et al.,2016). Interestingly, preliminary studies (Demyttenaere et al.,2004) have reported the inadequate treatment of persons living with various forms of severe mental illnesses low-and-middle-income countries. Similarly, Eaton (2008) suggests that one of the biggest challenges to provision of services to the people with mental illness in low- and middle-income countries is that of ensuring regular and adequate supply of appropriate, safe, and affordable medications. Consistent with this are reports that indicate that in Ghana, the mental health system faces many challenges that undermine the successful treatment and recovery of the mentally ill. The challenges faced by the mental health system in low- and middle-income countries such as Ghana may account for the high percentages of relapse among the mentally in the sub-region (Read and Doku,2012; Ofori-Atta, et al 2010).

Shives (2007) argued that relapse can occur at any time during treatment and recovery and is very detrimental to the successful management of patients with serious mental illnesses. With each relapse, there is a longer period to recover. Relapse could also trigger acts of violence and crime (especially when responding to hallucinations), substance abuse, poverty and homelessness hence reducing the quality of life for such individuals (Videbec, 2010). Judging from the effects of relapse on the life of mentally ill individuals, their family, community, and the huge economic burden, it will be expedient to streamline a study that assesses the factors that contributes to relapse among psychiatric patients. It is based on this factual evidence that the study examined risk factors that contribute to relapse among mentally ill patients in the Kissi Sub-District in the Central region of Ghana.

II. LITERATURE REVIEW

Introduction

Relapse in psychiatric disorders is highly distressing and poses a significant burden to the patients, family, and society. It interrupts the process of recovery and may increase the risk of resistance to treatment. Relapse detection and taking preventive measures against its possible factors are crucial for a better prognosis.

Relapse Risk Factors

Relapse in psychiatric patients is mainly considered as the re-emergence or the worsening of psychiatric symptoms. More specifically, in describing relapse certain criteria are used including aggravation of positive or negative symptoms, hospital admission in the past 6 months, and more intensive case management and/or a change in medication (Shepherd et al.,1999).

Among those with schizophrenia, relapse rate is between 50% and 92% (Kazadi et al.,2008). Relapse and readmission in psychiatric patients have been shown to have negative impact on socio-economic well-being of patients, family, and the society (Gbiri et al.,2011). Muller (2004) indicates that relapse can occur at any time during treatment and recovery and 70% of patients may relapse after the first schizophrenic episode. Relapse in patients with serious mental illnesses often results in an increased economic burden (Capdevielle et al.,2009), high morbidity, increased readmission rate and a high burden on the health care system and community services (Almond et al., 2010; Capdevielle et al., 2009). Additionally, Fikreyesus et al (2016) observed that relapse increases the tendency for stigmatization of patients, thereby reducing their chances of being reintegrated into the society. Apart from these, relapse also leads to increase disability among the mentally ill and increases the risk of future episodes (Gbiri et al., 2011).

Recovery Model of Mental Illness

The recovery model has been described as the first genuinely post-institutional service philosophy (Mental Health Commission, 2007). The use of the concept in mental health emerged as deinstitutionalization resulted in more individuals living in the community. It gained impetus as a social movement due to a perceived failure by services or wider society to adequately support social inclusion, and by studies demonstrating that many people do recover. A recovery approach has now been explicitly adopted as the guiding principle of the mental health or substance dependency policies of several countries and states. The model emphasizes and supports a person's potential for recovery. Recovery is generally seen in this approach as a personal journey rather than a set outcome, and one that may involve developing hope, a secure base and sense of self, supportive relationships, empowerment, social inclusion, coping skills, and meaning (Elm, et al 2016). In this regard, the recovery model requires mental health service providers to enable service users to identify and develop their own strengths and resources and service users taking an active role in improving their lives and service delivery focused on making this possible (Martindale & Phillips, 2010). The approach argues against just treating or managing symptoms but focusing on building resilience of people with mental illness and supporting those in

emotional distress. It has been emphasized that everyone's journey to recovery is a deeply personal process, as well as being related to an individual's community and society (Repper & Perkins, 2006). Several features or signs of recovery have been proposed as core elements and comprehensively they have been categorized under the concept of CHIME. CHIME is an abbreviation of Connectedness, Hope and optimism, Identity, Meaning & Purpose, and Empowerment (Leamy et al.,2011).

Furthermore, an analysis of the main themes in recovery-based model suggests that the dominant themes from the stakeholder perspectives were identity, the service provision agenda, the social domain, power and control, hope and optimism, risk and responsibility. There was clear consensus around the belief that good quality care should be made available to service users to promote recovery both as inpatient and, in the community, (Bonney & Stickley, 2008). With regards to the purpose of this study, it is assumed that when quality and affordable mental health care is made available to psychiatric patients, as well as plans to stabilize other factors that predisposes them to relapse, availability of psychotropic medication, a cornerstone to mental illness management, are made easily accessible to patients it will enable them to manage their crises and developed other coping strategies to deal effectively with the disorder.

Protection Motivation Theory

Protection motivation theory (PMT) was propounded by R.W. Rogers in 1975 to better understand fear appeals and how people cope with them. The protection motivation theory proposes that people protect themselves based on four factors: the perceived severity of a threatening event, the perceived probability of the occurrence, or vulnerability, the efficacy of the recommended preventive behavior, and the perceived self-efficacy (Rogers, 1975). PMT proposes that both individual and environmental factors can provide either encouragement or discouragement for engaging in protective behaviors and that the effects of such factors are mediated by individual cognitive processes. With regards to mental health patients, it is assumed that both personal and environmental factors can serve as a causative factor to relapse.

The Protection Motivation Theory relates to decision making in the face of health threats. The theory suggests that an individual will follow a prescribed behaviour if they are susceptible to a threat, the threat is severe, and the individual is fearful of the threat. This theory is particularly relevant in encouraging preventative behaviours, such as condom use, and in medication adherence where physicians can highlight the deleterious consequences of nonadherence (Floyd et al., 2000).

The prevalence of relapse among outpatient psychiatric patients.

Mental illness constitutes the highest burden of disease in the world with relapse being one of the most pertinent barriers to recovery and rehabilitation (WHO, 2008). Despite the availability of various treatment modalities, relapse rate among the mentally ill is relatively high. Relapse also leads to increase disability among the mentally ill (Gbiri et al., 2017 & Gbiri, 2011).

