The Critical Assessment of Knowledge, Attitude and Prevalence of Drug Abuse among Adults and Teenagers in Surulere L.G.A., Lagos State, Nigeria; a Case Study of Tramadol

Tecana American University

Post-Doctorate Program in Public Health with an Emphasis in Epidemiology and Research

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"I hereby swear and bear witness that I am the sole author of this Final Dissertation and that its content is the fruit of my work, experience and academic research"

Signature 

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General Index

Tramadol - Is an effective analgesic in the opioid family that has somewhat lesser narcotic associated side effects. Tramadol hydrochloride is a widely prescribed, centrally acting analgesic marketed in over 90 countries. Before being released in the U.S. in 1995, the drug had been available in Europe for almost two decades. Thus, the pharmacokinetic and pharmacodynamics properties of tramadol have been extensively investigated. Tramadol is a novel centrally acting analgesic used for the treatment of mild to severe pain. Tramadol is an oral analgesic, which stems from both norepinephrine and serotonin reuptake inhibition and direct receptor agonism.

Substance abuse - refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs. The DSM defines substance abuse as a pattern of maladaptive substance use that is associated with recurrent and significant adverse consequences.

Drug misuse - it is defined as the use of a substance for a purpose not consistent with legal or medical guidelines.

Dependence – it is a strong desire or sense of compulsion to take a substance, a difficulty in controlling its use, the presence of a physiological withdrawal state, tolerance of the use of the drug, neglect of alternative pleasures and interests and persistent use of the drug, despite harm to oneself and others. A compulsive pattern of substance use characterized by a loss of control over substance use and continued use despite the significant substance-related problems.

Drug tolerance - repeated use of a drug in which increased doses of the drug are required to produce the same effect.

Depressants - are sedatives which act on the nervous system. Artificial relaxation and relief from anxiety and mental stress tend to produce psychological dependence and withdrawal from heavy use is severe.

Stimulants - are agents that activate, enhance, or increase neural activity. They include amphetamines and synthetic appetite suppressants such as phenmetrazine or methylphenidate. They can give rise to symptoms suggestive of intoxication, including tachycardia, pupillary dilation, elevated blood pressure, nausea or vomiting and abnormal behavior such as fighting, agitation and impaired judgment. A full-blown delusional psychosis may occur.

Hallucinogens - are chemically divers group which produce profound mental changes such as euphoria, anxiety, sensory distortion, hallucination, delusion, paranoia and depression. They include mescaline and LSD.

Tramadol abuse -from the viewpoint of the researcher tramadol abuse can be defined as use of tramadol without medical reasons, and the daily dose excess 400-600 mg

Prevalence – defined as the proportion of a population which is found to have a disease or risk factor.

Drugs or substance: the word drug and substance are used interchangeably to refer to the same thing and, in this case, it refers to Tramadol

A drug user – in this case, study, this refer to a teenager or an adult involved in the use of tramadol

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Summary of the Dissertation

Background

Tramadol is an opioid analgesic indicated for the treatment of moderate and severe pains. When it is administered in the body for a long time, it has the potential to cause dependency, tolerance and drug abuse.

Objectives

This proposal aims at carrying out a critical Assessment of Knowledge, Attitude, and Prevalence of Drug Abuse among Adults and Teenagers in Surulere Local Government (LGA) of Lagos State, Nigeria; a case study of tramadol.

Study design

The study design which will be applied in this research will be a descriptive cross-sectional study among teenagers and adult in Surulere Local Government (LGA), Nigeria.

Keywords include; Cognition; teenagers, adults, substance abuse, Substance-Related Disorders; Tramadol

Justification

The prevalence of drug and substance abuse in Nigeria is wide and an increasingly growing problem. Studies carried in some places such as Adebayo indicate that 46.6% of the sample respondent had taken medicine for non-medical purposes at least once which are an indication that drug and substance abuse is a real problem in the country. Another study which was conducted by Onofa shows that the lifetime prevalence rate of any drug abuse among the respondent happened to be 69.2% which is low compared to that which had been reported by Maknjuola et al.

In this study, alcohol was the most prevalent lifetime drug with 34.4% (Abdel-Hamid et al, 2016). Alcohol and cigarette are the commonly abused drugs but currently, the abuse is taking a new direction. There are increasing concerns which have been evoked for the risk of developing tramadol dependence and the risk of adverse reactions which include epileptic seizures and fatal intoxications. Research done recently in Nigeria indicated that 54.4% of the total sampled population abused Tramadol and, in that population, 91% were male. Despite that these cases are being experienced and their effects studied, to understand the root cause of the behavior which is considered wrong, it is important to examine the understanding, attitude, and prevalence of the abuse. It has been noted that most people use the drug without being aware of the side effects. In this regard, it is important to examine the issue into details if proper and effective strategies will be initiated to curb the behavior.

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1.0 Chapter 1

1.1 Introduction

There is no doubt that the strength of any form of society derives its powers from the sons who happens to work as the first line defense against any breach of the social fabric through maintenance of values and morals, religion and heritage. Based on this assumption, if the spread phenomenon of drug and substance abuse among the society members, especially the young people are high, this threatens catastrophe will occur in the community. Substance abuse and the addictive behavior happen to be universal phenomena and they are currently regarded as the major public health problem (Oshodi et al, 2010). Research indicates that since ancient times if one lived with psychoactive substance, it seemed to be part of the fabric of their lives. The desire to have an experience of some altered state of unconsciousness seemed to be an intrinsic part of the human condition.

The health and social cost of abuse of any psychoactive substance in most cases reflect the most disturbing mortality and morbidity. The squealer of the physical, social, and economic and psychological harm derived from the abuse of the psychoactive substance tends to affect not only the individual user but also the family in general. Most of the reports indicate increment in risk-taking behavior which is inclusive of a significant rise in the cases of drug addiction. One of the drugs which have been associated with this typical trend is Tramadol, a drug first developed in Germany in the 1970s and then introduced in the 90s as a centrally acting analgesic properties which are similar to those of codeine and morphine and which are widely prescribed as pain killer;

Although, this drug is considered illegal without prescription in most of the Nigerian regions, it also easily accessible especially with the use of fake prescriptions from pharmacies or even from the black market (Olsson et al, 2017).

Tramadol HCl is a centrally acting synthetic opioid analgesic used in the treatment of moderate to severe pain. It has a low affinity to opioid receptors and inhibits the reuptake of norepinephrine and serotonin. Its analgesic effect is partially blocked by naloxone. Tramadol was approved for marketing as a safe analgesic in 1995.The manufacturer initially claimed that it produced only very weak narcotic effects. Recent data have demonstrated that its opioid activity is the overriding contributor to its pharmacological activity. The inadequate product labeling and lack of an established abuse potential have led to the safety feeling of many physicians to prescribe it to recovering narcotic addicts and to be known as narcotic abusers. Consequently, numerous reports of abuse and dependence have been received.

