2021

Determinants of Substance Abuse among Users with Mental Health Issues in Ogun State, Nigeria

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Walden University
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Abstract

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MPH, West Chester University of Pennsylvania, 2016

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Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

In Nigeria, about 14.3 million people use drugs without physician prescription and approximately 30% of Nigerians suffer from mental illness, some of which is due to substance abuse. This study examined the associations between (a) socio-demographic factors and substance abuse among users with mental health issues in Ogun State Nigeria, (b) clinical variables and substance abuse among users with mental health issues, (c) negative life events and substance abuse among users with mental health issues, and (d) social supports and substance abuse among users with mental health issues. This study theoretical framework was based on the definition of mental health according to American Psychiatric Association's *Diagnostic and Statistical Manual, DSM-5*. A convenient purposive non-probability sampling of patients' data was obtained from clinical case files of 458 patients receiving treatment at Federal Neuropsychiatric Hospital Aro, Abeokuta Ogun State Nigeria were used. The binary logistic regression showed that there were significant association between socio-demographic variables, clinical variables, negative life events and substance abuse. Substance abuse among users with mental health issues was associated with gender, marital status, education, employment, and type of housing; schizophrenia, mood disorder, anxiety disorder, and delusion; history of violence and history of suicide attempt. The adverse effects of substance abuse among users with mental health issues could be seen on the family system, individual members, and on the society. The study findings may be used by mental health professionals to better serve substance abusers leading to positive social change.

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Dedication

This study is dedicated to God Almighty.

Acknowledgments

I would love to appreciate the Faculty of Public Health, Walden University and all the faculty members. This dissertation could not have been completed without the guidance and support from my dissertation committee. My sincere appreciation goes to Dr. John Osward and Dr. Curt G Sobolewski, for their immeasurable and unrelenting support and expertise toward the completion of my doctorate study. I want to thank my father Mr. Bakare Adejimi, who provided the needed foundational educational opportunity on which I have built upon, my mentor and brother Mr. Lanre Sunday Olatunji, who discovered me when I was still searching for myself. The secretary of research department Aro Neuropsychiatry Hospital Mrs. Stanley and special thanks to my research assistant, Mr. Jacob Friday Ebalu for immeasurable and sleepless support toward the completion of the doctorate study. May the good God bless you all. Amen

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Section 1: Foundation of the Study and Literature Review

Introduction

The increasing occurrence of drug or alcohol abuse among individuals with mental health issues has often been revealed in the literature (Catel et. al., 2006; Hattenschwiler et. al., 2001; Kokkevi & Stefanis, 1995; Ross et. al., 1988). Patients with co-occurring severe mental health issues and substance abuse usually face stigma, problems with the law (Normal et al., 2010), poor education, unemployment, loneliness, poverty, +and homelessness as compared to those with severe mental disorders only (Laudet et. al., 2000). They also have more serious psychiatric symptoms, poorer treatment outcomes (Catel et. al., 2006) and use health services more often (Urbanoski et al., 2007).

Substance abuse and addiction form a major burden to the societies. In the Nigeria, economic costs alone are increasing annually, including health, crime related costs, and losses in productivity (Cicero et. al., 2008). Abused drugs fall into three categories: depressants (e.g., heroin, barbiturates), stimulants (e.g., cocaine, crack, amphetamines) and hallucinogens (e.g., marijuana, ecstasy) they are ingested, inhaled, smoked, injected or snorted. Depressants are sedatives which act on the nervous system Baldisseri, 2007).

There continues to be an enormous unmet need for drug use prevention, treatment, care and support, particularly in developing countries (Normal et al., 2010). Drug use affects not only individual users, but also their families, friends, co-workers and communities. Children whose parents take drugs are themselves at greater risk of drug use and other risky behaviors (Normal et al., 2010). Drugs generate crime, street violence and other social problems that harm communities (Isa & El-Sabbagh, 2014).

In some regions, illicit drug use is contributing to the rapid spread of infectious diseases like HIV and hepatitis (World Health Organization [WHO], 2003).

Drugs contain chemicals that tap into the brain's communication system and disrupt the way nerve cells normally send or receive information. As a person continues to abuse drugs, the brain adapts to the overwhelming surges in dopamine by producing less dopamine or by reducing the number of dopamine receptors in the reward circuit (Isa & El-Sabbagh, 2014). The result is a lessening of dopamine's impact on the reward circuit, which reduces the abuser's ability to enjoy the drugs. This decrease compels the addicted person to keep abusing drugs in an attempt to bring the dopamine function back to normal, except now larger amounts of the drug are required to achieve the same dopamine high; an effect known as tolerance (Stalker & McArthur, 2012).

Substance abuse interferes with a good nutrient supply to the brain and may result in brain damage, which is done in a cognitive and formal manner. Excessive alcohol use causes the brain to age prematurely. Brain disorders commonly associated with alcoholism are Wernicke's syndrome, Koraskoff's psychosis and Marchiafava's disease (Bezuidenhout, 2004). Substance abuse can weaken a person's inhibitions, dull the common sense, bring out sexually aggressive behavior and make the users more egocentric. Substance abuse leads to stress and anxiety, which in turn may cause the user to increase the substance dosage to cope with the situation. When this fails, the individual may suffer from uncontrolled depression and may commit suicide (Schatz, 2013). These adverse effects of substance abuse justify the necessity to examine the determinants of substance abuse among users with mental health issues and (to better precise) their relative significant.

Background

Substance abuse has become an important social and health problem in many countries of the world United (Nations Office on Drugs and Crime [UNODC],2018). According to Keyes et al. (2010), the public health burden of the cycle of domestic violence is because of substance use and substance use contributes more to this public health burden more than any other risk factor. Barret et al. (2017) discovered that humans have persistently sought to use substances to alter their mental states. Some of these substances and their use are often found in an uneasy position between legitimate medical use and substance abuse.

According to Barrett et al. (2012) and Robichaud et al. (2003), many people who regularly abuse substances are also diagnosed with mental disorders and vice versa. Barrett et al. (2012) observed that people who were diagnosed with anxiety disorders were about twice as likely to also suffer from a drug use disorder (abuse or dependence).

Castel et al. (2008) noted the high prevalence of drug or alcohol abuse among individuals with severe mental disorders. Compared to those with severe mental disorders only, Norman et al. (2010) noted that individuals with severe mental disorders and substance abuse disorders usually face stigma, problems with the law, poor education, unemployment, loneliness, poverty, and homelessness. Similarly, individuals with mental disorder due to substance abuse have more serious psychiatric symptoms, poorer treatment outcomes, and use health services more often (Urbanoski et al., 2007).

In both clinical and epidemiological studies, Fleury et al. (2014) confirmed that sociodemographic variables such as age, gender, civil status, education, and

employment are the most major causes of substance abuse for users with severe mental disorders. Gender and cultural differences are also societal factors associated with substance abuse (Tuchman, 2010). For example, the overall rates of illicit drugs abuse and drug dependence for most substance users, tend to be higher among males than females (Tuchman, 2010). Furthermore, males are more likely than females to suffer from antisocial personality disorder, while women have higher rates of mood and anxiety disorders than do men—all of which are risk factors for substance abuse (Wustoff et al., 2015).

Aina et al. (2010) reported that, despite worldwide concern and education about psychoactive substances, many adolescents in Nigeria have limited awareness of their adverse consequences. Curiosity, social pressure, and peer group influence are noted to be primary reasons for substance misuse. According to Danjuma et al. (2016), a substantial percentage of the Nigerian national budget is used for treatment and rehabilitation of people with substance use problems.

In a study carried out in the northern part of Nigeria by Abdu-Raheem (2013), it was discovered that, to control sleep or energize themselves, a majority of the adolescents sampled started experimenting with tobacco, alcohol and ephedrine. Some of the reasons for the drug abuse, as identified by Rose et al. (1988), are due to pain and anxiety, ignorance and misinformation on the use of such drugs, parental background, urge to commit crimes, peer group influence, isolation and loneliness.

According to Chikere and Mayowa (2011), alcohol use is the most common drug among students, and many students who drink had their first drink in family settings. The authors also discovered that many students affected were initiated into the use of alcohol at 16-20 years.

However, studies on determinants of substance abuse among users with mental health issues have not been previously done with the population in the southwest region of Nigeria and it is expected that findings will provide much needed understanding of these relationships between what and what? and prove useful in creating social change in Ogun State and by extension, the southwest region and the country at large.

Statement of the Problem

The nonmedical use of prescription drugs is becoming a major threat to public health and law enforcement worldwide, with opioids causing the most harm and accounting for 76% of deaths where drug use disorders were implicated (United Nations Office on Drugs and Crime [UNODC], 2018). UNODC, in collaboration with the National Bureau of Statistics (NBS) and the Center for Research and Information on Substance Abuse (CRISA), UNODC observed that 14.3 million people in Nigeria abuse all forms of drugs and reported "lifetime use" of alcohol and cigarettes (UNODC, 2018). According to UNODC (2018), There is a steady upward trend in drug peddling as attested by seizure statistics; the rate of illicit drug use in Nigeria in 2018 was more than twice the global average of 5.3% (UNODC, 2018). According to the Federal Ministry of Health in Nigeria? (2019), approximately 30% of Nigerians (60 million out of about 200 million) suffer from mental illness—a high rate—some of which is due to substance abuse. Despite having a high number of cases of mental illness in Africa (WHO, 2017), Nigeria has one of the lowest numbers of psychiatrists in the world.

While the government is trying to improve the health of every Nigerian, not just for human rights but as a necessary element of social and economic development,

drug use and abuse are seen as one of the problems that hinders the country from moving from underdeveloped to developed nation (Nwannennaya & Abiodun, 2017).

It was against this backdrop that the study sought to bridge the knowledge gap, that is, the lack of data on why substance abuse is high in Nigeria. Unlike other studies, this study looked into various causes of substance abuse in Nigeria. Although various studies have been conducted on the prevalence of psychoactive substance use and abuse in Nigeria (Akanni et al., 2015; Champion et al., 2016; Chukwujekwu, 2017; Odejide & Ohaeri, 1988), there is a scarcity of literature on the influence of demographic factors, clinical variables, negative life events and social support on substance abuse among users with mental health issues in Ogun State, Nigeria. Thus, this study focused on a series of variables: age, gender, civil status, education, type of housing (own or rent), language spoken, importance attached to spirituality; schizophrenia, mood disorders, and anxiety disorders; history of violence, history of problems with the law, history of suicide attempts; social provision scale score, contact with family members and friends who helped with substance abuse. Also, this study looked at the significance of each of these variables on substance abuse. Logistic regression was carried out to determine the effect of substance abuse based on the characteristics of the users with mental health issues, while holding constant a particular variable in each of the categories. This helped determine which of the variables had great effect on substance abuse. No study was found that had used this approach to examine the determinants of substance abuse in Nigeria.

Purpose of the Study

The purpose of this study is to determine how the research questions relate to (a) determinants of substance abuse among users with mental health issues; the (b)

extent to which each of the determinants relates to substance abuse and what (c) actions need to be taken to address the effect of substance abuse among users with mental health issues in Nigeria. The objectives of this study were to (a) gather data on the study question using clinical data from patients' medical records and to (b) analyze the results of what exactly? in relation to trends in treatment referrals, to identify what interventions could be developed. Outcomes from this study will inform practice and policy within the treatment service associated with this study in ways that those engaging in substance misuse. Outcomes from this study may also have the potential to inform and direct policy makers on how to combat the problem of drug abuse, check the trafficking of hard drugs, and possibly helps further study.

Research Questions and Hypotheses

This study was guided by the following four research questions and hypotheses:

1. Do sociodemographic factors (age, gender, marital status, education, employment, type of housing [own or rent], language spoken, and religion) have a significant association with substance abuse among users with mental health issues?

   $H_0$1: There is no significant relationship between sociodemographic factors and substance abuse.

   $H_1$1: There is significant relationship between sociodemographic factors and substance abuse.

2. Do clinical variables (schizophrenia, mood disorders, schizophrenia spectrum disorder, anxiety disorders, delusion and other psychotic disorders) have a

significant association with substance abuse among users with mental health issues?

$H_0$2: There is no significant relationship between clinical variables and substance abuse.

$H_1$2: There is significant relationship between clinical variables and substance abuse.

3. Do negative life events (history of violence, history of problems with the law, and history of suicide attempts) have a significant association with substance abuse among users with mental health issues?

   $H_0$3: There is no significant relationship between negative life events and substance abuse.

   $H_1$3: There is significant relationship between negative life events and substance abuse.

4. Do social supports (social provision scale score, contact with family members and friends who help) have a significant association with substance abuse among users with mental health issues?

   $H_0$4: There is no significant relationship between social supports and substance abuse.

   $H_1$4: There is significant relationship between social supports and substance abuse.