Adebiyi et al (2018) examined the rate of relapse and identified the socio-demographic and clinical factors associated with relapse. This research was a five-year retrospective study which involved 219 clients admitted into a mental health care facility in Nigeria. Findings revealed that 41% of the participants experienced at least an episode of relapse within the period of study. Among patients with schizophrenia, relapse rates vary from 50% to 92% globally. In a related study, Gathaiya and colleagues (2018) investigated the factors associated with relapse in patients with Schizophrenia at Mathari Hospital, Nairobi Kenya. The cross-sectional study engaged 209 family members or significant others accompanying patients to Mathari Hospital. Patients were selected using a random sampling technique. The study showed that relapse rates was between 58% - 97%. Similarly, Akpalu et al (2010) in a study that aimed at finding strategies to improve state psychiatric hospitals in Ghana found that between 75% to 90% of psychiatric patients are readmitted due to relapse. Also, Weret and Mukherjee (2014) assessed the prevalence of relapse and associated factors in patient with Schizophrenia at Amanuel Mental Specialized Hospital, Addis Ababa, Ethiopia from 422 patients. Among participants 43.3% of them had relapse of schizophrenia.

Likewise, Fikreyesus et al (2016) carried out a study to assess the prevalence of relapse among 386 patients with psychotic disorders attending services in Jimma University Specialized Hospital (JUSH). The prevalence of relapse among patients with psychotic disorder was 24.6 %. 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.

A similar study in china found that out of 876 patients, 293 (33.4%) had at least one relapse within 1 year after discharge, and 165 (18.8%) were rehospitalized (Xiao et al 2015). The empirical reviews discussed indicate that the prevalence of relapse among psychiatric patients is significantly high. Thus, this study intends to assess the prevalence of relapses among the mentally ill patients in the Kissi Sub-District in the Central region of Ghana.

Factors that Influence Relapse Among Psychiatric Patient.

Psychiatric readmissions remain an essential part in the field of mental health care for patients with psychiatric emergency (Fuller, Sinclair, & Snook, 2016). Nevertheless, there are objectionable outcomes since mental health care systems are not designed with the aim of prolonged or repeated admissions. For instance, Weinberger et al (1996) report that an increased number of readmissions, mostly due to relapses has high-cost implications for the healthcare system. Xiao et al (2015) examined the relapse rate in the year following hospital discharge among patients with schizophrenia in the naturalistic condition, and to explore possible risk factors related to relapse. Eight hundred and seventy-six (860) of 992 eligible patients completed the telephone survey. In participants' view, the most important factor contributing to relapse was poor medication adherence (50.7%). Nonadherent patients (37.9%) had a relapse rate that was 2.5-fold higher than adherent patients. The top five risk factors associated with relapse were nonadherence to medication, being without work, poor self-care ability, poor interpersonal skills, and hospitalization on more than three occasions.

Furthermore, many studies have identified factors associated with relapse to 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 (Adebiyi et al., 2018; Fikreyesus et al., 2016; Kazadi et al., 2008; Owens et al., 2010). Another study reported that significant factors related to relapse consist of lack of home visits, the stigma attached to mental illness, side effects of psychotropic drugs, and unavailability of psychotropic drugs (Nosipho, 2009).

A study systematically reviewed and analyzed risk factors for relapse in the early course of psychosis. Associated factors included medication nonadherence, persistent substance use disorder, critical comments from caregivers (but not overall expressed emotion), and poorer premorbid adjustment, and found an increased risk for relapse of 4-fold, 3-fold, 2.3-fold, and 2.2-fold, respectively (Alvarez-Jimenez, Priede and Hetrick 2012). Among all the associated factors, Ascher-Svanum et al (2006) and Novick et al (2010) argued that non-adherence is the strongest predictor of relapse. Discontinuing antipsychotic drug therapy increases the risk of relapse by almost five times.

Likewise, Sariah and colleagues (2014) explored 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. The qualitative study identified that people with schizophrenia and their caregivers (all of whom were relatives) perceived nonadherence 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.

Relapse and Psychiatric Patients socio-demographic factors

Adebiyi et al (2018) assessed socio-demographic factors associated with relapse. This study also revealed that socio-demographic variables such as age at onset of illness, educational status, unemployment, social class, living arrangement and family background were all significantly associated with readmission in this group of patients. Further analysis found that patients with duration of illness of greater than five years were 3.43 times more likely to relapse than those with lesser years. Lower age of onset predicted 2.76 times more likelihood of relapse but being employed at the onset of the illness and medication compliance reduces the likelihood of relapse. Again, marital status was not significantly associated with readmission. This study found that rate of readmission decreases with increasing age. Only 18% of patients above the age of 45 were readmitted at least once in this study. This result agrees with finding of Mortensen & Eaton (2009) who reported that readmission risk decrease with increasing age. Gbiri et al and Gbiri (2011) studied the socio-economic factors associated with relapse in individual admitted with psychiatric disorders and the pattern of socio-economic impact of relapse in those groups. It was reported that a significant relationship ($P<0.05$) among such socio-demographic characteristics as age, sex, number of relapses, number of admissions, pre-morbid marital status, morbid state marital status, pre-morbid state occupational status and morbid state occupational status and relapse.

III. RESEARCH METHODS

Introduction

A cross-sectional study approach was adopted in this study which seeks to gather information at a single point in time. This approach best suited the subject matter as it allowed the researchers to describe various characteristics among participants as well as gathering preliminary information to support further studies and future directions regarding the relapse of persons living with various forms of serious mental illnesses (SMIs).

Research design

A quantitative descriptive approach was adopted in this study. The aim of the research was to explore the risk factors that exposes patients to relapse among psychiatric outpatients in the Kissi Sub – District in the Western region of Ghana. This study employed the cross-sectional survey method. It allowed the collection of data to make inferences about this population understudy at one point in time (Lavrakas, 2008). This type of design was selected due to its ability to measure relationship between variables. It enabled the recognition of trends and patterns in data collected.