The 21st century Nigeria has observed changing predispositions in the form of psychoactive substance use with tramadol HCL developing as a candidate drug in various parts and counties of the nation (Borofka and Olatawura, 2016). In Nigeria, the use and abuse of tramadol has become a problem of National mental health and psychiatric significance, this is because, the use and abuse of Tramadol have been associated with psychosocial, economic and medical complications (Burke, 2016). Calabar, Cross River State, like other parts of the country has its own share of the National drug abuse epidemic and has exhibited changing trends over time with tramadol usage trends and patterns increasing with time (Ibrahim, Aliyu, Adeleke and Omoniyi 2017).

Based on Anecdotal clinical records and practice, the emergence of the opioid-based analgesic; tramadol among drug abusers admitted in Neuropsychiatric Hospital with the last ten (10) years presents a major concern in mental Health care and in the society, as the number of patients admitted in Neuropsychiatric facilities have seen an increase (Lanier, Lofwall and Mintzer 2010).

Tramadol is a centrally acting analgesic with strong opioid agonist properties as well as inhibitory effects on the reuptake of noradrenaline and serotonin. It was initially thought to have minimal addictive potentials when compared to other opioid analgesics, but the unfolding scenarios are contrary (Boostani and Derakhashan, 2012). Though not included in the essential drug list of the country, it is often prescribed for acute and moderate pains that are not responsive to other non-narcotic analgesics by clinicians. It is often used off-label for other purposes such as premature ejaculation and for its euphoric effects, and muscular enhancement (Chiang and Goldfrank, 2009). Literature also abound that and have documented the detrimental effects of tramadol which include, induction of seizures and Parkinson-like symptoms, development of classical opioid withdrawal syndrome and psychiatric symptoms such as aggressiveness, hostility, mania, mental and behavioral disorders (Aliyu, Adeleke, Omoniyi, and Ibrahim, 2016). Tramadol is linked with increased propensity of being addictive and it is more available and cheaper to buy than heroin and other opioids or psychoactive drugs. Its availability without prescription makes it easy to obtain and some people consider it a treatment for sexual dysfunctions such as weak erections and delay orgasms. The National Drug Law Enforcement Agency (2015), reports that, 3.2 million people over the age of 18 in Nigeria, used tramadol for non-medical reasons in their lifetime.

The prevalence of Tramadol Abuse is 54% and over 65% of tramadol users were within 18-37 years of age, while the average age of onset of use was 24 years (Liu, Lianz and Ren 2014). The major mode of initiation into tramadol use was peer influence and 63% used over 200mg per day. The primary reasons for tramadol abuse was reported as relief of tiredness, stress and pain 48%, prolonging of sexual enhancement and intercourse 40% and compulsive urge was 12% (Bashirian, 2014).

Socio-demographic characteristics reveals that males constituted over 83% of tramadol users, and the reasons for the male predominance was attributed to socio-cultural influences, but recently, females have also been reported to abuse tramadol. The detrimental and addictive effects of tramadol abuse have been revealed by the influx of patients presenting in emergency centers of psychiatric and mental Health facilities with cases of suicide attempts, acute schizophrenia, mental and behavioral disorders secondary to its compulsive addiction.

It is in context of this background information, that this study seeks to determine the prevalence and factors responsible for Tramadol abuse among patients admitted in the Federal Neuropsychiatric Hospital, Calabar from 2013 - 2017.

An increasingly alarming phenomenon of tramadol abuse has been heavily demonstrated in the Nigerian community in the last 4 years. Recent evidence suggests that Nigeria's drug abuse problem is not going away anytime soon. Nigerian authorities have seized more than half a billion tablets of Tramadol**,** a pain relief drug**,** in two high-profile raids at the country's biggest port over the past week. The tablets were found in 33 containers that had been flagged by the National Drug Law Enforcement Agency.

The agency says there are 39 more flagged containers yet to be searched. The high number of tablets suggests Nigeria has become a transit hub through which the tablets are smuggled into neighboring countries and it also highlights the scale of Nigeria's opioid abuse problem. Indeed, there's a willing Nigerian market of young people increasingly experimenting with and getting hooked on opioids and what is considered as unconventional mixtures to get high. Even though Tramadol is primarily a pain relief drug, non-medical use can produce similar effects to the high caused by heroin. Like heroin, Tramadol binds to opioid receptors in the brain and spinal cord and produces euphoric effects when the drug is taken at higher doses than medically prescribed. Unlike several other opioids, Tramadol is not internationally regulated and available for cheap (less than $1) at Nigerian pharmacies, which do not require prescriptions. The lack of international regulation also means Tramadol production and distribution has gone on unperturbed in countries like China and India, which have become the leading global exporters. The pain relief drug is also flooding other African cities including Accra and Cairo.

Although the issue of drug abuse is not new to the Nigerian society, tramadol is associated with a wide range of abuse and illegal transactions as it is easily accessible and readily provided at cheap costs despite it being scheduled. The alleged usages of tramadol have contributed considerably to its popularity and massive use, especially among the youth and middle-aged individuals as a remedy for premature ejaculation and for extended orgasm and to increase sexual pleasure. It also seems that it is not only a Nigerian problem but also had been reported in Iran and Israel. Their low price and availability without prescription make them very popular. It relieves psychosomatic symptoms related stress.

In the United Arab Emirates, the phenomenon of selling tramadol in an unlawful manner has been on the rise. Twenty-one cases of trafficking tramadol have been probed since January 2010 (Isanedighi, 2010).

Tramadol use is largely considered to be safe by physicians. The most commonly reported side effects are dizziness, nausea, constipation, and headache. However, tramadol toxicity may be underestimated; several deaths have been reported when tramadol was ingested alone in overdose. The most common symptoms of acute tramadol overdose are central nervous system depression, nausea, vomiting, tachycardia, and seizures. Higher doses can be associated with classic opioid toxicity features of coma, respiratory depression, and cardiovascular collapse. Tramadol has inhibitory actions on the 5-HT2C receptor. Antagonism of 5-HT2C could be partially responsible for tramadol's reducing effect on depressive and obsessive-compulsive symptoms in patients with pain and comorbid neurological illnesses. 5-HT2C blockade may also account for its lowering of the seizure threshold, as 5-HT2C knockout mice display a significantly increased vulnerability to epileptic seizures, sometimes resulting in spontaneous death. However, the reduction of the seizure threshold could be attributed to tramadol's putative inhibition of GABA-A receptors at high doses. Higher doses of tramadol can be associated with cardiovascular collapse, coma, and respiratory depression. Each of these features should be treated accordingly, with no other specific treatment for serotonin and norepinephrine reuptake inhibitors (SSRI) toxicity.

Tramadol is a synthetic pain reliever. Currently, doctors and other researchers have not yet understood the exact mechanism of action of tramadol though it is considered like morphine.