Theoretical Framework

The diagnostic and statistical manual disorder, fifth edition (DSM-5) is the 2013 update to the diagnostic and statistical manual disorders, the taxonomic and diagnostic tool published by the American Psychiatric Association (APA). Beginning

in 2000, work groups were formed to create a research agenda for the fifth major revision of DSM (DSM-5). These work groups generated hundreds of white papers, monographs, and journal articles, providing the field with a summary of the state of the science relevant to psychiatric diagnosis and letting it know where gaps existed in the current research, with hopes that more emphasis would be placed on research within those areas. In 2007, APA formed the DSM-5 task force to begin revising the manual as well as 13 work groups focusing on revising disorder area.

According to Scheid and Horwitz (1999), some mental health practitioners and a majority of psychiatrists view psychiatric symptoms as indicators of disease, whereas others such as psychologists, physiotherapists etc. view these symptoms as deviance. While the describe mental health issues in the context of stress and poor coping, the focus of the mental health practitioners and most psychiatrists is on people having profound symptoms that cause dysfunction. Advocates of this view generally refer to the definition of mental ill health found in *DSM-5* (American Psychiatric Association, 2013). The DSM-V defines a mental disorder as a

> behavioral or psychological syndrome or patterns that occur in an individual, reflecting an underlying psychobiological dysfunction, the consequences of which are clinically significant distress (a painful symptom) or disability (impairment in one or more important areas of functioning). It is not merely an expected response to common stressors and losses (the loss of a loved one) or a culturally sanctioned response to an event (trance states in religious rituals). It is primarily a result of social deviance or conflicts with society. (p.20).

The DSM-5 also emphasized that such a syndrome or pattern should be culturally or circumstantially driven. It should at least concurrently manifest a

dysfunction that may be diagnosed in clinical settings, irrespective of the causes. Deviant behaviors as well as conflict between the individual and society are not mental disorders. These behaviors may be considered mental disorders only if they exhibit themselves as a symptom of a dysfunction in the individual.

The psychiatric epidemiological approach to mental health is a specialized part of medical epidemiology. It concerns the prevalence and patterns of mental diseases, their determinants and correlates in different populations (Alegria et al., 2018). More specifically, psychiatric epidemiology concerns the relevance of social circumstances and sociodemographic characteristics such as age, sex, social class, and occupation on mental health outcomes (Silva et al., 2013). Thus, this area falls in the domain of both sociology and psychiatry. In order to study large populations, psychiatric epidemiology often employs survey research techniques, which are also tradition ally attributed to sociology (Silva et al., 2013). While studying large samples of people is important for generalizability as well as policy, it is a challenging task with respect to mental illness (Silva et al., 2013). Epidemiological surveys are often conducted by non-clinicians who ask respondents about the symptoms they experience (Safdar et al., 2016). Such settings are prone to diagnostic errors due to a lack of safeguards and corrective mechanisms that could be provided only in clinical settings (Safdar et al., 2016). Also, it is not feasible for clinicians to comprehensively interview a large sample of the population to get an accurate diagnosis (Safdar et al., 2016). Therefore, epidemiologists must rely on interviews conducted by non-clinicians in a general setting (Safdar et al., 2016).

Conceptual Framework

Conceptual framework is an analytical tool with several variations and contexts. It is used to make conceptual distinctions and organize ideas (Mugenda & Mugenda, 2009). In this study, the dependent variable is substance abuse (drug and alcohol abuse), while the independent variables are sociodemographic factors, clinical factors, negative life events, and social support.

The conceptual framework of the determinants of substance abuse among users with mental health issues organizes risk and protective factors at the individual, family, community, and societal levels. The factors from the four included documents were synthesized. The body of evidence describes a greater number of risk factors than protective factors. The relationships between these factors and substance abuse may not be causal. The factors in the conceptual framework (Figure 1) are not weighted because the evidence does not describe the magnitude of the effect of each factor. The conceptual framework is summarized below:

(A) At the individual level, a person's development, experiences, and health can influence substance abuse.

(i) Risk and protective: Social or emotional intelligence, degree of risk-taking sense of self and life events impact the likelihood of substance abuse (UNODC, 2015). Sense of self can include both low self-esteem or self-efficacy. Life events can be positive or negative; the latter of which can include death and loss, severe trauma, or homelessness (Crane et al., 2012).

(ii) Risk: Mental health problems, genetic predisposition, poor health or development, favorable attitude towards drugs, problem behavior or

temperament, and early substance use, increase the likelihood for substance abuse (UNODC, 2015). Poor health or development includes prenatal alcohol exposure, and poor physical, mental, and sexual health (Crane et al., 2012). Examples of problem behavior or temperament include antisocial behavior, rebelliousness and poor impulse control (Crane et al., 2012 & UNODC, 2015).

(iii) Protective: Being resilient and having a pro-social attitude and healthy lifestyle are protective against substance abuse (NSWMH, 2014).

(B) At the family level, relationships can influence substance abuse.

(i) Risk and protective: Parenting style or practices, as well as relationships or attachment serve as both risk and protective factors for substance abuse (HHS, 2016). Examples of parenting style or practices include low parental involvement as well as recognition for positive behavior (HHS, 2016). Examples of relationships or attachment include low parental warmth, as well as nurturing, supportive attachments to family and extended kinship networks (UNODC, 2015).

(ii) Risk: Additional risk factors include family conflict or abuse, negative role modelling, and social deprivation (NSWMH, 2014). Negative role modelling can include parental modelling of drug use or parental attitudes that are favorable towards drugs (HHS, 2016 & UNODC, 2015).

(C) At the community level, the school, workplace, and neighborhood environments, and peoples' interactions within these, can influence substance abuse.

(i) Risk and protective**:** Social integration, social influence, academic commitment or performance and access to supports can increase or decrease the likelihood of substance abuse (HHS, 2016 & UNODC, 2015). Social integration can include interpersonal alienation or participation in community activities, such as sport and recreation (Crane et al., 2012 & UNODC, 2015). Social influence largely relates to peer groups and can include peer substance use or healthy beliefs and standards for behavior (HHS, 2016).

(ii) Risk: Additional risk factors at the community level include a lack of sense of community, high substance availability, work stressors and bullying (Crane et al., 2012 & UNODC, 2015). As part of a lack of sense of community, low neighborhood attachment and community disorganization can increase the likelihood of substance abuse (HHS, 2016).

(iii) Protective: High levels of social capital (i.e. the value of a person's social network) can help protect against substance abuse (Crane et al., 2012 & UNODC, 2015).

(D) At the societal level, culture, policy, and socioeconomic factors can influence substance abuse.

(i) Risk and protective: Substance abuse can be influenced by factors related to housing and socioeconomic status (Crane et al., 2012 & UNODC, 2015).

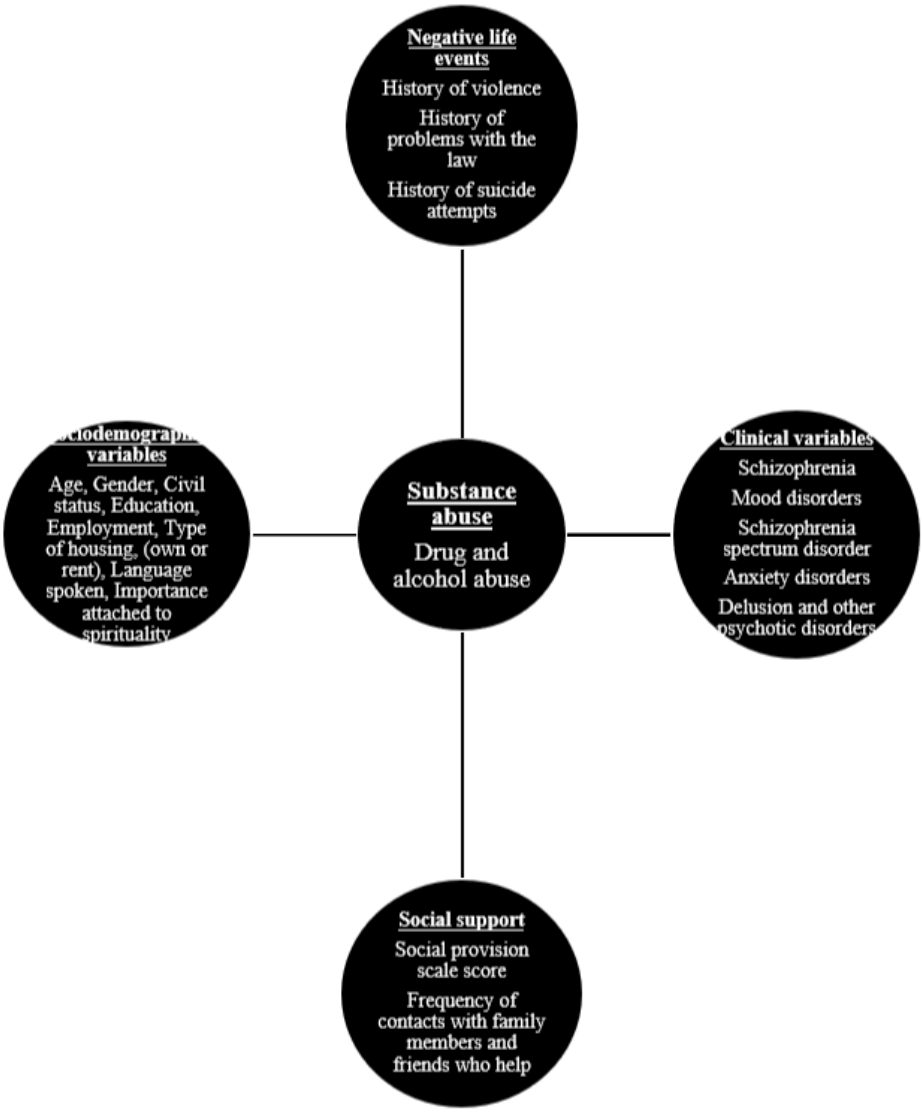
(ii) Risk: Additional risk factors at the societal level include discrimination or inequality, laws and norms favorable to drug use, and media portrayal that is favorable to drugs (HHS, 2016 & UNODC, 2015).

The influence of risk and protective factors varies. Variation occurs over the life course and can be related to changes to an individual's physiology or environmental context. (HHS, 2016 & NSWMH, 2014) Adolescence is a particularly at-risk period for the development of substance abuse problems (HHS, 2016 & UNODC, 2015). During this period, there is a greater tendency towards risk taking and experimenting, and there are changes in the brain that can make it more vulnerable to substance use (HHS, 2016) The risk factors for different stages and severity of use (i.e. initiation of use, continued use, abuse or dependence) also vary (NSWMH, 2014).

Population subgroups experience different levels of exposure to risk and protective factors. Some risk and protective factors appear to have a similar effect across gender, race and ethnicity. However, vulnerable populations are generally exposed to more risk factors and fewer protective factors compared to the rest of the population (HHS,2016) Furthermore, the differences in drug use by gender are primarily due to differences in how men and women are influenced by the social or cultural environment, as opposed to inherent gender vulnerability (UNODC, 2015).

Figure 1

Determinants of Substance Abuse Among Users with Mental Health Issues



Nature of the Study

This study used the quantitative method, based on cross-sectional, secondary data. This method was appropriate because it looked at the relationships between the factors that determined substance abuse among users with mental health issues and established cause and effect under highly controlled circumstances. This study was descriptive in nature and used clinical data from patients' medical records. To aid in data analysis, this study considered descriptive research that involved the time when

the variables of interest were measured, that is, it investigated the influences between the variables at various points in time. By describing the determinants of substance abuse among users with mental health issues, the study collected detailed factual information, identified problems, and current conditions, made comparisons and evaluations, and suggested implications.

The study population included male and female adults, living with mental illness, and receiving treatment at Aro Psychiatric Hospital in Ogun State. Nonprobability sampling was used. The study used convenient, purposive sampling, which is generally made up of patients from hospital treatment services and patient data obtained from readily available sources, such as hospital admission statistics, case registers, and case notes (Jain, 2020). The sample size for this study was 408; the criteria were as follows: age 18 years and above, individuals whose mental health issues were as result of substance abuse (drug and alcohol abuse) and individuals whose mental health issues could be traced to other causes other than substance abuse.

Operational Definitions

Substance: this is a chemical used in the treatment, cure, prevention or diagnosis of disease or to enhance physical and mental well-being (Rice & Dolgin, 2008)

Substance abuse: this is the chronic or habitual use of any chemical substance to alter states of the body or mind, other than medically warranted purposes leading to effects that are detrimental to the individual's physical or mental health or welfare of others (Drug Addiction and Drug Abuse, 2008)

Drug abuse: this is the use of drugs without regard to medical prescription or advice (Nwika, 1972)

Drug: is a substance that is used for medical purpose to bring about changes in the state of cells or organs of the human body (Nwika, 1972)

Substance dependence: is the uncontrollable craving and use of substance despite the potential or actual harm to the person and society that may result from it (Rice& Dolgin, 2008).