According to Babbie (2007), cross-sectional survey design has the advantage of economic and rapid turnaround data collection, and the ability to identify attributes of a population from a small group (sample) representative of the general population. In other words, it is comparatively quick and cheap to conduct and administer. The obvious advantages of cross-sectional study include the prevalence of outcome of interest can be estimated and many risk factors and outcomes can be assessed at the same time. However, there are inherent disadvantages as well. Causal inference cannot be established as such a study can only provide a snapshot of the problem. The prevalence is influenced by the time frame of the study (Levin, 2006).

Study Area

The study was conducted at the Kissi Sub-District in the Central region of Ghana. There are twenty communities under this Sub-District. The Sub-District is among the five sub-districts namely Elmina, Komenda, Ankaful and Agona sub-districts that makes up Komenda-Edina-Eguafo-Abirem (KEEA) Municipal assembly in the Central Region of Ghana. The municipal covers an area of 452 km^2. The 2020 Population Census by the Ghana Statistical Services report that the population of the municipality stood at 208,705. The total population for Males was 93917 whiles Female was 114,787 representing 45% and 55% respectively. This sub-district was chosen for the study because it is among the leading Sub-Districts in the KEEA Municipality with the highest number of mentally ill patients.

Population

Polit and Hungler (1999) refer to the population as an aggregate or totality of all the objects, subjects or members that conform to a set of specifications. In this study the target population was all psychiatric patients in the Kissi Sub-District. The estimated number of patients in the area is 127.

Inclusion and Exclusion Criteria

Psychiatric patients who have had at least one relapse episode since commencing treatment and engaging with mental health care services were included in the study. Emphasis was placed on those who have been diagnosed with several different forms of severe mental illnesses (SMIs). However, patients with history of considerably less severe forms of mental illnesses were excluded from the study.

Sample and Sampling procedure

Yamane's formular for sample size calculation was used to obtain the sample for the study. This was to ensure that the sample size is representative and statistically significant of the general population. The calculation is given below:

$\mathbf{n= N/ 1+ N(e)^2}$

Where, **n** = the sample size, **N**= Population size (127), **e** = Acceptable sampling error (0.05)

$\mathbf{n}$= 127/ 1+ 127 $(0.05)^2$ n= 127/ 1+ 127(0.0025).

n= 127/1.3175

n= 96

A sample size of 96 was arrived at given a population of 127 using the Yamane's sampling formular. However, based on the inclusion criteria, 40 participants were chosen for the study. This sample size was used because most participants were either unwilling or unavailable for the study during the time of data collection.

Research Instruments

The instrument for data collection comprised two sections. The first section gathered data on participant's demographic variables namely age, gender, marital status, employment status. This section also examined prevalence of relapse risk factors among participants. A follow up question was also asked for participants to enumerate the factors that predispose them to relapse.

The second section assessed relapse risk factors among patients with psychiatric outpatients using the Relapse Assessment for Schizophrenia Patients (RASP) by Velligan, Carpenter et al (2017). The adopted instrument was a 6-item tool ranked on a 5-Likert style scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The authors reported a Cronbach Alpha of 0.79 for scale. Analysis was done by classifying the responds of participants into two categories namely "1 Disagree and 2 Agree". Analysis was done by determining a

criterion item mean and was compared to the obtained mean of each item. A score above known mean is a significant relapse risk factor whilst a score below the criterion mean indicates that the item is not a siginifcant relapse risk factor.

Validation of Instruments

The content related evidence of validity of the questionnaire was established by submitting the questionnaire to co-authors for scrutiny. Suggestions made addressed the weaknesses of the questionnaire thereby improving the content validity of the questionnaire.

Pilot Testing

Pilot testing of the instrument was conducted at the Komenda Sub-District in the KEEA. The Sub-District was chosen because of availability of a variety of race, ethnicity, cultural and socio-economic backgrounds within the KEEA Municipality and like Kissi Sub-District where the study was done. Fifteen (15) participants participated in the pretesting study. Reliability of the scales was established by computing the Cronbach's Alpha Formula. Cronbach's Alpha was 0.70.

Ethical consideration

Ethical clearance to undertake the study was sought from the Ethical Review Board of the University of Cape Coast and an introductory letter from the Department of Mental Health nursing since the study involved human participants. The form spelt out the purpose of the study, the need for individual participation, anonymity as well as confidentially of participants. Informed consent was sought from participants by explaining the purpose of the study to them. Anonymity and confidentiality of participants was highly considered in the study. This was to give the participants the opportunity to have their identity and personal information concealed. Neither names nor any identifiable information from participants was taken.

Data collection procedures

Permission to carry out the study was obtained from the KEEA Municipal Health Directorate with an introductory letter from the Department of Mental Health Nursing and an ethical clearance from the Ethical Review of the University of Cape Coast. Upon approval of the study in the Sub- District, the questionnaires were given to selected participants to complete under our guidance. Participants were guided as to how to respond to the questionnaires without influence on the responses they provided. An informed consent and a participation leaflet, explaining the purpose of the study and assurance of confidentiality and anonymity was also provided to participants before the start of administration of questionnaires. Participants used 30-50 minutes to complete the questionnaires. Approximately three months was used for data collection.

Data processing and analysis

Generally, the data gathered for the study was analyzed statistically. The responses to the questionnaires were edited, coded, and scored. The editing procedure helped in checking whether participants followed directions correctly, and whether all items had been responded to. For effective statistical presentation and analysis, the questionnaires were serially numbered to facilitate easy identification. Section 'A' which is on demographic data of the participants was analyzed descriptively using frequencies tables and percentages. Research question one was analysed using frequencies and percentages. Research question two was analysed using means and standard deviation and frequencies and percentages. Finally, while Research question three was analysed using Pearson Moment Correlation.

IV. RESULTS AND DISCUSSION

This section comprises the results of the analysed data presented in tables. The second part of this section presents discussions based on comparison between the study's findings and findings from other studies. The presentation of results was based on the prevalence of relapse, relapse risk factors and the relationship among relapse risk factors and socio-demographic characteristics such as age, gender, marital status, employment status and duration of illness.

Background Information of Participants

The study was conducted among mentally ill patients in the Kissi Sub District. The sample size of participants was 40. Table 1 presents the background information of the participants involved in the study.