Just like morphine, tramadol tends to bind to the receptors in the brain that are deemed important for transmitting the sensation of pain in the whole body to the brain. Tramadol is of different forms, brands and strengths. Some happen to be immediate release formulations while there are others which are sustained or delayed the release; thus, they release the active moiety more slowly for several hours, thus providing a constant and more even pain control. In several countries, it is considered as a prescription-only medicine, but for Nigeria, it is a quite different story. In a statement offered by the pharmaceuticals from Nigeria, the approved use of tramadol is 50 mg and 100 mg, or capsules and it is not 200mg/250mg as it has found to be circulating in most of the markets in the country (Oluremi, 2012). Reports indicate that there is an increased abuse of tramadol among the teenagers and adults where they are using it as a pain reliever. Nevertheless, tramadol has resulted to a wide range of effects which calls for action from the relevant authority. Below is a description of the effects that most of the users are facing;

1.2 Effects and Side Effects of Tramadol Abuse

Immediate Effects and Adverse Effects of Tramadol Use

Tramadol relieves pain and possibly depression-related symptoms in patients with co-morbid mental health conditions.

While tramadol itself has a weak affinity for the mu-opioid receptor, several of its metabolites have far more affinity, likely leading to some of the desirable effects of tramadol use.

Unlike other centrally acting opioids (such as morphine or heroin), tramadol doesn't seem to have a clinically relevant respiratory depression effect on patients (only seen in patients who take considerably more than the recommended dose). By prescription, tramadol is most frequently taken orally, although intravenous and intramuscular formulations exist.

Effects that are associated with tramadol administration include:

- Analgesia.
- Euphoria.
- Lack of inhibition.
- Mellowed affect.

Some adverse effects associated with tramadol use include:

- Nausea.
- Drowsiness.
- Loss of appetite.
- Dizziness.
- Vomiting.
- Insomnia.
- Sweating.

1.3 Long-Term Effects of Tramadol

Tramadol, also known as Ultram, has managed to keep a relatively low profile in the world of addiction in part because it is an atypical opioid and not technically considered a narcotic. However, like other opioids it presents a host of dangers, particularly as tolerance builds and you graduate to higher doses over time.

Tramadol has a low abuse potential (especially when compared to other opioid analgesics); for years, tramadol was heralded as a non-abusable replacement option for many of the existing opiate painkillers. However, because tramadol is such an effective pain medication, the potential for abuse naturally does exist and we've now seen tramadol abuse becoming more prevalent over the past few years. If a user takes tramadol repeatedly over a period and develops a tolerance for the drug, an overdose may occur when that user takes more than normal to achieve the desired effect.

Tramadol overdoses can be very serious if they occur, and can cause:

1.3.1 Seizures

Tramadol is known to cause seizures in some users. While the risk is particularly significant for those with epilepsy, they can occur even in those with no prior history of seizures. High doses may increase risk of seizure for some, but several studies "demonstrate that seizures may also occur in therapeutic ranges—especially in association with consumption of other drugs such as alcohol, selective serotonin reuptake inhibitors, tricyclic antidepressants, and antipsychotics." Overall seizure risk is estimated to be between 8 and 35%, but research suggests that risk increases over time, which means that long-term users are particularly vulnerable.

1.3.2 Adrenal Insufficiency

The adrenal glands are endocrine glands responsible for producing a few hormones such as cortisol, adrenaline, and aldosterone. These hormones play a variety of critical roles, such as controlling blood pressure and heart rate, allowing your body to sufficiently metabolize nutrients, and maintaining immune system function.

Chronic tramadol use is associated with adrenal insufficiency, which means that your body's ability to produce these substances is diminished. As a result, a multitude of vital functions are compromised and you may experience symptoms such as muscle weakness, fatigue, and low appetite.

1.3.3 Androgen Insufficiency

Androgens are sex hormones, particularly testosterone, associated with secondary sex characteristics in men as well as bone and muscle development, metabolism, and sexual and reproductive health. Research suggests that long-term use of opioids, including tramadol, can lower these sex hormone levels and cause androgen insufficiency. This can lead to a host of potential symptoms including loss of libido and sexual enjoyment, fertility problems, decreased muscle and bone mass, and mood disturbances like depression. While typically associated with and studied in men, androgen deficiency can affect women as well and produce many of the same symptoms.

1.3.4 Respiratory Problems

While the risk of respiratory depression as not as severe as that associated with other opioids, tramadol can cause slow and shallow breathing. In turn, this can lead to fainting, dizziness, and confusion. Risk of respiratory depression is heightened with use of alcohol, benzodiazepines, or hypnotics.

1.3.5 Hallucinations

Although not well-researched, there are anecdotal reports of tramadol-induced hallucinations, particularly in elderly users.

1.3.6 Serotonin Syndrome

Serotonin syndrome occurs due to excessive serotonergic activity that disrupts the normal function of the central nervous system. As a result, you may experience agitation, loss of muscle control, rapid heart rate, rigid muscles, sweating, and coordination difficulties. In severe cases, it can cause loss of consciousness, irregular heartbeat, and seizures, potentially resulting in death. While serotonin syndrome typically occurs when tramadol is combined with medications such as selective serotonin reuptake inhibitors (SSRIs), selective serotonin/norepinephrine reuptake inhibitors (SNRIs), or monoamine oxidase inhibitors (MAOIs), there is evidence of serotonin syndrome developing due to tramadol use alone "without concomitant use of other serotonergic medications."

1.3.7 Liver and Kidney Damage

Long-term tramadol use is associated with liver and kidney damage. In particular, high doses of tramadol may cause liver failure.

1.3.8 Behavioral and Psychological Effects

Tramadol addiction, like other forms of addiction, can produce significant behavioral changes due to compulsive drug seeking and preoccupation with using. You may neglect healthy social interactions and obligations or experience increased interpersonal conflict, damaging even your most important relationships. You may also neglect or struggle to participate in professional or educational obligations and responsibilities, threatening your career and your livelihood.

Your financial security may be compromised as you spend increasing amounts of money on drugs and you could face legal consequences for your actions, particularly if you obtain tramadol illegally or engage in illegal activities in order to afford the drug. In some cases, even regular self-care may fall by the wayside, keeping you from engaging in vital activities like healthy eating, exercise, and basic hygiene. Additionally, you are at heightened risk for other forms of substance abuse. As a result of both these consequences and your own feelings about your addiction, you can experience profound psychological and emotional disturbances including depression, anxiety, and loss of confidence.

Symptoms of overdose may include:

- Seizures.
- Coma.
- Hypertension.
- Tachycardia.
- Lethargy.
- Nausea.
- Agitation.

1.4 Craving

As with most opioids, abstinent users experience cravings for tramadol. These cravings can be triggered by the environment or from situational awareness—anything that reminds the user of a time during which they were taking tramadol. Unfortunately, strong cravings often lead the abstinent user to relapse. The strength of craving seems to depend upon the level of dependence, tolerance, and the length of time the user has been taking tramadol.

Stronger cravings are associated with a more seasoned tramadol user who has been taking quadruple the recommended dose for a decade. Weaker cravings may be experienced by less tolerant users who have taken tramadol for six months, for example.

1.5 Dependence

While most tramadol users do not intend to take the drug for an extended time period, the analgesic effects coupled with the feelings of euphoria and decreased anxiety often lead a user to take more than prescribed, for a longer period than originally intended (often without the prescribing physician's knowledge). As users take tramadol more frequently, their bodies become physiologically dependent upon tramadol; that is, if they were to stop taking the drug, withdrawal symptoms would occur. Psychological dependence may also manifest itself with prolonged tramadol use. These users feel that they cannot normally function without taking their daily portion of tramadol, perhaps due to the euphoria or decreased anxiety associated with the drug.