Health: is a condition of a comprehensive physical, social and mental well-being and not simply non-existence of a disease or illness (WHO, 1946)

Mental health: is the condition welfare in which a person recognizes his or her capabilities, deal with the typical pressure of life, labor efficiently and is competent to contribute meaningfully to his or her society (Oyewunmi et al., 2015)

Mental illness: refers to a psychological form that takes place in persons and relates to suffering or ill health that is not likely to be a feature of the ways of life in the society (Akinade, 2008)

Co-occurring disorder: A behavioral health disorder by an individual characterized by co-existing substance use disorder and mental illness (SAMHSA, 2002)

Substance use disorder: Habitual use of substances that degenerates to maladaptive and symptomatic changed in behavior that would otherwise be viewed as undesirable and improper comparatively in all culture (APA, 2000).

The Diagnostic and Statistical Manual of Mental Disorder (DSM): Authorized classification of metal health disorder endorsed and used by Mental Health Practitioners in the United States (APA, 2013). The fifth edition, DSM-5, was used in this study.

Assumptions, Scope or Delimitations and Limitations.

The following assumptions were made in this study:

- I assumed that there are discernable patterns of behavior, opinion, and beliefs in the society and that the patients and their medical records share in these broad patterns with common discourse.
- I assumed that the patient clinical records were accurate and the information therein are adequate.
- I assumed that the mental health practitioners that assisted me in the collation of the data full understands and are aware of the concept of the determinants substance abuse and related addictive disorder.
- I assumed that the data collection method and the imputation was done in a non-contextual manner. In other words, I assumed that the social and physical environment for data collation and imputation are well set to avoid data error of omission and commission.

Scope and Delimitations.

The methodology and the choice of variables (both independents and dependent) examined in this study were delimited. The decision to examine the determinants of substance abuse, it relation to mental health issues, the decision to use secondary data (patients' clinical record) and the decision to involve mental health practitioners in the Federal Neuropsychiatric Hospital, Aro Abeokuta, Ogun State were important delimitations of this study. The study makes use of the medical records of the patients and exclude other medical assistance, spiritual homes and primary healthcare practitioners etc. who might have encountered patients with substance related mental health issues. In addition, complex mental health issues and

other related issues could not be examined in great depth due to the secondary data that was used.

Limitations

This study, just as every other secondary data-based study, was not without limitations as it relied on already processed patients' clinical records. The method of keeping medical records (paper base method) make it difficult to retrieve information about the patients on time. In other words, the paper base method of keeping patients' clinical records is time consuming. There was lack of additional information such as social provision scale score, frequency of contacts with family members and friends giving help etc. about the patients and the prevent and hinder further study and understanding of the mental health problems and needs of the country.

Implication for Social Change

If opportunities to promote the health of individuals abusing substance and mental health issues, to minimize harm, with possible reduction in criminal activities, and loss of productivity due to disability are to be strengthened, it is important to know the determinants of substance abuse among users with mental health issues in Nigeria. The relationship between the factors that caused the use of substance and the abused of substance must be well understood. Therefore, to provide evidence-based drug dependent treatment in Nigeria, it is expected that this study will encourage positive professional discretion and increased medical judgment in designing empirically validated drug dependent treatment plans and care, which are based on the needs of individuals having mental health issues due to substance abuse. Because the factors responsible for substance abuse among users with mental health issues play a pivotal role in diagnoses and identification of substance-use related problems

(Akinade et al., 2008), it is expected that additional research on tackling substance abuse with a primary focus on the factors responsible for its occurrence, would contribute to reduction in the rate of substance abuse among users with mental health issues. In addition, this research could help facilitate the rehabilitation and reintegration of drug using populations while enhancing effective treatment and strategies in curbing the menace of substance abuse. It is expected that this study will improve accountability and oversight while promoting the state-of-art policies toward the reduction substance use and abuse and treatment services in Nigeria.

Significance of the Study

Nigeria, a developing country, has meager resources to meet the basic needs of the citizens (UNODC, 2019). The country stands to experience further decline in resources because most of its productive population involved in illicit drug use and alcohol abuse (UNODC, 2019). The situation is likely to worsen given the steady increase in substance abuse in the country (UNODC, 2019). The findings of this study could be used to educate adolescents and their parents on substance abuse; they could also help educators, health care professionals, and other professionals involved with mental health to understand the determinants of substance use and abuse, associated morbidities and most importantly, to develop effective evidence-based strategies and policies to control the substance abuse problem. At the same time, policy makers will make use of the findings from this study to formulate future policies and "best use practices" with respect to drug abuse and addiction. Thus, this study will provide strategies to alleviate the substance abuse and addiction menace.

The study could also be important to government agencies because they will apply the findings to help ensure the fight against drug and substance abuse, through

National Drugs Law and Enforcement Agency (NDLEA), is successful. Projects may be established to help reduce the prevalence of drug and substance abuse in Nigeria. The findings of this study are expected to be of great importance to researchers involved in policy making. The study will contribute to the literature on the prevalence of drug and substance abuse and it will be helpful to researchers who want to examine more study on the determinants of substance abuse.

Summary (Transition)

In this chapter, I described the dearth of knowledge and gap in the literature regarding the determinants of substance abuse among users with mental health issues in Ogun State Nigeria. Furthermore, the theoretical proposition (DSM-5) as it relates to the research questions and the study approach was explained unambiguously. A concise rationale for conducting a non-experimental quantitative research was provided. In addition, the potential contribution of this research of examining the factors responsible for substance abuse among users with mental health issues, the significance, and positive social implications of this study were reiterated and ascertained. Chapter 2 offers an exhaustive review of the literature on (a) substance use and abuse (b) mental health and mental illness; (c) Prevalence of substance uses and abuse, (d) Prevalence of substance according to type of substance use, (e) factors influencing abuse of substances; (f) effects of substance abuse and substance abuse related studies in Nigeria; and (e) the socio-demographic profile of Ogun State. The gap in the literature is shown, and studies that described both the dependent variables (drug and alcohol abuse) and the independent variables (socio-demographic characteristics, clinical variables, negative life events and social support) were reviewed and synthesized. Chapter 3 covers issues regarding the methodology. It

includes the sampling and sampling procedures, the target population, the procedures data collection.

Literature Review

In this subsection, the literature on substance use, its determinants, and users with mental health issues are discussed. The focus was on the following:

- concept of substance uses and abuse, type of abused substance.
- concept of health, mental health and mental illness.
- prevalence of substance used and abuse among users.
- factors influencing abuse of substance.
- the effects of substance abuse on health, economics, and social aspects.
- The sociodemographic profile of the hospital used was discussed.

Literature Search Strategy

To identify prospective, peer-reviewed articles (as well as books and grey literature), the following electronic databases were used: PsycINFO, PsycARTICLES, ScienceDirect, PubMed, Cochrance Database of systematic Reviews, Citation Index Expanded, Database of Abstracts of Reviews of Effects (DARE), ProQuest Dissertation and theses, Google Scholar, Google search engine, Walden university e-library, and University of Ibadan e-library—were searched for the years 2000–2020 using the following keywords: *mental health issues, substance abuse and mental health, causes of mental health, determinants of substance abuse and mental health, mental health clinical variables, negative life events substance dependence, demographic variables, illicit drugs use substance use, psychoactive substance use, substance abuse related studies in Nigeria effects of substance use and abuse, factors of substance abuse and perception of substance abuse related disorders.* Abstracts

were used to judge an article's relevancy to the research questions. The reference lists of the selected articles were searched for additional articles.

Conceptual Foundation

A substance is a chemical used in the treatment, cure, prevention, or diagnosis of disease or to enhance physical and mental well-being (Rice & Dolgin, 2008). Substance abuse refers to chronic or habitual use of any chemical substance to alter states of body or mind, other than medically warranted purposes leading to effects that are detrimental to the individual's physical or mental health or the welfare of others (Drug Addiction and Drug Abuse, 2008). A drug, according to Nwika (1972), is a substance, an element, a compound or a mixture that is used for medical purpose to bring about changes in the state of cells, tissues or organs of the human body or in other organism, such substance could be made alone or in combination with nondrug substance, each as exigent, additive or adjutant. On the other hand, drug abuse can be defined as the use of drugs without regard to medical prescription or advice. The administration can either be over or under which in turn gradually leads to tolerance or end up being addicted to the drug.

On the other hand, substance dependence according to Rice Dolgin (2008) refers to the uncontrollable craving and use of substances despite the potential or actual harm to the person and society that may result from it. It includes both legal and illegal substances. Those dependent on substances are often unable to quit on their own and need treatment to help them to stop using the substances (Kring et al., 2007).

Types of Abused Substances

Legal substances are socially acceptable psychoactive substances (Miranda, 1987; Pelzer et al., 2010), and include over the counter and prescription medicines, such as pain relievers, tranquilizers including benzodiazepines, cough mixtures containing codeine and slimming tablets (Craig & Baucum, 2001). In addition, there are other agents such as solvents in glue, alcoholic beverages, nicotine and inhalants, nail polish and petrol. Illegal substances are prohibited, and the use, possession or trading of these substances constitute a criminal offence (Miranda, 1987). These substances include cocaine powder, crack cocaine, heroin, ketamine, cannabis, ecstasy, fentanyl, morphine, methaqualone (Mandrax), opium, flunitrazipam (Rohypnol), methamphetamine and Wellconal (Craig & Baucum, 2001).

Concept of Health

The most famous definition of health is located in the preamble to the constitution of World Health Organization (WHO). The holistic model of health, as conceptualized by WHO, is a condition of a comprehensive physical, social and mental well-being and not simply the nonexistence of a disease or illness (WHO, 1946). This definition indicates that there is a fundamental relationship between the soundness of the body and the good of the self. The WHO's *Ottawa Charter for Health Promotion* (1986) views well-being as multidimensional and promotes a social prototype of health. It describes health as an affirmative notion highlighting social and personal assets in addition to physical capacities.

According to Keyes (2010), health is a state in which humans and other living creatures interact and co-exist indefinitely. Health is a state characterized by anatomic, physiologic integrity, ability to perform especially valued familial, work,

and community roles, the capacity to deal with physical, biological, psychological and social stress (Strokes, 1982). Health is characterized by the capability of persons, families, groups, and communities to deal successfully with substantial misfortune or risk (Kenyatta, Lashan, & Lacey, 2014). The measurement of the state of health of a population involves more than counting the individuals who, on checkup displayed unmistakable signs of disease and comparing their number with those who do not. No matter the variations in the definitions given by authors, the assessment of mental health is still subjective to the author's conceptualization.

Social scientists in United States covered that psychosocial welfare may be a more precise construction of mental and social safety. Thus, they have interrogated the rationality of an explanation that entails complete health. Nevertheless, an expansion of the World Health Organization's explanation may be essential to comprise a spiritual part of health if social scientists can come to an understanding that mysticism is a characteristic of health and not simply an effect (Jegede, 2010). The primary determinants of health, according to the WHO, are the societal, economic, physical setting and the individual characteristics and conduct of the person.

In Nigeria, there are different conceptions concerning health and disease. According to Omotosho (2010), sociocultural factors which affect the perception of health include religion, ease of use of relatives in the hospital or link with hospital staff, family decision, marital status, position in the household, educational status and, very significantly, the nature of the disease.

Concept of Mental Health and Mental Illness

It is challenging to conceptualize mental? health, as no single definition is collectively recognized by scholars in the area of mental health. It is a socially generated and definite idea, that is, diverse cultures, groups, beliefs, and expertise have diverse means of conceptualizing its environment of what is psychologically fit.

To most educated persons, the concept of mental health has been confused with the idea of mental illness. Mental health is more than the mere nonexistence of mental illness. Mental health is an important and indispensable constituent of health. It is a condition of welfare in which a person recognizes his or her capabilities, deal with the typical pressures of life, labor efficiently and is competent to contribute meaningfully to his or her society. In the optimistic view, mental health is the basis for individual well-being and the proper running of society (Oyewunmi, Olabode, Oluwole, & Ayannike, 2015). The Canadian Mental Health Association (2014) argued that assessing mental health is not as simple to do as measuring physical health. The contributory factors to how well individuals can adapt in the society include their physical condition, genetic makeup, learning, reasoning, and socialization. Others are culture, life experiences, drugs, diseases and psychological mechanisms (Akinade, 2008).