Table *1* – *Background Information of Participants (N=40)*

Demographic Variables	Frequency	Percent (%)
Age		
Below 18 years	4	10
19 – 29	29	40
30 – 59	17	42.5
Above 60 years	3	7.5
Total	40	100.0
Gender		
Male	16	40
Female	24	60
Total	40.0	100.0
Marital Status		
Single	26	65.0
Married	8	20.0
Divorced	3	7.5
Widow	3	7.5
Total	40	100.0
Employment Status		
Employed	13	32.5
Unemployed	27	67.5
Total	40	100.0
Illness Duration		
Less than a year	3	7.5
1 – 4 years	16	40.0
5 – 9 years	11	27.5
10 years and above	10	25.0

Source: Field Survey, (2023)

Table 1 shows that majority of participants (n=17, 42.5%) were in the age category "30 – 59 years", whiles the age category "Above 60 years" were 3 participants representing 7.5% of the entire sample size. It was revealed that more than half of participants 60% were females whilst 40% were males. Regarding the marital status, more than half of participants 65% (26) were single whilst the divorced and widows represented 7.5% were married respectively. Similarly, majority of participants (n=27, 67.5%) were unemployed. With regards to illness duration, most participants (n = 16, 40%) were within the "1 – 4 years" category, whilst less participants (n = 3, 7.5%) were within the category "less than a year" category. Relapse rate among participants was 62.5% for those who have relapse before (Yes) and 37.5% for those who have not relapse before.

Analyses of Main Data

Research Question 1: What is the prevalence of relapse among psychiatric patients in the Kissi Sub-District in the KEEA District?

This question assessed the levels of relapse among mentally ill patients in the Kissi Sub-District in the KEEA District. Participants were asked to indicate if they had relapse before by ticking either **"*yes or no*".** Frequencies and percentages were used for the analysis. The analysed results are presented in Table 2.

Table 2 - *Prevalence of Relapse among Mentally Ill patients (n=40)*

Relapse Rate	Frequency	Percent (%)
Yes	25	62.5
No	15	37.5
Total	**40**	**100.0**

Source: Field Survey, (2023).

Table 2 show that more than half (n = 25, 62.5%) of participants had experience relapse before whilst only 15 participants had not relapsed before. The results connote the fact that the prevalence of relapse among mentally ill patients in the Kissi Sub-District is very high.

Research Question 2: What are the risk factors that influence relapse among psychiatric outpatient in the Kissi Sub - District?

This question assessed the factors that predispose mentally ill patients. Participants were required to provide responses to six (6) items scored on a 5-point Likert scale such as Strongly Agree (1), Agree (2), Uncertain (3), Agree (4), Strongly Agree (5). During the data entry participants' score were classified into two categories namely "1, *Disagree and* 2, *Agree"*. This was possible because none of the participants chose the response "*Uncertain*". An item mean score of 1.5 was determined as a criterion measure for each item. An item mean score above 1.5 indicate that the item is a significant relapse risk factor whilst a mean score lower than 1.5

indicates that that item is not a significant relapse risk factor. Table 3 presents the results of the analysis of significant relapse risk factor among participants.

Table 3 - *Means and Standard Deviation Results of Relapse Risk Factors.*

Statement	M	SD	Rank
I've been feeling more worried or nervous than usual	1.75	.439	2nd
I've been feeling more restless or tense than usual.	1.80	.405	1st
I've been feeling angrier or irritable than usual.	1.68	.474	3rd
I've been staying away from others more than usual.	1.65	.483	4th
I've been getting too little sleep.	1.58	.501	5th
Something specific happened recently that really upset me	1.32	.647	6th

Source: Field Survey, (2023)

Results from Table 3 revealed that the most significant relapse risk factor among mentally ill patients is "Feeling more restless or tense than usual" (M = 1.80, SD =.405), followed by "Feeling more worried and nervous than usual" (M = 1.75, SD =.439). Participants also believe that item such as "feeling more angry or irritable than usual" and "Staying away from others more than usual" are significant relapse risk factors. The results further revealed that item 6 "Something specific happened recently that really upset me" is not a significant relapse risk factor. Further analysis was carried out to determine the factors that predispose the 25 participants who had experience relapse before. This was done by using a further question for participants who had relapse before to indicate by ticking the factors they believe caused their relapse. Frequencies and percentages were used for the analysis. The analysed results are presented in Table 4.

Table 4 - *Frequencies and Percentages Results of Relapse Factors.*

Relapse Factors	Frequency (out of 25)	Percent (%)
Unavailability of Medication	13	52.0
Non-Adherence to Medication	15	60.0
Attitude of Physician and Nurses During Reviews	1	4.0
High Cost of Medication	4	16.0
Feeling of Hopelessness	14	56.0
Lack of Family Support	18	72.0
Stressful life Events	18	72.0
Unemployment	11	44.0

Source: Field Survey, (2023)

From table 4, the results reveal that majority of participants agrees that the leading factor for relapse is lack of family support and Stressful life events (n =18 out 25 participants, 72%), followed by non-adherence to medication. The least cause of relapse among mentally ill patients in the Kissi Sub-District is Attitude of physician and nurses during reviews (n = 1 out of 25 participants, 4%).

Research Question 3: What is the relationship among demographic characteristics (age, gender, marital status, employment status and duration of illness) and relapse risk factors among mentally ill patients? This question examined the relationship among mentally ill patients' demographic characteristics such as age, gender, marital status, employment status and duration of illness with regards to the prevalence of relapse. Pearson moment correlation was performed, and the results are presented in Table 5.

Table 5 - *Pearson Moment Correlation of Demographic Variables and Relapse Risk Factors*

		Relapse Risk Factors	Age	Gender	Marital Status	Employment Status	Illness Duration
Relapse Risk Factors	Pearson Correlation	1	.219	-.324*	.060	.296	.181
	Sig. (2-tailed)		.174	.041	.713	.053	.265
	N		40	40	40	40	40
Age	Pearson Correlation		1	-.026	.354*	-.244	.442
	Sig. (2-tailed)			.872	.025	.129	.004
	N			40	40	40	40
Gender	Pearson Correlation			1	.289	-.450**	.066
	Sig. (2-tailed)				.071	.004	.686
	N				40	40	40
Marital Status	Pearson Correlation				1	-527**	.085
	Sig. (2-tailed)					.000	.602
	N					40	40
Employment Status	Pearson Correlation					1	-.070
	Sig. (2-tailed)						.667

Illness Duration	N Pearson Correlation Sig. (2-tailed) N						40 1

Source: Field Survey, (2023).
Significant at $p < 0.05$

Table 5 shows a positive moderate relationship between age, marital status, employment status and illness duration with regard relapse risk factors (r=.219, .060, .296 and .181). This implies that age, marital status, employment status and illness duration influence relapse risk factors among mentally ill patients in the Kissi Sub-District. Nonetheless, the relationship among age, marital status, and illness duration with regards to relapse risk factors is not significant (p=.174, .713, and .265) respectively. The relationship between employment status and relapse risk factors was however significant (r= .296, p = .053). The study results further showed that participants gender showed a significant moderate negative relationship with relapse risk factors (r= -.324, p=.041).