1.6 Tolerance

Tramadol abuse may begin with something as simple as a prescription for post-operative pain or chronic arthritis. As the patient uses more and more tramadol, they require a higher dose to achieve the same effects. This is known as tolerance, and it can develop with many drugs of abuse as time progresses. Tolerance is dangerous because users taking tramadol will need increasingly more drug over time, possibly leading to an unintentional or accidental overdose.

1.7 Withdrawal

Withdrawal symptoms are common in patients who are physiologically dependent upon tramadol, like withdrawal symptoms in other more commonly abused opioids.

Symptoms include:

- Nausea.
- Anxiety.
- Irritability.
- Insomnia.
- Mood swings.
- Paranoia/hallucinations.
- Tremors.

The severity of these symptoms depends both upon the level of tolerance developed as well as the time since last dose of tramadol (as well as the amount taken). If withdrawal symptoms are severe enough, a partial opioid antagonist such as buprenorphine may be prescribed.

How Tramadol Addiction Changes a User's Life

The vast majority of tramadol abusers actually have a history of substance abuse (typically a substance other than tramadol), and many have been prescribed the medication legally for pain control purposes. However, due to developed tolerance, users can become out of control and use far more tramadol than recommended, ultimately becoming addicted both physiologically and psychologically to the drug. Tramadol addiction can have adverse effects on the user's social, occupational, and mental health. Many tramadol abusers report strained family relationships, as well as troubles in the workplace and/or at school.

Due to their perpetual need to obtain tramadol, many abusers report financial trouble associated with clinic visits or purchasing the drug illegally. Pregnant women may also experience trouble with their developing fetus while using tramadol, as the newborn may be physiologically addicted when born to a tramadol-addicted mother.

1.8 Tramadol Addiction and Mental Health

Historically, people who become addicted to tramadol frequently suffer from comorbid, or co-occurring substance abuse as well, often other opioids (such as heroin or morphine). A Tramadol addict who is also receiving treatment for depression or anxiety is at an increased risk of serotonin syndrome. There is an increased prevalence of substance abuse in patients reporting mental health conditions, such as depression and anxiety, and tramadol is no exception. Unique to tramadol, abusers may experience hallucinations while using or withdrawing from tramadol, which may present more like a psychiatric crisis instead of an addiction crisis, because of the overlapping symptomatology. Tramadol, in addition to its analgesic effects, also decreases reuptake of neurotransmitters that are involved (and often imbalanced) in clinical depression. Therefore, a tramadol addict who is also receiving treatment for depression or anxiety is at an increased risk of serotonin syndrome. Serotonin syndrome can be life threatening, and is characterized by a markedly increased concentration of serotonin in the synapses between neurons in the brain.

These effects tend to be alarming and requires the relevant authorities to understand the knowledge and attitude that the users have about this drug and its prevalence in the Nigerian communities. In this regard, the relevant authorities have called for concerted efforts to help curb the trend.

The proliferation of this higher strength tramadol which happens to become more popular among the teenagers and adults in Nigeria calls for concern and coordinated efforts by various stakeholders to help get rid of this substance which is unregistered and unapproved because of the problems it possesses to the general wellbeing of the society.

1.9 Problem Statement

1.9.1 Statement

There is a growing concern from various stakeholders in the health sector who are concerned that both adults and teenagers from in Surulere Local Government (LGA) of Lagos State, Nigeria have been misusing and abusing Tramadol where they take them with an aim of increasing their sexual performance, ecstasy, boost their energy among others (Abdel-Hamid et al, 2016). There are various researches which indicate that there are some of these teenagers and adults who put high doses of tramadol in energy drinks to achieve quicker results. It is important to note that Tramadol ought to be taken under the monitoring and supervision of the doctor. However, any form of an attempt to subject the drug to constant use precariously leads to addictions which in some case may lead to death (Umukoro et al, 2016).

1.9.2 Formulation of The Problem

Drug abuse and addiction are currently one of the most important health problems. Information which pertains the role of lay theories is being considered undeniable in the rehabilitative and preventive works.

There are various studies which have assessed the lay beliefs and attitudes which are related to various kinds of drugs where others indicate that there are variables which tend to increase the risk of drug abuse. The abuse of tramadol among the people of Surulere local government, reports indicate that 30% both male and female aged between 14 and 30 years have abused tramadol at least one time, and there are many people who are increasingly dependent on the drug with some becoming seriously addicted (Ibrahim et al, 2017).

Based on the observed spread of tramadol abuse and lack of information pertaining to its effect and preventive measures, the incidence has encouraged the researchers to study this phenomenon. It is a study which will assess the extent of the phenomena of abuse of the tramadol on the person who has tramadol abuse in Surulere.

1.10 Objectives

1.10.1 General Objective

This study aims at assessing the abuse of tramadol in Surulere Local Government (LGA) of Lagos State, Nigeria by examining the level of knowledge, attitude, and prevalence of the drug.

1.10.2 Specific Objective

- To identify the knowledge and attitude of tramadol among the people abusing Tramadol
- To determine the prevalence of tramadol abuse among patients admitted in the hospital since 2013 to 2017
- To ascertain the socio-demographic characteristics of the patients with tramadol abuse as indicated in the hospital records

- To assess the factors responsible for tramadol abuse

2.0 Chapter 2

2.1 Literature Review

2.2 Introduction

This chapter consists of the literature review that is an evaluative report of information available in the literature related to my area of study. It summarizes the findings of other researchers who have studied the field. Both the theoretical and the empirical reviews of the existing literature will be covered in this chapter. The theoretical review being a proposed manner of thinking about the information that is potentially related to my area of study will assist in understanding the current body of knowledge on the research topic. The empirical review on the other hand that is a means of obtaining knowledge through direct and indirect observation or experience will help in understanding the findings and observations of other related studies. The conceptual framework will later be developed using the information from the two reviews.

2.3 Theoretical Framework

Based on a systematic approach, substance use happens to be a social complex phenomenon which can only be meaningfully understood by carrying out an analysis on the complex relations for the users instead of having a linear casual deterministic perspective. The systematic approach basically result to a broader reading of the factors which contribute to substance use behavior including the physical effects of the abused drug to the body, the users knowledge and attitude towards the drug, the users belief towards the power of the drug and the network of favors that consumption imposes mainly the avenue through which he or she access the drug (Ibrahim et al, 2017).

If any of the scholars will fail to consider some of these aspects, then the understanding of the whole problem of drug addiction becomes incomplete, and it becomes difficult to understand the prevalence of the drug among the community, and the knowledge and attitude which the abusers tend to entail.

There are various theories and frameworks which have been developed with the aim of trying to describe or predict drug use in the community. For many years, health professionals, policymakers and researchers have carried out researches which mainly focus on the effects of drug abuse on the user. However, the phenomenon happens to be multivariate and most of these theories tend to focus on a single aspect of the problem thus failing to answer the core question about the phenomenon.