The variety of meanings presented can be challenged on some grounds, relating to their compatibility with one another and their internal reliability (Rogers & Pilgrim, 2010). However, a statistical norm can be used to define mental health, but what is common in one culture may be strange in another society. It is not easy to draw a firm line between normal and abnormal mental states. Diverse scholarly works have focused on various scopes of mental health, used diverse meanings of mental

illness and considered different populations, and a large portion of them have not measured for all the mystifying issues (Mukherjee, 2013). The characteristics of mental health include ability to enjoy life, self-actualization, flexibility, balance, and resilience (Castle et al., 2008).

Keyes (2002) further divides the concept of mental health into three independent domains, namely, emotional, psychological, and social well-being. These domains are satisfied with the quality of life, and positive affect, self-acceptance, and a sense of purpose in life, having a thriving social life (Robitschek & Keyes, 2009).

According to Akinade (2008), mental illness refers to a psychological form that takes place in persons and relates to suffering or ill health that is not likely to be a feature of the ways of life in the society. It is used to describe the situations of health that is characterized by variations in philosophy, the frame of mind or conduct connected to suffering and weakened functioning (United States Department of Health and Human Services, 1999). For Goldstein and Noel (2017), the expansion of the Diagnostic and Statistical Manual of Mental Disorders (DSM) helped concretize the concept of mental illness. Furthermore, Australia Bureau of Statistics (2003) defined mental illness as a clinically diagnosable illness that affects an individual's reasoning, emotional or societal abilities. For National Institute of Mental Health (2013), no one factor is responsible for mental illness. There are lots of factors responsible for mental illness which include genetic factors, environmental factors which may be physical or socio-cultural (living in poverty and lack of social support), psychological factors which include poor social skills, poor coping skills and the problem with communication.

Mental illness is a general term to describe psychological abnormalities and disorders. There are different categories of mental illness, and many different facets of human behavior can become disordered (Ghalandari & Jamili, 2014).

Prevalence of Substance Uses and Abuse

Alcohol is regarded as the most widely abused substance. Research has shown that one in every 13 individuals throughout the world abuse alcohol or are in fact alcoholics (National Institute on Alcohol Abuse and Alcoholism, 2000). As reported by Weinberg (2001), drinking alcohol is a significant problem for 10-20% of the population. Weinberg (2001) noted that in the United State, there are approximately three million alcohol drinkers of ages 13-18 years. Also, a study done by SAMHSA revealed that approximately 7-8% of young adolescents (12-13 years); 20-21% of adolescents (13-15 years); and 33% of older adolescents (16-18 years) reported the use of alcohol. This suggests that prevalence of alcohol use starts and increases at a very young age and alcohol use progresses with age. About 10% of women and 20% of men have met the diagnostic criteria for alcohol abuse sometime during their lives and males tend to binge drink more than females (Kaplan & Sadock, 2003).

Nigerian statistics on alcohol and tobacco use according to UNODC (2018) revealed that nearly 15% of the adult population had smoked or used a tobacco product, whereas nearly 7% of men and 1% of women smoke or used tobacco products. These estimates of current tobacco use among the general population are in line with the WHO (2012) Global Adult Tobacco Survey conducted in Nigeria. With a mean number of 78 cigarettes smoked per month, manufactured cigarettes were the most common tobacco product used in Nigeria (WHO, 2012). Overall, nearly one quarter of the adult population in Nigeria reported using an alcoholic drink in their

lifetime (Lasebikan et al., 2018). Among those who drink alcohol, over 40% drink alcohol occasionally and 15% drink it daily (Lasebikan et al., 2018). This means 25% of men and 13% of women survey for the study are alcoholic (Lasebikan et al., 2018).

According to a survey carried out by United Nations Office on Drugs and Crime (UNODC, 2018) on National Drug Survey Use, about 14.3 million people in Nigeria use illicit drugs. This showed that the number of drug users in Nigeria is higher than the entire population of some European countries. The statistics also showed that the majority of people using illicit drugs are between 15 and 64 years of age. One in every four of them is a woman. According to UNODC (2018), the rate of drug use in Nigeria in 2018 is more than twice the global average of 5.3 percent i.e. the rate of drug use in Nigeria is estimated to 14.4% (UNODC 2019). Also, the report disclosed that about three million of the drug users are drug dependent and cannot access help due to lack of health facilities.

Prevalence of Substance Use According to Type of Substance

Adamson et al. (2015) revealed the prevalence of alcohol abuse in Nigeria with a lifetime drink 39%. Cannabis was also reported as the most commonly used illicit drug with a lifetime use of 6.6 %. The prevalence rates of inhalants use were 6.8% lifetime.

The national lifetime prevalence rates of cocaine use were 3.3%. The lifetime rates were marginally higher in the urban locality and were much higher in the rural locality. The rates were higher among males, particularly in the Southwest, where the male rates were more than double the female rates. Crack cocaine use in Nigeria were 4.1%. The distribution between urban and rural localities was like that of cocaine. The lifetime rate was highest in the North-Central (6.2%) and lowest in the FCT (1.9%).

Heroin was also identified among the illicit drug use in Nigeria. The overall lifetime prevalence of heroin use was 4.6% (Adamson et al., 2015).

Factors Influencing Abuse of Substances

According to Goodman and Huang (2002), low socioeconomics was associated with greater alcohol use and with greater drug abuse. Goodman and Huang (2002) found that lower household income and parental education were associated with greater adolescent depression. Friestad and colleagues (2003) found that low parental education and moderate household income was associated with greater rates of smoking in adolescents. Reinherz and colleagues (2000) examining 360 respondents followed from 1977- 2000, found that low family socioeconomics and larger family size were associated with increased probability of substance abuse disorders in early adulthood. An analysis by Hamilton and colleagues (2009) found that adolescents (ages 12-19) with college-educated parents were less likely to engage in hazardous or harmful drinking or illicit drug use.

Illicit drug use is a high-risk behavior associated with immediate and long-term mental health repercussion. While individual risk factors are certainly associated with mental health issues, sociodemographic factors are determinants of both risky drug-use behavior and mental health consequences of drug use (Scher et al., 2004). These sociodemographic determinants, including age, race, ethnicity and language and the socioeconomic status include income and education, frequently coincide and interact to the detriment of individual mental health. These sociodemographic factors also play a significant role in creating health differentials between drug users and the general population (Scher et al., 2004).

In a study carried out by Taplin et al. (2014), among chronic injection substance users, the proportion of users who had experienced any childhood abuse or neglect was extremely high (72.9%) in comparison to lower rates seen in the community and the general population. This means that there is a strong association between severity of childhood trauma and parental alcohol and drug abuse. Maternal alcohol abuse was significantly associated with all types of childhood trauma except physical abuse, which, in turn, was associated with paternal alcohol abuse. Taplin et al. (2014), stated that drug abuse by the mother or father is a strong factor determining the increased severity of specific forms of childhood trauma. Although maternal drug and alcohol abuse was most commonly associated with increased severity of childhood trauma, however, most children han8cve more regular contact with their mothers than their fathers.

There exist gender disparities for substance abuse. Boys and men compared with girls and women often are more likely to use almost all types of illicit drugs, and substance use among men compared with women is more likely to result in medical emergencies like overdose and death (Substance Abuse and Mental Health Services Administration, 2014). There are some exceptions to these trends, though. For example, the most commonly abused substance in the United States, alcohol, is consumed at similar rates among adolescent boys and girls (Substance Abuse and Mental Health Services Administration, 2014). Again, Nolen-Hoeksema (2004) commented that women appear to be less likely than men to display specific risk factors for alcohol use and problems with use, including mental health issues.

In a study carried out by Ani (2015), it was discovered that several factors influence substance abuse among users with mental health issue. The study showed

that there is a significant relationship between substance abuse and the educational status of respondents' parents, and the type of housing users lived in. The study further stated that the type of housing the user lives in has a significant relationship and there is also a significant association between educational status, abuse of drug and alcohol. The study depicted vividly that users living with parents are more likely to abuse drugs than those living with other relatives.

Previous research has shown that substance abuse is associated with decreased educational attainment and labor market productivity (hart, Ksir, & Ray 2009). Binge drinking in particular has been linked to driving under the influence of alcohol (DUI) and accidental deaths among the populace. As illicit drugs are illegal and the use of these substances places users at risk of having mental disorder. Thus, substance use can have substantial negative consequences for young adults.

However, as much previous literature has focused on the substance use of lower income adolescents (Norman et. al., 2003), Research has also shown that marijuana's negative effects on attention, memory, and learning can last for days or weeks after the acute effects of the drug wear off. Consequently, someone who smokes marijuana daily may be functioning at a reduced intellectual level most or all of the time. Not surprisingly, evidence suggests that, compared with their nonsmoking peers, students who smoke marijuana tend to get lower grades and are more likely to drop out of high school.

According to Lynch et al. (2000), income inequality affects health status through deteriorated material conditions and lower levels of investment in human and social capital associated with greater income inequality. Marmot and Wilkinson (2001) emphasize the social and psychological pathways through which income

inequality operates, such as erosion of the social fabric, greater levels of mistrust, lower levels of civic participation, etc. Nevertheless, both explanations of the effect of income inequality suggest that the relationship between income inequality and substance abuse may be mediated by other sociodemographic variables like civil status, housing and population density, quality of housing, crime, and social capital. In other words, the neighborhoods in which people live contain both sources of stress and coping resources, mediating the relationship between individual sociodemographic characteristics and substance abuse.

UNODC (2018) identified the multiple direct effect of harmful substance use on the users. The likelihood of unemployment, physical health problems, dysfunctional social relationships, suicidal tendencies, mental illness and even lower life expectancy is increased by substance use. In the most serious cases, harmful drug use can lead to a cycle in which damaged socioeconomic standing and ability to develop relationships lead to substance use. Poverty and a lack of opportunities for social and economic advancement can lead young people to become involved in the drug supply chain. Young people are also known to be involved in the cultivation, manufacturing and production of and trafficking in drugs.

There is growing evidence that chronic heavy use of substance can exacerbate symptoms of schizophrenia and psychosis (Hall, 2006). Epidemiological studies have consistently established high comorbidity between psychiatric disorders and substance use disorders (Compton et. al., 2007; Hasin et al., 2007). This comorbidity is more pronounced in clinical populations, particularly among homeless groups and in acute psychiatric wards where patients with schizophrenia are particularly frequent. The prevalence of substance use disorder varies considerably with the schizophrenia and

other psychotic disorder; there is high level of schizophrenia among patient with substance use disorder (Helseth et. al., 2009). For instance, early use of cannabis can be linked to schizophrenia (Anglin et al., 2012) and psychosis (Schubart et al., 2011). Early use of cannabis alters executive function (Fontes et al., 2011), as well as the ability to inhibit impulsive behaviors and engaging in multiple health risk behaviors (Gruber et al., 2014). Also, Schizophrenia and alcoholism appear to be more prevalent among people in the low socioeconomic levels. Such people may not have ready access to adequate professional treatment (Link & Phelan, 2001).

Effects of Substance Abuse

Substance abuse has profound health, economic, and social consequences. The negative consequences of substance abuse affect not only individuals who abuse substances but also their families and friends, various businesses and government resources. Substance abuse and dependence have grave consequences for existing social systems, affecting crime rates, child abuse and neglect, and rapidly consuming public funds (Hoffman & Goldfrank, 1990). The exact effect of a substance will depend on the substance used, how much is taken, in what way, and on each individual's reaction. Substances can be extremely harmful, and it is relatively easy to become dependent on them.

Health Effects of Substance Abuse

There is an array of health-related harms associated with substance use and abuse (Berk, 2007). The continued use of substances leads to dependence (Pressly & McCormick, 2007). The user will continue using the substance despite the physical and psychological harm that may result from it. The physiological or biochemical component of substance dependence usually, but not always, consists of the

development of tolerance to the substance, that is increasing amounts are needed to have the required effect and withdrawal symptoms can occur for a number of reasons. The process of substance dependence is a complex one, involving an interaction of biogenetic, neurochemical and psychological factors. The process of substance dependence is unpredictable, therefore anyone who uses and abuses psychoactive substances, including alcohol, do not usually believe it will ever happen to them (De Miranda, 1987). The process of dependence entails an uncontrollable urge to satisfy a need and can be said to exist if, as a result of the repetitive use of a substance, there is impairment of functioning, that is physical, emotional and social of the affected individual (Kring et al., 2007). The physiological or biochemical component of substance dependence usually, but not always, consists of the development of tolerance for the substance. That is, larger volumes are required to experience the required effect and withdrawal, for example signs of shock and physiological deprivation, occurs when the substance of dependence is withheld (Rice & Dolgin, 2008). The pattern of substance dependence commonly observed in adolescent substance dependents include the following: experimentation and first-time use, occasional or social use, regular use, and dependence (Davison et al., 2004). Experimentation and first-time use usually occur between the ages of 12 and 16. Adolescents often believe that experimentation with substances is safe and even normal (Davison et al., 2004).