V. Discussion

The purpose of research question one was to assess the prevalence of relapse among mentally ill patients in the Kissi Sub-District. Findings revealed that the prevalence of relapse among participants was generally high (62.5%). The findings suggest that mentally ill patients in this area will have a delayed or low recovery and a very high hospital attendance due to the resurgence of the treated mental disorder. According to the WHO (2008) relapse is one of the most pertinent barriers to recovery and rehabilitation among mentally ill patients. Weinberger et al (1996) discovered that an increased number of readmissions, mostly due to relapses has high-cost implications for the healthcare system. A study by Gbiri et al and Gbiri (2011) revealed that although the world has experienced vast improvement in treatment of mental illness, relapse rate among the mentally ill is relatively high and is responsible for the causing many disabilities among the persons with mental disorders. Xiao et al (2015) also reported the prevalence of relapse among psychiatric patients is significantly high.

Consistent with this study is a report by Adebiyi et al (2018) who examined the rate of relapse and the socio-demographic and clinical factors associated with relapse. In the five years' study, 219 clients admitted into a mental health care facility in Nigeria were involved. Findings revealed that as high as 41% of the participants experienced at least an episode of relapse within the period of study. Among patients with schizophrenia, relapse rates vary from 50% to 92% globally. Likewise, Gathaiya et al (2018) investigated the factors associated with relapse in patients with Schizophrenia at Mathari Hospital, Nairobi Kenya. The cross-sectional study engaged 209 family members or significant others accompanying patients to Mathari Hospital. Patients were selected using a random sampling technique. The study showed that relapse rates was between 58% - 97%. Similarly, Akpalu, et el. (2010) in a study that examined the strategies to improve state psychiatric hospitals in Ghana found that between 75% to 90% of psychiatric patients are readmitted due to relapse. Also, Weret and Mukherjee (2014) assessed the prevalence of relapse and associated factors in patient with Schizophrenia at Amanuel Mental Specialized Hospital, Addis Ababa, Ethiopia. Among the 422 participants, 43.3% of them had relapsed.

Contrary to this study's findings, Fikreyesus et al (2016) assess the prevalence of relapse among 386 patients with psychotic disorders attending services in Jimma University Specialized Hospital. The prevalence of relapse among patients with psychotic disorder was 24.6 %. Of this, 25.4 and 22.4 % were males and females respectively. It was argued that relapse rate is lower among the participants because majority of patients (72%) had a strong social support.

In research question two, the intent was to find the significant relapse risk factor among mentally ill patients in the Kissi Sub-District. It was found that factors such as restlessness, irritability, worrying, being nervous, loneliness, lack of sleep were the risk factors to relapse. Further analysis among participants who had relapse indicated that factors such as Lack of Family Support, Stressful life Events, Unavailability of Medication, Non-Adherence to Medication, and Feeling of Hopelessness. The most prominent relapse factors among these variables are as Lack of Family Support, Stressful life Events and medication non-adherence. Among all the factors associated with relapse, Alvarez-Jimenez et al. (2012), Ascher-Svanum et al (2006) and Novick et al (2010) argued that non-adherence is the strongest predictor of relapse. Discontinuing antipsychotic drug therapy increases the risk of relapse by almost five times.

Similarly, Sariah and colleagues (2014) explored 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. The qualitative study identified that among patients and caregivers the most significant factors that influence relapse is adherence to antipsychotic medication. Other important risks included poor family support, stressful life events and substance use. Xiao et al (2015) examined

the relapse rate and possible relapse factor. The study engaged 876 participants through a telephone survey. Most (50.7%) participants indicated that the most important factor contributing to relapse was poor medication adherence. The top five risk factors associated with relapse were nonadherence to medication, being without work, poor self-care ability, poor interpersonal skills, and hospitalization on more than three occasions.

Similarly, various the findings of this study support the assertion of several studies that factors associated with relapse to 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 et al., 2016; Kazadi et al., 2008; Owens et al., 2010; Adebiyi et al.,2018). Another study reported that significant factors related to relapse consist of lack of home visits, the stigma attached to mental illness, side effects of psychotropic drugs, and unavailability of psychotropic drugs (Nosipho, 2009).

The focus of research question three was to determine the relationship among mentally ill patients' demographic characteristics such as age, gender, marital status, employment status and duration of illness with regards to the prevalence of relapse. It was found that employment status and gender significantly correlated positively and negatively with relapse risk factors respectively. The results reveal that employment status and gender are significantly associated with relapse risk factors. In a related study by Adebiyi et al (2018) that assessed socio-demographic factors associated with relapse reported that socio-demographic variables such as age at onset of illness, educational status, unemployment, social class, living arrangement and family background were all significantly associated with readmission in this group of patients. Further analysis found that patients with duration of illness of greater than five years were 3.43 times more likely to relapse than those with lesser years. Unlike this study, our current study found no significant relationship between illness duration and relapse risk factors. Similar to this study, marital status was not significantly associated with relapse risk factors. This study found that rate of readmission decreases with increasing age. Only 18% of patients above the age of 45 were readmitted at least once in this study. Contrary to this study findings, Mortensen & Eaton (2009) reported that readmission risk decreases with increasing age. Gbiri et al and Gbiri (2011) also studied the socio-economic factors associated with relapse in individual admitted with psychiatric disorders and the pattern of socio-economic impact of relapse in those groups. It a significant relationship was observed among age, sex, number of relapses, number of admissions, pre-morbid marital status, morbid state marital status, pre-morbid state occupational status and morbid state occupational status. This study agrees with Gbiri et al in terms of employment status.