This study is guided by the differential reinforcement theory which maintains that drug and substance abuse stems from the effects of the drug which outweigh the negative ones. Whenever a drug produces an undesirable result such as panic and other problems, they tend to deliver negative reinforcement. More so, they can always return to positively reinforcing effects such as euphoria which in most cases outweighs the negative effects. People tend to learn how to take a drug and what to expect from it, they learn the rules of taking these drugs despite that they do not always apply what they have learned. Scholars indicate that people tend to be shaped by the consequences of consuming various products and they will always continue to be involved in their behavior whenever someone else complements their behaviors.

Whenever an individual gets a reward from taking a drug such as being able to cope with a pain, any positive consequence despite how small it is tending to be more emotionally powerful when compared to the negative one.

The differential reinforcement theory happens to be relevant because it takes into account the factors contributing to drug abuse and captures the complexities and intricacy of the prevalence of drug abuse in that excessive taking of the drug happens to be a learned behavior which tends to be reinforced and it is subject to change via relearning and various patterns being incorporated in reinforcing it.

2.3.1 Social Cognitive Theory

This is a theory which on the reason why people tend to acquire and maintain behavioral patterns which also indicating the basis which can be used during interventions. While assessing the behavioral changes, both the environmental factors, people and behaviors are examined. The environment is defined as a factor which can affect the behavior of a person (Mamman et al, 2014). These include the social, economic and environmental factors. The environment tends to provide models for behavior via observational learning which occurs when an individual watch the actions of another person and the reinforcement which this person receives. This theory happens to be important because it analyzes the social context on which taking of most drugs occurs and factors contributing to drug abuse.

2.3.2 Expectancy Model

This theory evolved from cognitive-behavioral and social learning perspectives. According to this model, people with alcohol dependence develop problematic beliefs about substances use relatively early in life can occur through a combination of reinforcement and observational learning Another concept of expectancy model is that of self-efficacy and coping.

Self-expectancy refers to an individual ‘s perception that he or she has the ability to meet the challenges of a difficult situation while coping refers to the strategies that an individual use to reduce the perception of a threat or danger. Based on Dimeff and Marlatt ‘s (1988) expectancy model, a series of reactions can occur when a drug-dependent individual attempts to remain abstinent. There will be a contrasting scene when two persons try to remain abstinent in high-risk situations. For example, Persons A and B encountered high-risk situations, such as parties where people are consuming alcohol. A can abstain from drinking at the party because he or she has learned how to cope with such situations, and he or she feels capable of carrying through with his or her intention not to drink alcohol. Each successful episode of abstinence reinforces his or her sense of self-efficacy, causing him or her to feel more capable of abstaining in subsequent situations. B lacks a satisfactory coping response. The actual consumption of alcohol is not what leads to a relapse, but, rather, his or her interpretation of the act of drinking as a sign of loss of self-control.

Thus, when B enters a high-risk situation, he or she feels incapable of staying away from alcohol because of his or her low sense of self-efficacy. A compelling expectation that alcohol will have a positive mood-altering effect adds to his or her low sense of self-efficacy and leads him or her to take the first drink.

The positive sensations that the drug produces further undermine B ‘s resolve, but cognitive factors enter at this point in the process as well. Having violated the self-imposed rule of remaining abstinent, B now is subject to the abstinence violation effect, a sense of loss of control over one ‘s behavior that has an overwhelming and demoralizing effect. Thus, B ‘s self-efficacy is further eroded, initiating a down-ward spiral trend, which eventually ends in renew drug dependence.

2.3.4 Personality and Substance Abuse

Personality variables help to explain why certain people are drawn to substance abuse. In this regard, researchers have studied high levels of negative affect and an enduring desire for arousal and increased positive affect. In one study (Davison & Neale, 2001), kindergarten children were rated by their teachers on several personality traits and were followed up several years later. Anxiety (e.g., worries about things, fear of new things or situations) and novelty seeking (e.g., restlessness, forgetting) predicted the onset of getting drunk, using drugs, and smoking (Killen et al, 1997). Drug use in general has been found to correlate with anti-social personality disorder (Ball, Carroll, & Rounsaville, 1994). Rebelliousness and high levels of aggression have been found to be related to substance abuse (Anderson et al, 1997; Davison & Neale, 2001). (Lavelle, Hammersley, & Forsyth, 1991) showed that drug user was shrewd, tough-minded, anxious, streetwise and experience-seeking. Further, Ekstrand (1985) reported that drug users seemed to be immature, compulsive and possess low self-esteem and are incapable of managing failure. Also, Shedler & Block (1990) indicate that frequent drug users were maladjusted, socially alienated, and deficient in impulse control and manifestly distressed.

Conversely, abstainers were observed to be anxious, emotionally constricted and lacking in social skills. With respect to extraversion, findings on its relationship with substance abuse have been mixed. Eysenck 's (1967) arousal theory categorized it on the bases of stimulation, excitement and gregariousness and these are potent factors in predicting drug use. Furthermore, Oluwatelure (1995) found a positive relationship between extraversion and alcohol abuse. However, Ifeagwazi's (2005) study failed to find a positive relationship between extraversion and drug use. The researcher explained the result by suggesting that extraversion is not a pronounced personality trait that distinguishes drug users from non-users. However, it seems that extraversion is a more positively valued personality trait (than introversion) and thus is not likely to be higher among drug users than in the general population. With respect to neuroticism, studies have found a strong relationship between it and substance abuse. Neuroticism reflects individual differences in the extent to which a person perceives and experiences the world as problematic, threatening and distressing. High scorers on this scale experience various negative emotions such as anxiety, guilt, sadness, and hostility. They tend to feel inadequate and inferior and report elevated level of stress and indicate that they cope poorly with stress, causing pronounced emotional liability (Watson, Clark, & Harkness, 1994).

The experience of negative unpleasant states has been linked with alcohol and drug use (Ifeagwazi; 2005). Pharmacological evidence indicates that opiates and tranquilizers are used more frequently by anxious and neurotic persons to reduce their emotional distress. In fact, emotional instability including frustration, anxiety, depression and unhappiness has become crucial in etiological explanations of substance abuse (Kuna & Bande, 1993) for instance; anger or unhappiness is related to cigarette smoking and alcohol use.

With reference to psychoticism, studies have repeatedly shown a positive relationship between psychoticism and substance abuse. High scorers on the psychoticism scale exhibit some personality and behavioral traits e.g., aggressiveness, impulsivity, egocentrism; and impersonal feelings and anti-social tendencies (Carey & dilalla, 1994); these are linked with the initiation and maintenance of drug use (Andersonet al, 1997).