Alcohol is a central nervous system depressant with effects similar to those of sleeping pills or tranquilizers (Craig & Baucum, 2001). Larger doses of alcohol distort vision, impair motor coordination, and slur speech (Butcher et al., 2013). Other common physiological changes include damage to the endocrine glands and pancreas,

heart failure, erectile dysfunction, hypertension, stroke, and capillary hemorrhages, which are responsible for the swelling and redness in the face, and especially the nose of chronic alcohol abusers (Kring et al., 2007). Short term abuse of alcohol may affect cognitive performance of alcohol abusing students (Rice & Dolgin, 2008).

Tobacco is smoked, chewed, or ground into small pieces and inhaled as snuff. Nicotine is the addicting agent of tobacco. The most probable harmful components in the smoke from burning tobacco are nicotine, carbon monoxide and tar (Davison et al., 2004). Cigarettes discolor teeth, affect skin color, and makes breath, and body and clothes smell unpleasant. In addition to that, smoking increases heart rate, constricts blood vessels, irritates the throat, and deposits foreign matter in sensitive lung tissues, thus limiting lung capacity (Cicchetti, 2007). Years of smoking can lead to premature heart attacks, lung and throat cancer, emphysema, and other respiratory diseases. Even moderate smoking shortens a person's life by an average of 7 years for women and 9 years for men (Koh, 2014).

Cannabis is made from the dried and crushed leaves and flowering tops of the hemp plant *Cannabis sativa*. It is most often smoked, but it may be chewed, prepared as tea, or eaten in baked goods (Kring et al., 2007). The intoxicating effects of cannabis, like those of most substances, depend in part on its potency and the size of the dose (Butcher et al., 2013). Smokers of cannabis find it makes them feel relaxed and sociable. The short-term somatic effects include blood shot and itchy eyes, dry mouth and throat, increased appetite, reduced pressure within the eye and somewhat raised blood pressure (Kring et al., 2007).

Heroin is produced from morphine by a simple chemical process. It is a white, odorless powder (Rice, 1992). It is usually injected for a maximum effect, although it

can also be sniffed, smoked, or taken orally (Davison et al., 2004). Heroin affects the central nervous system, causes respiratory depression, nausea and vomiting (Carson et al., 2000). In addition to the effects of the substance itself, street heroin may have additives that do not dissolve and result in clogging the blood vessels that lead to the lungs, liver, kidney or brain. This can cause infection or even death of small patches of cells in vital organs (Carson et al., 2000).

Cocaine is extracted from the leaves of the coca plant (Davison et al., 2004). It is available as an odorless, fluffy, white powder (De Miranda, 1987). Cocaine can be swallowed, sniffed (snorted) or injected (Butcher et al., 2013). It is highly addictive in any form (De Miranda, 1987). The main undesirable effects are nervousness, irritability and restlessness, mild paranoia, physical exhaustion, mental confusion, loss of weight; fatigue or depression and various afflictions of the nasal mucous membranes and cartilage (Rice, 1992). Cocaine affects the brain. Users of cocaine become confused, anxious and depressed. Frequent users of cocaine might experience a "cocaine psychosis" consisting of hallucinations and delusions among others of insects crawling under their skin. Other known risks of cocaine use include death from stroke, heart attack, or respiratory failure (Craig & Baucum, 2001). From the above discussion, it is evident that substances abuse has a negative effect on health of the users.

Social Effects of Substance Abuse

Substance abuse does not only affect the individual, it also affects the society as a whole. Adolescents abusing substances may become withdrawn, moody, irritable or aggressive. This often leads to a deterioration in family, peer group, and school relationships (Parrott et al., 2004). These adolescents' academic performance drops

and truancy often increases (Burger, 2008) and they end up being expelled from school due to their behavior (Donald et al., 2007). Some adolescents drop out of school and turn to other crimes such as robbery and gang-related activities to support their habit. Previous studies confirm that there is a link between substance abuse and criminal activities (Donald et al., 2007; Lesly, 2008; UNODC, 2008).

Furthermore, substance abuse issues are encountered at every level of the criminal justice system, from the international trade in substances and the use of the proceeds of that trade for corrupt ends to driving under the influence of alcohol or other substances (Department of Social Development, 2006; UNODC, 2008). The high cost of substances means that dependents must either have great wealth or acquire money through illegal activities, such as theft, prostitution or the selling of substances (Davison et al, 2004). The correlation between opiate dependence and criminal activities is thus rather high, undoubtedly contributing to the popular notion that substance dependence per se causes crime (Davison et al., 2004). Substance use impacts on the criminal justice system, with evidence of links between drinking at risky levels, committing crime, or being a victim of crime (Lesly, 2008). Most substance-related crimes, however, are the culmination of a variety of factors, which are personal, situational, cultural, and economic.

Economic Effects of Substance Abuse

Substance abuse has a negative impact on the economy of the country. This includes several problems such as inefficiency, impaired work performance, accidents and absenteeism at a considerable cost to both industry and society (Parrott et al., 2004). Furthermore, the use of substances has a negative impact on the health care system including the depletion of scarce resources available to improve the health of

people (Ministry of Health, 2018). Medical resources are wasted, and lives are lost, in substance-related mishaps. Large amounts of money are spent in hospitals, on prevention campaigns, and in treatment centers for substance dependents (UNODC, 2008). Although most people who abuse substances do not seek professional help, people who abuse alcohol constitute a large proportion of new admissions to mental hospitals and general hospitals (Davison et al., 2004). Other costs include repairs to property damaged by addicts, food and accommodation in prisons, transportation of addicts to courts in terms of those still awaiting trial (UNODC, 2008). Medication for treatment of substances is also expensive. The use of alcohol and other substances presents law-enforcement problems as well.

Thus, substance dependence is a financial burden for the country. The users not only suffer progressive physical and psychological deterioration but also loses the ability psychologically, socially and often economically to break out of the cycle of substance abuse (Donald et al., 2007). The health and socioeconomic consequences of substance use and abuse undermine democracy, good governance and has a negative impact on the country. As with alcohol, the socioeconomic cost of smoking is staggering. Each year smokers compile over 80 million lost days and 145 million days of disability, considerably more than do nonsmoking peers (Davison et al., 2004).

Sociodemographic Profile of Ogun State

This study was carried out in the Federal Neuropsychiatric Hospital Aro in Ogun State, Southwestern Nigeria. The state is known as the Gateway State and was created on the 3rd of February 1976. Ogun State borders Lagos State, to the South is the Atlantic Ocean, to the north are both Oyo and Osun States, to the east is Ondo State and to the west is the Republic of Benin (Ogun State Bulletin, 2009). Ogun State

is predominantly a homogenous group of Yoruba extraction. It is made up of six Yoruba subethnic groups which are the Egba people, the Ijebu people, the Remo dialectical group, the Egbado people, the Awori group and the Egun people. Many of the inhabitants are Yoruba speaking people. The state capital is Abeokuta. The Yoruba tradition and beliefs about causes of mental illness to include witchcraft. This makes Ogun State relevant as a traditional Yoruba state.

According to National Bureau of Statistics (2016), the population of Nigeria is estimated at 183 million, consisting of 92,387,474 males and 90,989,254 females. However, the figures showed that Ogun State had a population of 5,037,600 million comprising 2,533,913 men and 2,503,687 women. The State has a range of cultural, traditional and historical attractions. Both monogamy and polygyny exist as forms of marriage with patriarchy (male dominance) as the authority structure. Being a patriarchal (male-controlled) society, men exercise domination in decision-making on most issues including health in the family. Traditionally, among the Yoruba of Ogun State, the male gender does not participate in domestic work including child rearing. Such tasks are exclusively the domain of women. Marriage takes the form of an agreement between the parents. After the completion of all necessary agreements and customs, the marriage is sealed in a manner reminiscent of a typical Yoruba marriage. There is a high regard for marriage because it is seen as a condition for the survival of the society.

The extended family arrangement consists of close lineage other than a married couple and children who live in the same household or a familial and incessant association with one another governs the people of Ogun State. Surrounded by the background of family structure, series of childrearing practices are upheld. In

Ogun State, a high value is placed on children and procreation is regarded as the essential purpose of marriage. Thus, every couple care for children in a peculiar way. The traditional and modern child-rearing practices (a product of westernization) are widely acknowledged. Meanwhile, a household extends mainly to many relatives in addition to parents and children living in the same compound. Within the extended family structure, traditional childrearing practices are communal.

Summary (Transition)

This chapter provided a succinct outline of current literature that grounded the applicability of the identified gap via the DSM- 5 and other substance abuse and mental health related studies. Studies related to the method, constructs, and rationale for both independent and dependent variables were further justified from the literature. In addition, study that examine the prevalence of substance abuse, the effects of substance abuse and substance use were reviewed and concisely synthesized. In chapter 3, I defined the study population and discussed the estimated sample size, the sampling strategies, and procedures for data collection. Chapter 3 also provide a narrative summary of the methodology adopted in the study.

Section 2: Research Design and Data Collection

Introduction

The purpose of this study was to examine the determinants of substance abuse among users with mental health issues in Ogun State, Nigeria. The following research question guided the study:

1. Do sociodemographic factors (age, gender, marital status, education, employment, type of housing [own or rent], language spoken, and religion) have a significant association with substance abuse among users with mental health issues?
2. Do clinical variables (schizophrenia, mood disorders, and anxiety disorders) have a significant association with substance abuse among users with mental health issues?
3. Do negative life events (history of violence, history of problems with the law, and history of suicide attempts) have a significant association with substance abuse among users with mental health issues?
4. Do social supports (social provision scale score, contact with family members and friends who help) have a significant association with substance abuse among users with mental health issues?

This chapter deals with the research methodology and consists of the research design of the target population, sample of the study, sampling techniques, research instruments, piloting of the instruments, data collection procedures, and data analysis techniques.

Research Design and Rationale

The study variables for this research included substance abuse (drug and alcohol abuse), and sociodemographic factors (age, gender, marital status, education, employment, type of housing [own or rent], language spoken, and religion); clinical variables (schizophrenia, mood disorders, schizophrenia spectrum disorder, anxiety disorders, delusion and other psychotic disorder); negative life events (history of violence, history of problems with the law, and history of suicide attempts) and social supports (social provision scale score, contact with family members and friends who help). For this study, the sociodemographic characteristics of the patients, the clinical variables, the negative life events and the social support were presumed not to be significantly related to substance abuse. Moreover, the sociodemographic characteristics of the patients, the clinical variables, the negative life events and the social support were classified as the independent variables while substance abuse was the dependent variable.

To realize the aims and objectives of this study, cross-sectional secondary data was examined. The aims and objectives of this study were further reformulated to research questions and hypotheses. Adding to the general body of knowledge was the sole intent of this study; therefore, in this study, common features of a descriptive study, quantitative data collection, and findings generalizable to the target population were examined.

Descriptive studies embrace research whose data are collected through a wide range of methods, including diaries, interviews, questionnaires, and observations (Sim & Wright, 2002). This type of research intends to present facts pertaining to the nature and status of a particular situation, as it exists at the time of study (Creswell, 2009).

An important characteristic of this type of study is that the study used clinical data from patients' medical records within the year 2015 to 2019 and there is no manipulation of variables of interest, and it does not entertain any form of deliberate interference, intervention, or random allocation of study (Sim & Wright, 2002).

The time point of data collection for this descriptive research was cross-sectional because this type is used to study a particular phenomenon, to describe variables (e.g., clinical variables, sociodemographic variables etc.) at a given period of time, or to compare across populations, multiple attributes (Creswell, 2009; Sim & Wright, 2002).

Target Population, Sampling, and Sampling Procedures

The target population is the group of individuals that the intervention intends to conduct research in and draw conclusions from (Barnsbee et at., 2018) the target population for this study consisted of a heterogeneous group of adult male and female who are 18 years and above, experiencing mental illness and are presently receiving treatments at Federal Neuropsychiatric Hospital Aro, Abeokuta Ogun State Nigeria.

Sampling, and Sampling Procedures

The sampling procedure that was used was a non-probability sampling. A convenient purposive sampling types of non-probability sampling of patients' data, which were obtained from readily available sources, such as hospital admission statistics, case register and case notes (Ferencz & Serbian, 2017) was used in this study. This non-probability sampling is affordable and easy to carried out. Unlike random sampling, which deliberately include a diverse cross section of ages, background and cultures, purposive sampling concentrate on particular characteristics (mental health patients and patients who abuse and use substance) (Etikan et al.,

2016). Therefore, the sample size was put at 458 patients receiving treatments at Federal Neuropsychiatric Hospital Aro, Abeokuta, Ogun State, Nigeria.