VI. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Overview of the Study

The study was a descriptive cross-sectional survey which examined the relapse risk factors and associated socio-demographic determinants of mentally ill patients in the Kissi Sub-District. The study specifically determined the prevalence of relapse, relapse risks factors and the relationship among demographic variables such as age, gender, marital status, employment status and illness duration with regards to relapse risk factors. The study was conducted at the Kissi Sub- District in the Central Region of Ghana. The study used the purposive and convenience sampling technique to select 40 patients for the study. Relapse Assessment for Schizophrenia Patients (RASP) instrument was adopted for data collection. Data was analysed using Frequencies, Percentages, Means, Standard deviation and Pearson Moment Correlations.

Summary of Key Findings

Findings revealed that the prevalence of relapse among mentally ill patients was generally high. Additionally, the study variables such as restlessness, irritability, worrying, being nervous, loneliness, lack of sleep were the risk factors to relapse. In furtherance, participants who had relapsed indicated that factors such as Lack of Family Support, Stressful life Events, Unavailability of Medication, Non-Adherence to Medication, and Feeling of Hopelessness are the leading cause of relapse. Lastly, the study demonstrated that employment status and gender significantly correlated positively and negatively with relapse risk factors respectively. The results revealed that employment status and gender are significantly associated with relapse risk factors.

Conclusion & Recommendation

The findings suggest that mentally ill patients in this area will have a delayed or low recovery and a very high hospital attendance due to the resurgence of the treated mental disorder. Again, mentally ill patients are affected by many factors depending on their personality and the environment they lived in. Nonetheless, mentally ill patients and caregivers in the Kissi Sub-District should be given psychoeducation to family and patients to enable them to adopt proper coping measures that enhance recovery. Education should include information about the disease course, treatment regimens, support systems and life management skills. Mentally ill patients must be supported to be able to identify specific individual factors that predispose them to relapse after recovery as well as how to manage them accordingly.

Future Direction

Future studies must consider the impact or the bearing of cultural belief systems on relapse among mentally ill patients as well as the positive cultural values that may enhance recovery and offer persons living with severe mental illnesses with the quality of life they deserve.

BIBILIOGRAPHY.

[1]. Adebiyi, M.O., Mosaku, S.K., Irinoye, O.O. & Oyelade, O. (2018). Socio-Demographic And Clinical Factors Associated With Relapse In Mental Illness. International Journal Of Africa Nursing Sciences, 8,149-153.

[2]. Agenagnew Et Al. The Lifetime Prevalence And Factors Associated With Relapse Among Mentally Ill Patients At Jimma University Medical Center, Ethiopia: Cross Sectional Study J. Psychosoc. Rehab. Mental Health (2020)

[3]. Akpalu, B., Lund, C., Doku, V., Ofori Atta, A., Osei , A, Ae-Ngibise, K., Awenva, D., Cooper S., Flisher, A. J. (2010). Scaling Up Community-Based Services And Improving Quality Of Care In The State Psychiatric Hospitals: The Way Forward For Ghana. African Journal Of Psychiatry, Vol. 13, (2), 109–115.

[4]. Almond S., Knapp, M., Francois, C., Toumi, M., & Brugha, T. (2004). Relapse In Schizophrenia: Costs, Clinical Outcomes, And Quality Of Life. Br J Psychiatry, 184, 346–351.

[5]. Alvarez-Jimenez, M., Priede, A., Hetrick, S. E., Bendall , S., Killackey, E., Parker, A. G., Mcgorry, P. D., Gleeson, J. F. (2012). Risk Factors For Relapse Following Treatment For First Episode Psychosis: A Systematic Review And Meta-Analysis Of Longitudinal Studies. Schizophr Res., 139(1–3):116–128.

[6]. Ascher-Svanum, H., Faries, D. E., Zhu, B., Ernst, FR., Swartz, M. S., & Swanson, J. W. (2006). Medication Adherence And Long-Term Functional Outcomes In The Treatment Of Schizophrenia In Usual Care. J Clin Psychiatry, 67(3): 453–460.

[7]. American Psychiatric Association. (2013). Diagnostic And Statistical Manual Of Mental Disorders. (5th Ed). Arlington, VA, American Psychiatric Association.

[8]. Babbie, E. (2007). Survey Research Methods. (5th Ed.). Belmont: Wadsworth.

[9]. Bonney S. & Stickley T. (2008. Recovery And Mental Health: A Review Of The British Literature. J Psychiatr Ment Health Nurs, 15, 140–153.

[10]. Babatunde Et Al. (2021). Barriers And Facilitators To Child And Adolescent Mental Health Services In Low-And-Middle-Income Countries: A Scoping Review. Global Soc. Welfare

[11]. B.D. Kennard Et Al. (2018). Predictors And Moderators Of Relapse In Children And Adolescents With Major Depressive Disorderj. Clin. Psychiatry

[12]. Capdevielle, J.P. Boulenger, D. Villebram, K. Ritchie. (2009). Schizophrenia Patients' Length Of Stay: Mental Health Care Implications And Medico-Economic Consequences. Encéphale, 35 (4), 394-399

[13]. Chaurotia, V. K., Verma, K. K., & Baniya, G. C. (2016). A Study Of Psychosocial Factors Related With Relapse In Schizophrenia. IOSR Journal Of Dental And Medical Sciences (IOSR-JDMS), 15(4), 26–34.

[14]. Davies, T. (1994). Psychosocial Factors And Relapse Of Schizophrenia. Br Med J., 309(6951):353.

[15]. Demyttenaere K, Bruffaerts R, Posada-Villa J, Gasquet I, & Kovess V. (2004). Prevalence, Severity, And Unmet Need For Treatment Of Mental Disorders In The World Health Organization World Mental Health Surveys. JAMA. 291(21):2581–90.

[16]. Dovi, M. (2013). The Silent Crisis: Mental Health In Africa. Consultancy Africa Intelligence's Public Health Unit Discussion Paper, Vol. 1.

[17]. Doku, V. C., Wusu-Takyi, A., & Awakame, J. (2012). Implementing The Mental Health Act In Ghana: Any Challenges Ahead? Ghana Med J. 46(4):241–50.