2.4 Opioid

The term opioid is used to refer to a class of psychoactive substances derived from the poppy plant including opium, morphine and codeine, as well as semi-synthetic forms including heroin and synthetic compounds including methadone and buprenorphine with similar properties. Illicit use of opioids generally involves injecting, or inhaling the fumes produced by heating the drug. The term opiate refers strictly to the subset of opioids that are naturally stirring or semi-synthetic, and therefore includes heroin and morphine but ignores methadone and buprenorphine. Stimulants refer broadly to any substance that activates, enhances or increases neural activity. Illicit stimulants comprise cocaine, crack cocaine and amphetamines. Cocaine is one of the most frequently abused illicit stimulants in the Europe. It is extracted from the leaf of the coca plant and generally sniffed in powder form. Crack cocaine is usually smoked but sometimes injected. Amphetamines are a group of synthetic substances with different chemical structures but broadly similar stimulant properties to cocaine and include dexamphetamine sulphate a prescription drug licensed for the treatment of narcolepsy and attention-deficit hyperactivity disorder, but which has misuse potential) and methamphetamine. Cannabis is a generic term denoting the various preparations of the cannabis sativa plant, including cannabis leaves the most common form, which is smoked, hashish resin and the rarely used cannabis oil.

Tetrahydrocannabinol is the key constituent of cannabis that produces the psychoactive effect sought by most users, and the diverse forms of cannabis vary in their tetrahydrocannabinol content. Drug misuse is defined as the use of a substance for a purpose not consistent with legal or medical guidelines. It has an adverse impact on health or functioning and may take the form of drug dependence or be part of a wider spectrum of problematic or harmful behavior.

The Advisory Council on the Misuse of Drugs (ACMD) exemplifies problem drug use as a condition that may cause an individual to experience social, psychological, physical or legal problems related to intoxication and regular excessive consumption, and dependence.

2.5 Drug Dependence

Dependence is analyzed according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) when three or more of the following principles are present in a 12-month period: tolerance; withdrawal; increasing use over time; persistent or unsuccessful efforts to reduce use; preoccupation or unnecessary time spent on usage or recovery from use; negative impression on social, occupational or recreational bustle; and sustained use despite evidence of its causing psychological or physical difficulties. The diagnosis of dependence is strongest with opioids. The WHO states that: opioid dependence progresses after a period of regular use of opioids, with the time required varying based on the quantity, frequency and route of administration, as well as factors of individual vulnerability and the context in which drug use occurs. Opioid dependence is not just a heavy use of the drug but a complex health connotation that has social, psychological and biological elements and consequences, including changes in the brain. It is not a weakness of appeal or will.

However, dependence, as categorized by the above definition, can also occur with stimulants and cannabis.

2.6 Tolerance

Repetitive use of a drug can lead to the development of tolerance in which amplified doses of the drug are needed to produce a similar effect. Tolerance develops to opioids, stimulants and cannabis. Termination of use leads to reduced tolerance and this may lead to significant risks for individuals who return to drug doses at a level to which they had previously developed tolerance. This can result in accidental overdoses and, in the case of opioid misuse, could lead to respiratory depression and death.

2.7 Withdrawal

Withdrawal syndromes have evidently been seen after cessation or lessening of opioid and stimulant use. DSM-IV criteria for a withdrawal disorder include the development of a substance-specific syndrome due to cessation or reduction in use; the syndrome causing clinically significant distress; and symptoms not due to a general medical condition or better explained by another mental disorder. While withdrawal effects have been associated with cessation of heavy opioid use, their clinical significance is uncertain at present.

Individuals who abuse drugs may be affected by wide a range of health and social challenges other than dependence, which may include (particularly with opioid abusers):

- Physical health problems (for example, thrombosis, abscesses, overdose, hepatitis B and C, HIV, and respiratory and cardiac problems).
- Mental health problems (for example, depression, anxiety, paranoia and suicidal thoughts).
- Social difficulties (for example, relationship problems, financial difficulties, unemployment and homelessness).
- Criminal justice problems.

Most people who tend to abuse drugs mostly use various substances concurrently and regularly, a situation referred to as polydrug abuse.

The usage of opioids together with cocaine or crack happens to be common to many people, with the National Drug Treatment Monitoring System (NDTMS), which collects, collates and analyses information from those involved in the drug treatment system, reporting an increase in the use of both drugs, from 18% of those presenting for drug treatment in 1998 to 24% in 2001National Treatment Agency for Substance Misuse. Alcohol abuse happens to be common to all people who tend to abuse drugs; data from the National Treatment Outcomes Research Study (NTORS) on drug misuse suggested that 22% of participants also drank alcohol frequently, 17% drank extremely heavily and 8% drank an excessive amount daily. The individuals who abuses opioids may frequently take cocktail substances which are inclusive of alcohol, cannabis and prescribed drugs which includes benzodiazepines which tend to have especially dangerous effects when compared to one of the drugs taken independently.

The association which can be seen between drug misuses and crime also applies on the younger population; The Home Office 2004 Offending Crime and Justice Survey discovered that, young people who had misused drugs in the previous years happened to be twice as likely to have committed an offence when compared with those who had reported to have never misused drugs (52% versus 19%). Additionally, young offenders who happens to have taken Class A drugs in the past were discovered to be more likely to be frequent offenders when compared to other young people who had taken different types of drugs. However, in contrast to figures for the general population, Class A drug users comprise a very small proportion (1% testing positive for heroin and 4% for cocaine) of arrestees aged below 18 years.

2.8 Etiology and Maintenance of Drug Abuse

Drug abuse is in an increasingly manner being portrayed in the field as a medical disorder which is known as the disease model of drug abuse of misuse, in part as a result of advances in our understanding of the neurobiology underlying dependence. There is also no question that numerous socioeconomic and psychological factors all play an important part in the etiology of drug abuse. These conceptualizations are not mutually exclusive; rather they are facets of the multifactorial an etiology of drug abuse.

The most robust evidence highlights peer drug use, availability of drugs and elements of family interaction, including parental discipline and family cohesion, as significant risk factors for drug misuse. Traumatic family experiences such as childhood neglect, homelessness or abuse increase the likelihood that the individual will develop problems with drugs later in life.

Recent studies of twins, families and people who have been adopted suggest that vulnerability to drug abuse may also have a genetic component, although it is unclear whether repeated use is primarily determined by genetic predisposition, or socioeconomic and psychological factors lead an individual to try and then later to use drugs compulsively. Risk factors for heavy, dependent drug use are much more significant when they occur together rather than individually.

A defining characteristic of drug dependence is that drug use begins as a voluntary action to seek a rewarding stimulus, but continued use results in loss of control over the use, despite its negative consequences. The effects of many illicit drugs are mediated via various brain circuits, the mesolimbic systems, which have evolved to respond to basic rewards such as food and sex to ensure survival. A diverse range of substances, including opioids, stimulants and cannabis, as well as alcohol and nicotine, all appear to produce euphoric effects via increasing levels of dopamine a neurotransmitter in the nucleus accumbency. This has been well demonstrated in human brain-imaging studies. Euphoria resulting from use then potentiates further use, particularly for those with a genetic vulnerability.

Chronic drug use may produce long-lasting changes in the reward circuits, including reductions in dopamine receptor level, and these contribute to the clinical course of drug dependence, including craving, tolerance and withdrawal. In addition, other types of neurotransmitter systems for example, opioids, glutamates and cannabinoids are implicated in the abuse of specific drugs. Although initiation into drug use does not lead inevitably to regular and problematic use for many people, when use begins, it often escalates to abuse and sometimes to dependence tolerance, withdrawal symptoms and compulsive drug taking.