Data Analysis Plan

The clinical data collected were coded accordingly, entered into the laptop, and analyzed using the Statistical Package for Social Sciences (SPSS v. 23). Data were checked for discrepancies. Descriptive statistics, consisting of numerical techniques for data summarization, were performed and use to analyze frequency of data distribution on categorical variables. Chi-square were performed between the dependent variables – substance abuse – and the independent variables – sociodemographic characteristics, the clinical variables, negative life events and social support. The statistical analysis used univariate, bivariate, and multivariate levels.

Univariate Analysis. This examines variation in a single variable, was carried out through descriptive statistics of frequency distribution and percentage. It showed the descriptive statistics (using frequency distribution tables, percentages, and graphs) and was used to analyze variables such as the sociodemographic characteristics of respondents.

Bivariate Analysis. This examines the relationship between an independent variable and a dependent variable. Substance abuse was the dependent variable, while sociodemographic factors, clinical variables, negative life events, and social supports were the independent variables. Pearson chi-square analysis was used to investigate the association between the variables at the significant level of p-value = 0.05. The Pearson chi-square test was also used to examine the association between the

sociodemographic factors, clinical variables, negative life events, and social supports and substance abuse.

Multivariable Analysis. This was used to determine the strength of the relationship between a dependent variable and several independent variables. Logistic regression was used to identify the nature of any relationship between each of the sociodemographic factors, clinical variables, negative life events and social supports and substance abuse and to determine the strength of the relationship between the independent variables and dependent variable.

Summary (Transition)

This cross-sectional quantitative study was aimed at adding to the general body of knowledge. The study examined the factors responsible for substance abuse among users with mental health issues. Thus, this study assessed the significant relationship between substance abuse and sociodemographic characteristics, the clinical variables, negative life events and social support. To examine the significant relationship, this study used patients' clinical records of adult, male and female of ages 18 years and above receiving treatment at Federal Neuropsychiatric Hospital Aro, Abeokuta Ogun State, Nigeria. Data obtained from the patients' case files and case notes were analyzed via the IBM statistical package for the social sciences (SPSS) statistics 23. In Chapter 4, the data obtained in the study are concisely reported.

Section 3: Presentation of the Findings

Introduction

In this chapter I present the data and the results of analysis. Descriptive statistics included means, frequencies, and percentages. Logistic regression analysis was performed to identify the strength of the relationship between the independent variables and dependent variable. A p-value of < 0.05 was considered significant.

The chapter is divided into four sections. In the first section, I tabulated the demographic and socioeconomic characteristics of the respondents. The second section contains the bivariate analysis; the third section contains the multivariate analysis, which involves logistic regression. The results of the tests of the hypotheses are presented and discussed in the fourth section.

Demographic and Socioeconomic Characteristics of the Mental Health Patients

Four-hundred and fifty-eight patients' case files were checked for the period of 5 years: 2015 -2019 (Table 1). As per the study criteria, all participants were 18 years and above; their mean age was 27.71 ± 10.3 years (range 18–62 years). Most of the patients were male (93.89%). The vast majority were single and never married; only 23 (5.03%) were widowed or divorced. The majority of the patients sampled had a tertiary level of education (39.96%); 117 (25.55%) had completed at least secondary education. More than half (53.93%) were unemployed; among the employed patients, 20.09% were civil servants. Most patients (69.43%) lived in a rented apartment, while 30.57% owned their apartments. More than half of the patients (n = 276, 60.26%) were Muslim, 140 (30.57%) were Christian, and 42 (0.15%) practiced other religions.

Table 1

Demographic and Socioeconomic Characteristics of the Mental Health Patients

Demographic	Characteristics	Frequency	Percentage
Age	Young adult	395	86.24
	Middle age/Older adult	63	13.76
Gender	Male	430	93.89
	Female	28	6.11
Marital status	Single/Never married	374	81.84
	Married	60	13.13
	Widowed/Divorced	23	5.03
Highest education	No formal education	75	16.38
	Primary	83	18.12
	Secondary	117	25.55
	Tertiary	183	39.96
Employment	Unemployed	247	53.93
	Self-employed	119	25.98
	Civil servant	92	20.09
Type of housing	Rent	318	69.43
	Own	140	30.57
Religion	Christianity	140	30.57
	Islam	276	60.26
	Others	42	9.17

Clinical Characteristics of the Mental Health Patients

According to the clinical case file sampled, the most prevalent mental disorders were schizophrenia and mood disorder. Two hundred and thirteen (46.51%) of the patients experienced schizophrenia and about two-thirds of the patients experienced mood disorder. Fifty-nine patients experience schizophrenia spectrum disorder, 71 patients experienced delusion. Three hundred and twenty-three (323) patients did not have personality disorder while 135 patients experience personality disorder. However, 56 patients experience moderate to mild mental retardation.

Table 2

Tabulation of clinical Variables of the Mental Health Patients

Clinical Variables	Responses	Frequency	Percentage
Schizophrenia	No	245	53.49
	Yes	213	46.41
Mood disorder	No	280	61.14
	Yes	178	38.86
Schizophrenia	No	392	85.59
spectrum disorder	Yes	59	12.88
Delusion	No	387	84.50
	Yes	71	15.50
Personality	No	323	70.52
disorder	Yes	135	29.48
Moderate and mild	No	402	87.77
mental retardation	Yes	56	12.23

Negative Life Events of the Mental Health Patients

Table 3 shows the negative life events of the patients. One hundred ninety-six patients were violence in the past. Two hundred and twenty (48.0%) of the patients experienced problem with the law, and about half of the patients had attempted suicide in the past

Table 3

Tabulation of Negative Life Event of the Mental Health Patients

Negative Life Event	Response	Frequency	Percentage
History of violence	No	262	57.2
	Yes	196	42.8
History of problem	No	238	52.0
with law	Yes	220	48.0
History of suicide	No	215	46.9
attempt	Yes	243	53.1

Substance Abuse (Drug and Alcohol Abuse)

From Table 4, a total of 271 mental health patients (59.17%) had drug or alcohol abuse, 187 mental health patients didn’t abuse substances.

Table 4

Tabulation of Substance Abuse (Drug and Alcohol Abuse)

Substance abuse	Frequency	Percentage
Abused	271	59.17
Did not abuse	187	40.83
Total	458	100

Chi-Square Analysis for Categorical Variables

Cross-tabulation was carried out to assessed whether there is significant relationship between the dependent variable – substance abuse – and the independent variables - sociodemographic characteristics, clinical variables, negative life events and social support

Demographic Characteristics and Substance Abuse Among Users with Mental Health Issues

The result of chi-square analysis for categorical variables between demographic variables and substance abuse (Table 5) shows that there is significant relationship between substance abuse and gender ($p < 0.05$), between substance abuse and marital status ($p < 0.05$), between substance abuse and education ($p < 0.05$), between substance abuse and employment ($p < 0.05$) and between substance abuse and type of housing ($p < 0.05$). There is no significant relationship between substance abuse and age ($p > 0.05$), between substance abuse and religion ($p > 0.05$) (Table 5).

The results indicated a significant association between gender, marital status, education, employment, type of housing and substance abuse. This implies that the relationship between gender, marital status, education, employment, type of housing and substance abuse is statistically significant i.e. they are contributing factors determining substance abuse among users with mental health issues. Those who are

male, never married, unemployed, and those who stayed in a rented apartment, tended to have weaker attachment bond and are more likely to abuse substances. There is no statistically significant between substance abuse and religion.

Table 5

Demographic Characteristics and Substance Abuse Among Users with Mental Health Issues.

Demographics Characteristics		Substance abuse *n* = 458		Overall *p* value	Value* (df)
		Abused *n* = 271	Did not abuse *n* = 187		
Age, *n* (column %)	Young adult	239 (60.51)	156 (39.49)		
	Middle age	32 (37.3)	31 (49.21)	0.315	2.1216 (1)
Gender, *n* (column %)	Male	262 (39.07)	168 (39.07)		
	Female	9 (32.14)	19 (67.86)	0.003	9.0175 (1)
Marital Status, *n* (column %)	Single	228 (60.96)	146 (39.04		
	Married	28 (46.67)	32 (53.33)		
Education, *n* (column %)	Widowed	14 (60.87)	9 (39.13)	0.001	4.4031 (2)
	No formal	42 (56.00)	33 (44.00)		
	Primary	44 (53.01)	39 (46.99)		
	Secondary	69 (58.97)	48 (41.03)		
Employment, n (column %)	Tertiary	116 (63.39)	67 (36.61)	0.009	2.9643 (3)
	Unemployed	137 (55.47)	110 (44.53)		
	Self employed	73 (61.34)	46 (38.66)		
Housing, n (column %)	Civil servant	61 (66.34)	31 (33.70)	0.006	3.5742 (2)
	Rent	197 (61.95)	121 (38.05)		
Religion, n (column %)	Own	74 (52.86)	66 (47.14)	0.013	3.3264 (1)
	Christian	78 (55.71)	62 (44.29)		
	Islam	166 (60.14)	110 (39.86)		
	Others	27 (64.29)	15 (35.71)	0.540	1.2556 (2)

Clinical Variables and Substance Abuse Among Users with Mental Health Issues

The result of the chi-square analysis between clinical variables and substance abuse shows that there is significant relationship between substance abuse and schizophrenia ($p<0.01$), between substance abuse and mood disorder ($p<0.01$), between substance abuse and anxiety disorder ($p = 0.01$), between substance abuse and delusion ($p<0.01$).

There is no significant relationship between substance abuse and schizophrenia spectrum disorder (p>0.01), substance abuse and personality disorder (p>0.01) and substance abuse and moderate and mild mental retardation (p>0.01) (Table 6).

This indicates a significant association between schizophrenia, mood disorder, anxiety disorder, delusion and substance abuse. This implies that the relationship between schizophrenia, mood disorder, anxiety disorder, delusion and substance abuse is statistically significant, i.e. clinical variables are contributing factors determining substance abuse among users with mental health issues. The association between substance abuse and a lower number of mental disorders among users can be explained by the fact they are more likely to have schizophrenia, mood disorder, anxiety disorder, delusion and major depression than nonusers (Krishnan, 2005).

Table 6

Clinical Variables and Substance Abuse Among Users with Mental Health Issues

Clinical Variables		Substance abuse n = 458		Overall p value	Value (df)
		Abused	Did not abuse		
Schizophrenia, *n* (column %)	No	149 (60.82)	96 (39.18)		
	Yes	122 (57.28)	91 (42.72)	0.002	0.5908 (1)
Mood disorder *n* (column %)	No	178 (63.57)	102 (36.43)		
	Yes	93 (52.25)	85 (47.75)	0.006	5.7763 (1)
Schizophrenia Spectrum disorder *n* (column %)	No	231 (58.93)	161 (41.07)		
	Yes	40 (60.61)	26 (39.39)	0.798	0.0658 (1)
Anxiety Disorder, *n* (column %)	No	227 (56.89)	172 (43.11)		
	Yes	44 (74.58)	15 (25.42)	0.010	6.6534 (1)
Delusion, *n* (column %)	No	236 (60.98)	151 (39.02)		
	Yes	35 (49.30)	36 (50.70)	0.006	3.3913 (1)
Personality Disorder, *n* (column %)	No	189 (58.51)	134 (41.49)		
	Yes	82 (60.74)	53 (39.26)	0.658	0.1954 (1)
Moderate and mild mental retardation, *n* (column %)	No	234 (58.21)	168 (41.79)		
	Yes	37 (66.07)	19 (33.93)	0.262	1.2577 (1)

Negative Life Events and Substance Abuse Among Users with Mental Health Issues

The result of the chi-square analysis between negative life events and substance abuse shows that there is significant relationship between substance abuse and history of prior violence ($p < 0.05$) between substance abuse and history of prior suicide attempt ($p < 0.05$). However, there is no significant relationship between substance abuse and history of prior problems with law enforcement ($p < 0.05$) (Table 7).

This indicates a significant association between history of violence, history of suicide attempt and substance abuse. This implies that the relationship between history of violence, history of suicide attempt and substance abuse is statistically significant. This implies that negative life events are contributing factors determining substance abuse among users with mental health issues. Furthermore, the association with prior history of violence is known that the potential for violent or aggressive behavior of those who abuse substance with severe mental disorders increases when they are intoxicated.

Table 7

Negative Life Event and Substance Abuse Among Users with Mental Health Issues

Negative Life Event		Substance abuse *n* = 458		Overall *p* value	Value* (df)
		Abused	Did not abuse		
History of violence, *n* (column %)	No	148 (56.49)	124 (63.27)		
	Yes	144 (43.51)	72 (36.73)	0.014	2.1349 (1)
History of problem with law n(column %)	No	132 (55.46)	140 (63.64)		
	Yes	106 (44.54)	80 (36.36)	0.075	3.1672 (1)
History of suicide attempt n(column %)	No	128 (59.53)	144 (59.26)		
	Yes	40 (40.47)	99 (40.74)	0.009	0.9526 (1)

Logistic Regressions on the Influence of Socioeconomic and Demographic Factors on Substance Abuse Among Users with Mental Health Issues

Table 8 shows the results of simple binary logistic regression analysis with odds ratios at 95% CI. It was shown that the demographic and socioeconomic factors predicting the likelihood of abusing substance among users with mental health issues were somewhat different.