[18]. Eaton J. (2008). Ensuring Access To Psychotropic Medication In Sub-Saharan Africa. Afr J Psychiatry, 11(3):179–81.

[19]. Elm, J. H. L., Lewis, Jordan P., Walters, Karina, L., & Self, J. M. (2016). I'm In This World For A Reason": Resilience And Recovery Among American Indian And Alaska Native Two-Spirit Women. American Indian Journal Mental Health, 20 (3–4): 352–371.

[20]. Fikreyesus, M., Soboka, M. & Feyissa, G.T. (2016). Psychotic Relapse And Associated Factors Among Patients Attending Health Services In Southwest Ethiopia: A Cross-Sectional Study. BMC Psychiatry 16, 354.

[21]. Floyd, D. L., Prentice-Dunn, S., & Rogers, R. W. (2000). A Meta-Analysis Of Research On Protection Motivation Theory. Journal Of Applied Social Psychology, 30(2), 407-429.

[22]. Fuller, D., Sinclair, E., & Snook, J. (2016). Released, Relapsed, Rehospitalized: Length Of Stay And Readmission Rates In State Hospitals – A Comparative State Survey. Arlington, Virginia. Retrieved From: Https://Www.Treatmentadvocacycenter.Org/Storage/Documents/Released-Relapsed-Rehospitalized.Pdf.

[23]. Gathaiya, N. W., Mwaura, J., & Wagoro, M. C. A. (2018). A Cross-Sectional Study On Factors Associated With Relapse In Patients With Schizophrenia At Mathari Hospital, Nairobi, Kenya. Ann Clin Lab Res, .6, (1) 218.

[24]. Gavois, H., Paulsson, G., & Fridlund, B. (2006). Mental Health Professional Support In Families With A Member Suffering From Severe Mental Illness: A Grounded Theory Model. Scand J Caring Sci, 20, 102–9

[25]. Gbiri, C. A., Badru, F. A., Ladapo, H. T., & Gbiri, A. A. (2011). Socio-Economic Correlates Of Relapsed Patients Admitted In A Nigerian Mental Health Institution. International Journal Of Psychiatry In Clinical Practice, 15, 19–26.

[26]. Kazadi, N. J. B., Moosa, M. Y. H., & Jeenah, F. Y. (2008). Factors Associated With Relapse In Schizophrenia. South Africa Journal Of Psychiatry (SAJP), 14(2), 34432 3443217406-1-PB.Pdf.

[27]. Kessler, R. C., Chiu, W. T., Demler, O., & Walters, E. E. (2005). Prevalence, Severity, And Comorbidity Of 12-Month DSMIV Disorders In The National Comorbidity Survey Replication. Archives Of General Psychiatry, 62 (6):617–27. Https://Doi.Org/10.1001/Archpsyc.62.6.617 PMID: 15939839

[28]. K. Geerts Et Al (2020). Quality Of Life Of People With Severe Mental Health Problems: Testing An Interactive Model Int. J. Environ. Res. Public Health

[29]. Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size For Research Activities. Educational And Psychological Measurement, 30, 607-610

[30]. Lavrakas, P.J. (2008). Encyclopaedia Of Survey Research Methods. Sage Publications, Inc., Thousand Oaks.

[31]. Leamy, M., Bird, V. J., Le Boutillier, C., Williams, J. & Slade, M. (2011). A Conceptual Framework For Personal Recovery In Mental Health: Systematic Review And Narrative Synthesis. British Journal Of Psychiatry, 199:445-452.

[32]. Levin, K. A. (2006). Study Design III: Cross-Sectional Studies. Evid Based Dent, 7(1), 24–25.

[33]. Mathers, C., Fat, D. M. & Boerma, J. T. (2008). The Global Burden Of Disease: 2004 Update. World Health Organization, Geneva.

[34]. Martindale, K., & Phillips, R. (2010). Applying Quality Of Life In Mental Health Social Work Practice. Aotearoa New Zealand Social Work, 22(1).