Once dependence is established, particularly with opioids, there may be repeated cycles of cessation and relapse extending over decades. Vulnerability to use is highest among young people, with most problem drug users initiating by the age of 20.

Individuals dependent on drugs often become so in their early twenties and may remain intermittently dependent for many years. With cannabis and cocaine, recreational use is more common and it is likely that there are different patterns of use, with those taking cocaine being divided between those who take the drug on an episodic basis and those who take it daily; in contrast, usually only a small number of people taking cannabis move to repeated daily increasingly heavy use, with many taking the drug intermittently.

A general US population survey of 8,098 individuals (Anthony et al., 1994) found that among those who had used cocaine or cannabis in their lifetime, 16.7% and 9.1% subsequently became dependent on the respective drugs; for heroin, such differences may relate to the different intensities of action different drugs produce within the neural reward sites. The neurobiological account of fundamental reward systems implicated in drug abuse may parallel the sociocultural–behavioral–cognitive model presented by Orford (2001). He conceptualized drug abuse as an excessive appetite, belonging to the same class of disorders as gambling, eating disorders and sex addiction. All involve activities that form strong attachment, and were once rewarding, but with excessive consumption result in compulsion and negative consequences. Orford argued that the emotional regulation of such appetitive behaviors in their respective social contexts for example, the excitement associated with gambling or the anticipation of the next of heroin, well characterized within the principles of operant conditioning, is a primary factor driving excessive use.

Secondary factors such as internal conflict knowing that the behavior is harmful yet being unable to disengage from it potentiate these emotions and thus excessive use, but an alternative result is that the individual alters behavior in order to resolve such conflict. This crucially suggests that recovery is not impossible, but also that successful treatment attempts are likely to operate against a background of powerful natural processes (Orford, 2001).

2.9 The Sequence of Drug Abuse

Drug abuse is a relapsing and remitting condition often involving numerous treatment episodes over several years. While the initiation of drug use does not lead inevitably to dependence over the long term, several factors can potentiate this developmental course.

Earlier initiation of drug use increases the likelihood of daily use, which in turn results in a greater likelihood of dependence. Among people who misuse opioids, who form the predominant in-treatment population, most individuals develop dependence in their late teens or early twenties, several years after first using heroin, and continue using over the next 10–30 years. In a long-term outcome study up to 33years of 581 male opioid users in the US, 30% had positive or refused urine tests for opioids, 14% were in prison and 49% were dead. Longitudinal data from the US also showed that the average time from first to last opioid use was 9.9 years, with 40% dependent for over 12 years. Although it is the case that problem drug users can cease drug use without any formal treatment, particularly for individuals with primary cocaine or cannabis misuse, for many it is treatment that alters the course of opioid dependence. Most initiation of cocaine use occurs around the age of 20, with the risk of cocaine dependence occurring early and explosively after first use and persisting for an average of 10 years.

Cannabis use typically begins in early adolescence with heaviest use in the 15–24 age group, which may in part be explained by strong peer influences. Most use tends to decline steadily from the mid-20sto the early 1530s. Cannabis dependence persisting through adulthood is the most prevalent among those with sustained frequent use, as high as 40% among those who have used almost daily. Although drug abuse can affect all socioeconomic groups, deprivation and social exclusion are likely to make a significant contribution to the maintenance of drug abuse. That said, an association has been found between income in adolescence and early adulthood and cannabis use, which may reflect the recreational nature of most of the cannabis use.

Factors that influence the cessation of drug use in adulthood are like those associated with lack of drug use in adolescence. For example, transitions into social roles with greater conventionality, responsibility and contexts that are not favorable to using drugs such as employment, marriage and pregnancy; for example, and good health are not associated with long-term use. Peer pressure is a major influence on experimental use and is also likely to affect a move towards regular use. The level of drug use is again a clear predictor of continued use. Once an individual is dependent, drug use is generally a chronic condition, interspersed with periods of relapse and remission. Repeated interaction with the criminal justice system, long-term unemployment and increasing social isolation serve to further entrench drug use.

2.10 The Pharmacological Effects of Drug Abuse

2.10.1 Opioids

Opioids have many effects on the brain, mediated through specific receptors (μ, κ, or δ). The key opioid receptor subtype is μ, which mediates euphoria ', as well as respiratory depression, and is the main target for opioids, while the κ receptor is involved in mood regulation. Drugs such as heroin and methadone are agonists, which stimulate the receptor. Buprenorphine is a partial agonist; that is, it occupies the receptor in the same way but only partially activates it. In addition, it is an antagonist at the κ receptor and therefore is less likely to lower mood compared with μ agonists. Soon after injection or inhalation, heroin metabolizes into morphine and binds to opioid receptors. This is subjectively experienced as a euphoric rush, normally accompanied by a warm flush, dry mouth, and sometimes nausea, vomiting and severe itching.

As the rush wears off, drowsiness, and slowing of cardiac function and breathing (sometimes to the point of death in an overdose), persist for several hours. The effects of methadone are similar but more drawn out and therefore less intense lasting up to 24 hours when taken orally as prescribed; however, this may be circumvented by illicit users who inject the drug. The most obvious consequence of long-term opioid use is the development of opioid dependence itself, and the associated harms. Repeated injection will also have medical consequences, such as scarring, infection of blood vessels, abscesses, and compromised functioning of the kidney, liver and lungs (with increased vulnerability to infections).

2.10.2 Stimulants

As central nervous system stimulants, cocaine and amphetamine affect several neurotransmitter systems in the brain but exert their effects primarily via dopamine, which mediates reward. Cocaine blocks the presynaptic reuptake of dopamine, such that it is not removed from the intracellular space and leads to extended firing of postsynaptic neurons, resulting in physiological arousal. Amphetamines also increase the availability of dopamine but are thought to do so by triggering a presynaptic leakage. The acute subjective effects of cocaine are euphoria, increased energy, heightened alertness, sexual arousal, increased sociability and talkativeness. Physiologically there can be acute adverse effects on breathing, and the cardiovascular and central nervous systems: increased heart rate, blood pressure and body temperature, and pupil dilation. All these effects have near-immediate onset but also diminish quickly (after roughly 15–30 minutes if the drug is snorted and 5–10 minutes if smoked), as cocaine is metabolized rapidly by the body. As acute effects wear off, users experience a rebound period crash, which may include restlessness, anxiety, agitation and insomnia.

This can lead to the user bingeing on cocaine to displace these negative effects. Chronic misuse of cocaine may lead to increased paranoia, inability to concentrate, sexual dysfunction and cognitive deficits. For amphetamines, the acute effects are broadly similar except that they are long lasting (normally 4–8 hours), due to slower metabolism. Overdoses may lead to dangerously elevated body temperature, convulsions or even death. Chronic misuse may cause long-term damage to the brain ‘s ability to manufacture dopamine, possibly resulting in amphetamine psychosis.