Middle-aged patients are 77% more likely to abuse substance compared to Young adult patients i.e. (OR = 1.7712, 95% CI = 0.7986 – 3.9284).

Married patients were 42% more likely to abuse substance (OR = 1.4171, 95% CI=0.7120 2.8243) compared to single patients and widowed/divorced patients were 69% less likely to abuse substance (OR = 0.6911, 95% CI = 0.2294 – 1.2258) compared to single patients.

Patients who had education up to primary were 90% less likely to abuse substance (OR = 0.9012, 95% CI = 0.4665 – 1.7488) compared to patients with no formal education, Patient who had education up to secondary school level were 98% less likely to abuse substance (OR = 0.9862, 95% CI = 0.5317 – 1.8290) while patients with education up to tertiary level were 70% less likely to abuse substance (OR = 0.6962, 95% CI = 0.3954 – 1.2258).

Self-employed patients were 66% less likely to abuse substance (OR = 0.6638, 95% CI = 0.4022 – 1.0954) compared to unemployed patients while patients who work with the government (civil servants) were 48% less likely to abuse substance (OR = 0.4797, 95% CI = 0.2704 – 0.8512).

Patients who lived in their own apartment are 43% more likely to abuse substance (OR = 1.4346, 95% CI = 0.9391 – 2.1917) compared to those who lived in rented apartments.

Table 8

Logistic Regressions on the Influence of Socioeconomic and Demographic Factors on Substance Abuse Among Users with Mental Health Issues

Demographic and socioeconomic variable	Odd ratios	95% CI
Age		
Young adult	1.0000	
Middle age	1.7712	0.7986 – 3.9284
Gender		
Female	1.0000	
Male	0.3297	0.1410 – 0.7709
Marital Status		
Single	1.0000	
Married	1.4171	0.7120 – 2.8243
Widowed/divorced	0.6911	0.2294 – 2.0821
Education		
No formal education	1.0000	
Primary	0.9012	0.4665 – 1.7488
Secondary	0.9862	0.5317 – 1.8290
Tertiary	0.6962	0.3954 – 1.2258
Employment		
Unemployment	1.0000	
Self employed	0.6638	0.4022 – 1.0954
Civil servant	0.4797	0.2704 – 0.8512
Type of Housing		
Rent	1.0000	
Own	1.4346	0.9391 – 2.1917
Religion		
Christianity	1.0000	
Islam	0.8683	0.5589 – 1.3490
Others	0.7341	0.3518 – 1.5268

Logistic Regressions on the Influence of Clinical Factors on Substance Abuse Among Users with Mental Health Issues

Table 9 shows the results of simple binary logistic regression analysis with old ratios at 95% Confidence Interval (CI). It was found that the clinical factors predicting the likelihood of abusing substance among users with mental health issues were somewhat different.

Patients experiencing mood disorder were 47% more likely to abuse substance (OR = 1.4150, 95% CI = 0.9916 – 2.1941) compared to patients experiencing Schizophrenia, patients experiencing schizophrenia spectrum disorder were 8% more likely to abuse substance (than non-abuse) (OR = 1.0841, 95% CI = 0.6052 – 1.9418) compared to patients experiencing schizophrenia while patients experiencing delusion were 61% more likely to abuse substance (OR = 1.6125, 95% CI = 0.9569 – 2.7171) compared to patients experiencing schizophrenia.

Patients experiencing moderate and mild mental retardation were 71% less likely to abuse substance (OR = 0.7197, 95% CI = 0.3802 – 1.3626) compared to patients experiencing anxiety disorder, patients experiencing personality disorder were 92% less likely to abuse substance (OR = 0.9216, 95% CI = 0.5853 – 1.4511), compared to those experiencing anxiety disorder.

Table 9

Logistic Regression on the Influence of Clinical Factors on Substance Abuse Among Users with Mental Health Issues

Clinical variables	Odd ratios	95% CI
Severe Mental Disorder		
Schizophrenia	1.0000	
Mood disorder	1.4750	0.9916 – 2.1942
Schizophrenia Spectrum disorder	1.0841	0.6052 – 1.9418
Delusion	1.6125	0.9569 – 2.7171
Second Diagnosis		
Anxiety disorder	1.000	
Moderate and mild mental retardation	0.7197	0.3802 – 1.3626
Personality disorder	0.9216	0.5853 – 1.4511

Logistic Regressions on the Influence of Negative Life Events on Substance Abuse Among Users with Mental Health Issues

Table 10 shows the results of simple binary logistic regression analysis with old ratios at 95% Confidence Interval (CI). It was found that the negative life events

predicting the likelihood of abusing substance among users with mental health issues were somewhat different.

Patients with history of problem with law were 1% more likely to abuse substance (OR = 1.01, 95% CI = 0.66 – 1.56) compared to patients with history of violence, patients who had history of suicide attempt were 61% less likely to abuse substance (than non-abuse) (OR = 0.84, 95% CI = 0.63 – 1.12) compared to patients with history of violence

Table 10

Logistic Regression on the Influence of Negative life events on Substance Abuse Among Users with Mental Health Issues

Negative Life Event	Odds Ratio	95% Confident. Interval	
History of violence	0.77	0.53 -	1.13
History of problem with law	1.01	0.66 -	1.56
History of suicide attempts	0.61	0.37 -	1.00
Constants	0.84	0.63 -	1.12

Presentation of Findings According to the Research Question

In Chapter 4, I presented the findings to the research questions. The first research question examined the significant association between sociodemographic factors (age, gender, civil status, education, employment, type of housing (own or rented), language spoken, and importance attached to spirituality) and substance abuse among users with mental health issues in Ogun State, Nigeria. The second research question examined the significant association between clinical variables (schizophrenia, mood disorders, and anxiety disorders) and substance abuse among users with mental health issues in Ogun State, Nigeria. The third research question examined the significant association between negative life events (history of prior

violence, history of prior problems with the law, and history of prior suicide attempts) and substance abuse among users with mental health issues in Ogun State, Nigeria. And the fourth research question examined the significant association between social support (social provision scale score, contact with family members and friends giving help) and substance abuse among users with mental health issues in Ogun State, Nigeria using the existing literature, since data on social support were not included in the clinical case note of the patients.

Answer to RQ1: Demographic characteristics and substance abuse among users with mental health issue

The results of the binary logistic regression analysis revealed that middle aged patients are 77% more likely to abuse substance compared to young adult patients. At a 95% confidence interval, an increase in age of the patients increases the odds of abusing substance by a factor of 1.77. Female patients were 33% less likely to abuse substance. Also, at 95% confidence interval female patients decrease the odds of abusing substance by a factor of 0.33. Married patients were 42% more likely to abuse substance. At 95% confidence interval, married patients increase the odds of abusing substance by a factor of 1.42 and widowed or divorced patients decrease the odds of abusing substance by 0.69. Patients who had education up to primary were 90% less likely to abuse substance. At 95% confidence interval, patients with primary level of education decrease odds of abusing substance by a factor of 0.90 and patient who had education up to secondary school level decrease the odds of abusing substance by a factor of 0.99 and patients with education up to tertiary level decrease the odds of abusing substance by a factor of 0.70. Self-employed patients were 66% less likely to abuse substance. At 95% confidence interval, self-employed patients decrease odds of

abusing substance by a factor of 0.66 and civil servant patients decrease the odds of abusing substance by a factor of 0.48. Patients who lived in their own apartment are 43% more likely to abuse substance. At 95% confidence interval, patients who lived in their own apartment increase the odds of abusing substance by a factor of 1.43. Overall, the combined effect of demographic variables on substance abuse among users with mental health issues was statistically significant chi_2 (12) = 25.46, p = 0.012 < 0.05. At 95% confidence interval, the odds of substance abuse were significant.

Table 11

Binary Logistic Regression of Demographic Variables and Substance Abuse

					Number of obs = 458 LR chi_2 (12) = 25.46 P-value = 0.0128	
Demographic Variables	Odds Ratio	Std. errs.	Z	*P* value	95% CI Lower	Upper
Age						
Young adult	1.00					
Middle age	1.77	0.72	1.41	0.160	0.80	3.93
Gender						
Male	1.00					
Female	0.33	0.14	-2.56	0.10	0.14	0.77
Marital Status						
Single	1.00					
Married	1.42	0.50	0.99	0.322	0.71	2.82
Widowed or Divorced	0.69	0.39	-0.66	0.011	0.23	2.08
Education						
No formal education	1.00					
Primary	0.90	0.30	-0.30	0.003	0.47	1.75
Secondary	0.99	0.31	-0.04	0.045	0.53	1.83
Tertiary	0.70	0.20	-1.25	0.010	0.40	1.23
Employment						
Unemployment	1.00					
Self employed	0.66	0.17	-1.60	0.009	0.40	1.10
Civil servant	0.48	0.14	-2.51	0.002	0.27	0.85
Type of Housing						
Rent	1.00					
Own	1.43	0.31	1.67	0.005	0.94	2.19
Religion						
Christianity	1.00					
Islam	0.87	0.20	-0.63	0.530	0.56	1.35
Others	0.73	0.28	-0.82	0.410	0.35	1.53
Constants	2.66	1.35	1.93	0.054	0.98	7.17

Answer to RQ2: Clinical variables and substance abuse among users with mental health issue.

The results of the binary logistic regression analysis of clinical variables and substance abuse revealed that patients with schizophrenia were 7% more likely to abuse substance. At a 95% confidence interval, patients with schizophrenia increase the odds of abusing substance by a factor of 1.07. Patients experiencing mode disorder were 47% more likely to abuse substance. At a 95% confidence interval, patients experiencing mood disorder increase the odds of abusing substance by a factor of 1.47. Patients experiencing schizophrenia spectrum disorder were 8% more likely to abuse substance. At a 95% confidence interval, patients experiencing schizophrenia spectrum disorder increase the odds of abusing substance by a factor of 1.08. Patients experiencing anxiety disorder were 46% less likely to abuse substance. At a 95% confidence interval, patients experiencing anxiety disorder decrease the odds of abusing substance by a factor of 0.46. Patients experiencing delusion were 61% more likely to abuse substance. Also, at a 95% confidence interval, patients experiencing delusion decrease the odds of abusing substance by a factor of 1.61. Patients experiencing personality disorder were 92% less likely to abuse substance. At a 95% confidence interval, patients experiencing personality disorder decrease the odds of abusing substance by a factor of 0.92. Patients with moderate to mild mental retardation were 72% less likely to abuse substance. At a 95% confidence interval, patients with moderate to mild mental retardation decrease the odds of abusing substance by a factor of 0.72. Overall, the combined effect of clinical variables on substance abuse among users with mental health issues was statistically significant

chi_2 (7) = 16.33, p = 0.0222 < 0.05. At 95% confidence interval, the odds of substance abuse were significant.

Table 12

Binary Logistic Regression of Clinical Variables and Substance Abuse

					Number of obs = 458 LR chi_2 (7) = 16.33 *P* value = 0.0222	
Clinical Variables	Odds Ratio	Std. Err.	Z	*P* value	95% Conf. Interval Lower Upper	
Severe Mental Disorder						
Schizophrenia	1.07	0.22	0.35	0.027	0.72	1.60
Mood disorder	1.48	0.30	1.92	0.045	0.99	2.19
Schizophrenia spectrum disorder	1.08	0.32	0.27	0.786	0.61	1.94
Delusion	1.61	0.42	1.79	0.037	0.96	2.72
Second Diagnosis						
Anxiety disorder	0.46	0.15	-2.39	0.017	0.25	0.87
Moderate and mild mental retardation	0.72	0.23	-1.01	0.313	0.38	1.36
Personality disorder	0.92	0.21	-0.35	0.724	0.59	1.45
Constants	0.61	0.12	-2.48	0.013	0.41	0.90

Answer to RQ3: Negative life events and substance abuse among users with mental health issue

The results of the binary logistic regression analysis of negative life events and substance abuse revealed that patients who were violence were 77% less likely to abuse substance. At a 95% confidence interval, patients with record of being violence decrease the odds of abusing substance by a factor of 0.77. Patients who had prior history with the law were 1% more likely to abuse substance (than not abuse). At a 95% confidence interval, they increase the odds of abusing substance by a factor of 1.01. Patients with prior history of suicide attempt were 61% less likely to abuse substance. At a 95% confidence interval, they tend decrease the odds of abusing

substance by a factor of 0.61. Overall, the combined effect of negative life events on substance abuse among users with mental health issues was statistically significant chi_2 (3) = 5.90, p = 0.0095 < 0.05. At 95% confidence interval, the odds of substance abuse were significant.