[35]. Mental Health Commission. (2007). The Challenge To Salvation 1996-2006: The Journey Of Recovery For The New Zealand Mental Health Sector Wellington: Mental Health Commission.
[36]. Morken, G., Widen, J. H., & Grawe, R. W. (2008). Non-Adherence To Antipsychotic Medication, Relapse And Rehospitalization In Recent-Onset Schizophrenia. BMC Psychiatry, 8, 32.
[37]. Mortensen, P. B., & Eaton, W. W. (2009). Predictors Of Readmission In Schizophrenia. Psychological Medicine, 24(1), 223–232.
[38]. Muller N (2004) Mechanism Of Relapse Prevention In Schizophrenia. Pharmacopsychiatry. 37, 141-147.
[39]. Munro, J., Osborne, S., Dearden, L., Pascoe, K., Gauthier, A., & Price M. (2011). Hospital Treatment And Management In Relapse Of Schizophrenia In The UK: Associated Costs. Psychiatrist, 35, 95–100.
[40]. Nosipho D. (2009). Factors Influencing Relapse Of Psychiatric Outpatients In The Rural Communities Of The Eastern Cape Province.
[41]. Novick, D., Haro, J. M., Suarez, D., Perez, V., Dittmann, R. W., & Haddad, P. M. (2010). Predictors And Clinical Consequences Of Non-Adherence With Antipsychotic Medication In The Outpatient Treatment Of Schizophrenia. Psychiatry 176(2–3):109–113.
[42]. Ofori-Atta, A., Read, U. M., Lund, C. & Mhap. P. (2010). Research Programme Consortium. A Situation Analysis Of Mental Health Services And Legislation In Ghana: Challenges For Transformation. African Journal Of Psychiatry, 13(2), 99-108.
[43]. Oppong, S., Kretchy, I. A., Imbeah, E. P., & Afrane B. A. (2016). Managing Mental Illness In Ghana: The State Of Commonly Prescribed Psychotropic Medicines. International Journal Of Mental Health Systems; 10(28):1–10.
[44]. Owens, D. C., Johnstone, E. C., Miller, P., Macmillan, J. F., & Crow, T. J. (2010). Duration Of Untreated Illness And Outcome In Schizophrenia: Test Of Predictions In Relation To Relapse Risk. British Journal Of Psychiatry, 196(4), 296–301
[45]. Piggot, T, A., Carson, W, H., Saha, A, R., Torbeyns, A, F., & Ingenito, G, G. (2003). Aripiprazole For The Prevention Of Relapse In Stabilized Patients With Chronic Schizophrenia: A Placebo-Controlled 26-Week Study. Journal In Clinical Psychiatry, 64, 1048-1056.
[46]. Polit, D.F., Hungler, B.P. (1999) Nursing Research: Principles And Methods. (6th Ed). Philadelphia: J.B. Lippincott.
[47]. Read, U. M. & Doku, V. C. (2012). Mental Health Research In Ghana: A Literature Review. Ghana Medical Journal, 46(2), 29–38.
[48]. Repper, J. & Perkins, R. (2006) Social Inclusion And Recovery: A Model For Mental Health Practice. Bailliere Tindall, UK. ISBN 0-7020-2601-8
[49]. Rogers, R. W. (1975). A Protection Motivation Theory Of Fear Appeals And Attitude Change1. Journal Of Psychology, 91, 93–114.
[50]. Rickwood, D. (2006). Pathways Of Recovery: Preventing Further Episodes Of Mental Illness (Monograph). Commonwealth Of Australia Canberra.
[51]. Ritchie, H., & Roser, M. (2019). Mental Health. Published Online At Ourworldindata.Org. Retrieved From: 'Https://Ourworldindata.Org/Mental-Health' [Online Resource]
[52]. Rössler, W., Salize, H. J., Os, J. V., & Riecher, A. (2005). Size Of Burden Of Schizophrenia And Psychotic Disorders. European Neuro-Psychopharmaco.,15, 399–409
[53]. Sariah, E., Outwater, A, H., & Malima, K, I, Y. (2014). Risk And Protective Factors For Relapse Among Individuals With Schizophrenia: A Qualitative Study In Dar Es Salaam, Tanzania. BMC Psychiatry, 14, (240), 2-12.
[54]. Saunders, M., Lewis. P., & Thornhill, A. (2007). Research Methods For Business Students (4th Ed.). England: Pearson Education Limited.
[55]. Shepherd, J. D., King S., Dixon, J. M (1999). Expressed Emotion And Relapse In Young Schizophrenia Outpatients. Schizophrenia Bulletin, 25(2), 377-386,
[56]. Shives, L. R. (2007). Basic Concept Of Psychiatric-Mental Health Nursing. (7th Ed) Lippincolt William/Wilkins: Philadelphia, USA.
[57]. Suzuki, Y., Yasumura, S., Fukao, A., & Otani, K. (2003). Associated Factors Of Re-Hospitalisation Among Schizophrenic Patients. Psychiatry And Clinical Neurosciences, 57, 555–561.
[58]. Tawiah, P. E., Adongo, P. B., & Aikins, M. (2015). Mental Health-Related Stigma And Discrimination In Ghana: Experience Of Patients And Their Caregivers. Ghana Medical Journal, 49, 30-36. Http://Dx.Doi.Org/10.4314/Gmj.V49i1.6
[59]. Thiam, M. H., Toure, K., & Gueye, M. (2002). Frequency Of Relapse Among Hospitalized Patients At The Psychiatric Department. Dakar Medical, 47(1), 72–76 Www.Ncbi.Nlm.Nih.Gov/Pubmed Accessed On 9/10/12.
[60]. Velligan , D., Carpenter , W., Waters, H. C., Gerlanc, N. M., Legacy, S. N., Reutsch, C.,(2017). Clinical Schizophrenia And Related Psychoses. 11(4): 224-235.
[61]. Videbec, S. L. (2010). Basic Concepts Of Psychiatric-Mental Health Nursing. (5th Ed) Wolters Kluwer Health | Lippincott Williams & Wilkins. China.
[62]. Vigo, D., Thornicroft, G., & Atun, R. (2016). Estimating The True Global Burden Of Mental Illness. The Lancet Psychiatry, 3(2), 171-178.
[63]. Weiden, P. J., & Olfson, M. (1995). Cost Of Relapse In Schizophrenia. Schizophr Bull, 21(3):419–429.
[64]. Weinberger, M., Oddone, E. Z. & Henderson W.G. (1996). Does Increased Access To Primary Care Reduce Hospital Readmissions? New England Journal Of Medicine, 334 (22), 1441-1447.
[65]. Weret, Z. S., & Mukherjee, R. (2014). Prevalence Of Relapse And Associated Factors In Patient With Schizophrenia At Amanuel Mental Specialized Hospital, Addis Ababa, Ethiopia: Institution Based Cross Sectional Study. International Journal Of Interdisciplinary And Multidisciplinary Studies (IJIMS), 2(1), 184-192. Available Online At Http://Www.Ijims.Com ISSN: 2348 – 0343
[66]. World Health Organization [WHO]. (2018). Global Health Estimates 2016: Burden Of Disease By Cause, Age, Sex, By Country And By Region, 2000–2016. Available At: Http://Www.Who.Int/Healthinfo/Global_Burden_Disease/Esti Mates/En/Index1.Html
[67]. World Health Organization [WHO]. (2017). Mental Disorders. Available From: Http://Www.Who.Int/ Mediacentre/Factsheets/Fs396/En/.
[68]. World Health Organization [WHO]. (2014). Mental Health Improvements For Nations Development: The WHO Mind Project. Retrieved From, Www. Who.Int/Mental_Health/Policy/Country/Ghana/En/.
[69]. World Health Organization (2013). Mental Health Action Plan 2013–2020. Geneva, Switzerland: WHO Document Production Services ISBN 9789241506021.
[70]. World Health Organization [WHO]. (2013). Investing In Mental Health. EVIDENCE For Action. 2013.
[71]. World Health Organization And World Organization Of Family Doctors (2008). Integrating Mental Health Into Primary Care: A Global Perspective. Singapore: WHO Press.
[72]. Xiao, J., Mi, W., Li, L., Shi, Y., & Zhang, H. (2015). High Relapse Rate And Poor Medication Adherence In The Chinese Population With Schizophrenia: Results From An Observational Survey In The People's Republic Of China. Neuropsychiatric Disease And Treatment,11, 1161—1167.