Table 13

Binary Logistic Regression of Negative life events and Substance Abuse

					Number of obs. = 458 Chi_2 (3) = 5.90 *P*-value = 0.0095	
Negative Life Event	Odds Ratio	Std. Err.	Z	*P* value	95% conf. interval Lower	Upper
History of violence	0.77	0.15	-1.33	0.002	0.53	1.13
History of problem with law	1.01	0.22	0.07	0.947	0.66	1.56
History of suicide attempts	0.61	0.15	-1.97	0.019	0.37	1.00
Constants	0.84	1.12	-1.19	0.006	0.63	1.12

Summary (Transition)

This study aimed at examining the determinants of substance abuse among users with mental health issues in Ogun State, the study used patients' clinical records of Federal Neuropsychiatric Hospital Aro, Abeokuta, Ogun State, Nigeria. The study had dependent variable – substance abuse – and independent variables – sociodemographic characteristics, clinical variables, negative life events and social support. Four hundred and fifty-eight case files were checked for the period of five years 2015 – 2019. All the patients' files checked were that of adult age 18 years and above with the mean age of 27.71 ± 10.03. Most of the patients were male, single, and never married with educational level up to tertiary. Majority of them lived in the rented apartment and more than half of the patients were unemployed. The most prevalent mental disorder were schizophrenia and mood disorder. Fifty-nine patients experience schizophrenia spectrum disorder, seventy-one patients experienced

delusion. One hundred and thirty-five patients experienced personality disorder and fifty-six patients experienced moderate and mild mental retardation. One hundred and ninety-six patients had history of violence, two hundred and twenty patients had problem with the law while half of the patients' case file checked had attempted suicide in the past. A total of two hundred and seventy-one patients had abused drug and/or alcohol while one hundred and eighty-seven patients had never abused drugs and/or alcohol. The chi-square analysis between demographic variables and substance abuse, shows the relationship between gender, marital status, education, employment, type of housing and substance abuse to be statistically significant. It means they are factors causing substance abuse among users with mental health issues. However, there is no statistically significant association between substance abuse and religion. There is also significant association between schizophrenia, mood disorder, anxiety disorder, delusion, and substance abuse. This implies that the relationship between schizophrenia, mood disorder, anxiety disorder, delusion and substance abuse is statistically significant. The study also revealed that there is a strong positive relationship between history of violence and substance abuse and history of suicide attempt and substance abuse. However, there is no significant association between substance abuse and history of problem with law. The simple binary logistic regression analysis carried out in the study Middle-aged patients are 77% more likely to abuse substance compared to Young adult patients. Married patients were 42% more likely to abuse substance compared to single patients and widowed or divorced patients were 69% less likely to abuse substance compared to single patients. Patients who had education up to primary were 90% less likely to abuse substance compared to patients with no formal education, Patient who had education up to secondary

school level were 98% less likely to abuse substance while patients with education up to tertiary level were 70% less likely to abuse substance Self-employed patients were 66% less likely to abuse substance compared to unemployed patients while patients who work with the government (civil servants) were 48% less likely to abuse substance. Patients who lived in their own apartment are 43% more likely to abuse substance compared to those who lived in rented apartments. Patients experiencing mood disorder were 47% more likely to abuse substance compared to patients experiencing Schizophrenia, patients experiencing schizophrenia spectrum disorder were 8% more likely to abuse substance (than non-abuse) compared to patients experiencing schizophrenia while patients experiencing delusion were 61% more likely to abuse substance compared to patients experiencing schizophrenia. Patients experiencing moderate and mild mental retardation were 71% less likely to abuse substance compared to patients experiencing anxiety disorder, patients experiencing personality disorder were 92% less likely to abuse substance compared to those experiencing anxiety disorder. Patients with history of problem with law were 1% more likely to abuse substance compared to patients with history of violence, patients who had history of suicide attempt were 61% less likely to abuse substance (than non-abuse) compared to patients with history of violence. In chapter 5, I reiterate the primary purpose of my research study. The key findings in chapter 4 are concisely summarized and compared with peer-reviewed literature. The study limitations, positive social change implications and recommended for further study are described.

Section 4: Application to Professional Practice and Implications for Social Change

Interpretation of the Findings

According to these findings, sociodemographic variables are important variables when determining substance abuse for users with severe mental disorders. Males and young adults have the highest rate of substance abuse. Married patients were more likely to engage in substance abuse than single patients, while widowed or divorced patients were less likely to engage in substance abuse than single patients. This was in line with previous studies on gender disparities in the prevalence of mental disorders and substance abuse (Robichaud, 2003; Tuchman, 2010). The type of housing is another factor of substance abuse. Rented housing usually refuses to admit users with disturbing behaviors (Lynch et al., 2000). On the other hand, patients who live in autonomous housing have a high probability of having drug consumers in their neighborhoods because of their poor socioeconomic status (Lynch et al., 2000). With respect to education, there is significant relationship between education and substance abuse. However, patients who had education up to the tertiary level were less likely to engage in substance abuse compared to patients who had no formal education. This is probably due to knowledge of the danger of abusing substances.

Employment opportunity is another demographic variable that has an impact on substance abuse, because there is relationship between substance abuse and employment opportunity. Patients who were self-employed tended to be less likely to engage in substance abuse compared to patients who were unemployed. Also, patients who were civil servants were less likely to engage in substance abuse compared to patients who were unemployed.

Religion has no significant relationship with substance abuse. This may be attributed to the fact that the major religions in Nigeria, particularly Christianity and Islam, highly disapprove of the consumption of alcohol and the illegal use of drugs.

From the result of the findings, the relationship between substance abuse and absence of mood disorders among patients who abused substances were particularly unexpected, considering that they are more likely to have major depression or bipolar disorders than those who do not abuse substances. According to Grella et al. (2009), mood disorders would predispose patients to substance abuse.

The results of this research also reveal that there is a significant relationship between substance abuse and anxiety disorder. The relationship between substance abuse and anxiety disorders among users with mental health issues can be explained by the fact that patients who engage in substance abuse are less likely to have anxiety disorders and major depression than those who do not abuse substances. Furthermore, patients with severe mental disorders that are single and living alone can be motivated to use alcohol or drugs to reduce their loneliness (Segun et al., 2006). Also, there is a significant association between substance abuse and history of violence. The potential for violent or aggressive behavior of patients with severe mental disorders abusing substances increases when they are intoxicated.

Finally, the relationship between substance abuse and social support among users with mental health issues can be explained with the existing literature. This is because the records on social support were not included in the patients' case files. Patients who do not abuse substances usually receive more help from their relatives and friends than do patients who abuse substances. Family and social supports influence admission and pursuit of treatment and they predict better outcomes for

users with co-occurring mental and substance abuse disorders (Moos & Moos 2007). Another explanation could be that patients used alcohol and drugs to reduce their inhibitions.

Limitations of Study

This study has some limitations. First, since the case files used consisted record of heterogeneous group of users with severe mental health issues, the results of the findings may not be applicable to populations in other area of the country, such as persons with a specific mental disorder (e.g., schizophrenia). Second, due to the use of medical records, it was not possible to identify users having alcohol or drug abuse only thus it was impossible to analyze the two substance abuse disorders separately. Finally, the combination of drugs and alcohol abuse as the dependent variable could explain some unexpected results. This is because alcohol or some specific drugs are mainly associated with specific mental disorders. However, future studies could therefore focus on more specific severe mental disorders (such as schizophrenia or severe depression) and/or substance abuse.

Implications for Social Change

This study examined the determinants of substance abuse among users with mental health issues. This study was innovative in using a comprehensive framework including socio-demographic, clinical and negative life events variables among individuals with mental disorders and substance abuse. This study however, identified the implication of substance abuse for social changes. The adverse effects of substance abuse among users with mental health issues could be seen on the family system, individual members and the society as a whole. These issues clearly affect

many people in addition to the individual with the problem, often creating a burden for the family and its members. These effects on the family may include:

- Emotional burden: Members of the family and friends of the patients may feel anger, frustration, anxiety, fear, worry, depression, shame and guilt, or embarrassment.
- Economic burden: This may be caused by money spent on substances, or money problems associated with the loss of jobs or reliance on public assistance.
- Relationship distress or dissatisfaction: Families may experience high rates of tension and conflict related to the substance abuse disorder and problems it causes in the family.
- Family instability: This may result from abuse or violence, or family breakup due to separation, divorce, or removal of children from the home by Children and Youth Services.
- Effects on parents: Mothers who abuse substance may show less sensitivity and emotional availability to infants. They may feel guilty, helpless, frustrated, angry, or depressed
- Effects on the developing fetus and children: Alcohol use during pregnancy can harm fetal development causing birth defects and problems in child development.

Infants born to opioid-dependent mothers are at increased risk for neonatal abstinence syndrome, which can contribute to developmental or cognitive delays. Children of parents with substance abuse issues are at increased risk for abuse or neglect, physical problems, poor behavioral or impulse control, poor emotional

regulation, conduct or oppositional disorders, poorer academic performance, psychiatric problems such as depression or anxiety, and substance abuse.

Social effects of substance abuse impact the social functioning of individuals and create a burden for society as well. These disorders contribute to medical or psychiatric conditions, disability, and death because of accidents or diseases caused or worsened by substance use, or higher rates of suicidality, all of which affect society. Other social problems associated with substance abuse include housing instability, homelessness, criminal behaviors (victim or perpetrator) and incarceration, the transmission of HIV due to drug use or high-risk sexual behaviors, and unemployment or dependence on welfare. The costs associated with these social problems are staggering, creating an economic burden for governments who spend considerable sums of money on treatments for addiction, medical or psychiatric disorders, and other related problems such as those associated with welfare dependence, unemployment, or involvement in the criminal justice or social service systems.

Conclusion

This study was innovative in using a comprehensive framework including socio-demographic, clinical, negative life events, and social support variables among users with mental health issues. However, social support variables were excluded because there was no provision for such in the clinical records of the patients. Therefore, the study makes use of existed literatures to explain the relationship between social support variable and substance abuse among users with mental health issues.

The identification of variables as determinants of substance abuse among users with mental health issue in general could be useful in view to target appropriate interventions for patients. This study found that age, employment status, education, type of housing and gender are the major demographic and socioeconomic variables determining substance abuse among users with mental health issues. As a result, mental health services need to focus particularly on these variables where the propensity for individuals to experience substance abuse issues may be greater. As well, the results reveal that substance abuse among users is related to severe mental disorders, schizophrenia, mood disorder are clinical determinants of substance abuse in this study among others. Programs such as integrated dual diagnosis treatment, day hospital, supervised housing and assertive community treatment should be prioritized for mental health patients. Furthermore, substance abuse among males and females with severe mental disorders is associated with very distinct variables. It is important for mental health services to focus their attention on young individuals living alone, with history of suicide attempt and a history of violence.

Recommendations for Further Study

Since it is revealed from the study that substance abuse is related to some clinical variables and psychological wellbeing highlights the importance of mental health among young adult. As such the Psychological Well-Being Scale can perhaps, in future research be used to identify those adolescents who have low psychological well-being levels and thus who are at a greater risk of developing substance abuse problems and associated disorders. The vicious tension-reduction circle of psychological problems leading to substance use and then further psychological deterioration needs to be stopped at an early point. Since majority sampled for this

study were young adult thus, awareness should be made of the higher risks they face in developing substance abuse behavior. The knowledge about substance use should be given to them and the devastating consequences involved as a result should be highlighted.

Costs related to substance abuse are on the increase as reflected by the increasing need for young adult treatment services. The costs involved in these services are massive and they place an immense burden on the country's health system and economy. The results of this study would suggest that apart from the essential programs targeted at preventing substance abuse, there should be programs aimed at identifying and then advising adolescents who have negative life events and little help from relative and family. this would possibly be an effective method of decreasing substance abuse.

There should be training by experts for stakeholders particularly parents and young adult on substance abuse. This study therefore recommends that substance abuse training workshops be conducted for patients and for people. This will enable them to know the nature, signs and symptoms of substance abuse and the services available in their communities to provide care and support to users, especially those with mental health issues. However, these training workshops must be tailored to suit the cultural and educational backgrounds of the people. Comprehensive information about substances needs to be covered during lessons, substance abuse awareness campaigns and workshops need to be implemented. Where possible, site visits to hospitals and rehabilitation centers need to be arranged for people to witness the hardships of people who abuse substances. Patients need to be taught refusal and coping skills when encountering difficult situations in their lives (*Partnership for a*

Drug-Free America, 2009). Furthermore, support groups should be established in all areas of the country to provide care and support to those experiencing mental disorder.

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