2.10.3 Cannabis

Cannabis affects almost everybody system, via cannabinoid receptors in the brain, which regulate a range of cognitive and motor functions. Within minutes of smoking cannabis, the heart rate increases, and the bronchial passages relax. Often the individual experiences intoxication, mild euphoria and increased sociability. However, anxiety or paranoia may sometimes occur, particularly among first-time or psychologically vulnerable users. Distorted perceptions are common, for example colors may appear more intense and time may seem to slow down. The euphoria reaches a plateau lasting 2 hours or more, depending on the dose, after which the individual may feel sleepy or depressed. Cannabis use also impairs memory, attention and motor coordination, with especially dangerous consequences on driving performance. Such effects may last for many hours after administration of the drug; the numerous metabolites of a single moderate dose of cannabis may require up to 4 weeks to be eliminated from the body. The smoke from cannabis contains the same constituents as tobacco smoke; hence chronic cannabis smoking is associated with a range of respiratory tract disorders, including bronchitis, emphysema and cancers.

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2.10.4 Dsm-Iv Substance Abuse Criteria

Substance abuse is defined as a maladaptive pattern of substance use leading to clinically significant impairment or distress as manifested by one (or more) of the following, occurring within a 12-month period:

1. Recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home (such as repeated absences or poor work performance related to substance use; substance-related absences, suspensions, or expulsions from school; or neglect of children or household).
2. Recurrent substance use in situations in which it is physically hazardous (such as driving an automobile or operating a machine when impaired by substance use)
3. Recurrent substance-related legal problems (such as arrests for substance related disorderly conduct)
4. Continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance (for example, arguments with spouse about consequences of intoxication and physical fights). Note: The symptoms for abuse have never met the criteria for dependence for this class of substance. According to the DSM-IV, a person can be abusing a substance or dependent on a substance but not both at the same time.

2.10.5 Dsm-Iv Substance Dependence Criteria

Substance dependence is defined as a maladaptive pattern of substance use leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring any time in the same 12-month period:

1. Tolerance, as defined by either of the following: (a) A need for markedly increased amounts of the substance to achieve intoxication or the desired effect or (b) Markedly diminished effect with continued use of the same amount of the substance.
2. Withdrawal, as manifested by either of the following: (a) The characteristic withdrawal syndrome for the substance or (b) The same (or closely related) substance is taken to relieve or avoid withdrawal symptoms.
3. The substance is often taken in larger amounts or over a longer period than intended.
4. There is a persistent desire or unsuccessful efforts to cut down or control substance use.
5. A great deal of time is spent in activities necessary to obtain the substance, use the substance, or recover from its effects.
6. Important social, occupational, or recreational activities are given up or reduced because of substance use.
7. The substance use is continued despite knowledge of having a persistent physical or psychological problem that is likely to have been caused or exacerbated by the substance (for example, current cocaine uses despite recognition of cocaine-induced depression or continued drinking despite recognition that an ulcer was made worse by alcohol consumption).

2.10.6 ICD-10 Clinical Description

A cluster of physiological, behavioral, and cognitive phenomena in which the use of a substance or a class of substances takes on a much higher priority for a given individual than other behaviors that once had greater value. A central descriptive characteristic of the dependence syndrome is the desire (often strong, sometimes overpowering) to take psychoactive drugs (which may or may not have been medically prescribed), alcohol, or tobacco. There may be evidence that return to substance use after a period of abstinence leads to a more rapid reappearance of other features of the syndrome than occurs with nondependent individuals.

2.10.7 ICD-10 Diagnostic Guidelines

A definite diagnosis of dependence should usually be made only if three or more of the following have been present together at some time during the previous year:

- A strong desire or sense of compulsion to take the substance;
- Difficulties in controlling substance-taking behavior in terms of its onset, termination, or levels of use;
- A physiological withdrawal state when substance use has ceased or have been reduced, as evidenced by: the characteristic withdrawal syndrome for the substance; or use of the same (or closely related) substance with the intention of relieving or avoiding withdrawal symptoms;

- Evidence of tolerance, such that increased doses of the psychoactive substance are required in order to achieve effects originally produced by lower doses (clear examples of this are found in alcohol-and opiate-dependent individuals who may take daily doses sufficient to incapacitate or kill nontolerant users);
- Progressive neglect of alternative pleasures or interests because of psychoactive substance use, increased amount of time necessary to obtain or take the substance or to recover from its effects;
- Persisting with substance use despite clear evidence of overtly harmful consequences, such as harm to the liver through excessive drinking, depressive mood states consequent to periods of heavy substance use, or drug-related impairment of cognitive functioning; efforts should be made to determine that the user was actually, or could be expected to be, aware of the nature and extent of the harm.

2.10.8 ICD-10 Diagnostic Criteria for Research

Three or more of the following manifestations should have occurred together for at least 1 month or, if persisting for periods of less than 1 month, should have occurred together repeatedly within a 12-month period:

- A strong desire or sense of compulsion to take the substance;
- Impaired capacity to control substance-taking behavior in terms of its onset, termination, or levels of use, as evidenced by the substance being often taken in larger amounts or over a longer period than intended, or by a persistent desire or unsuccessful efforts to reduce or control substance use.

- A physiological withdrawal state when substance use is reduced or ceased, as evidenced by the characteristic withdrawal syndrome for the substance, or by use of the same (or closely related) substance with the intention of relieving or avoiding withdrawal symptoms.
- Evidence of tolerance to the effects of the substance, such that there is a need for significantly increased amounts of the substance to achieve intoxication or the desired effect, or a markedly diminished effect with continued use of the same amount of the substance.
- Preoccupation with substance use, as manifested by important alternative pleasures or interests being given up or reduced because of substance use; or a great deal of time being spent in activities necessary to obtain, take or recover from the effects of the substance.

- Persistent substance use despite clear evidence of harmful consequences as evidenced by continued use when the individual is aware, or may be expected to be aware, of the nature and extent of harm.

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2.11 The Public Health Impact of Drug Abuse

The harms associated with illicit drugs use include increased mortality from overdose and from other directly or indirectly associated harms such as increased risk of infection with blood-borne viruses HIV, hepatitis B and hepatitis C; high levels of depression and anxiety disorders; social problems such as disrupted parenting, employment and accommodation; and increased participation in income-generating crime. Research indicate that of the general population in England and Wales, there were 1,382 drug-related deaths in 2005.

The majority (59%) were cases of accidental poisoning, although a sizeable proportion (16%) was a result of intentional self-poisoning. Opioids alone or in combination with other drugs accounted for some 70% of the deaths, and cocaine 13%. Many of the deaths appear to be due to multiple drug toxicity, especially the presence of central nervous system depressants for example, alcohol and benzodiazepines, rather than simply an overdose of an opioid. This is supported by research that shows those whose deaths were attributed to overdose have opioid levels no higher than those who survive, or than heroin users who die from other causes. Recent cohort studies have shown that mortality rates from methadone-related death are decreasing. Psychiatric comorbidity is common in drug abuse populations, with anxiety and depression generally common, and antisocial and other personality disorders in opioid-using populations.

The national US Epidemiological Catchment Area study of the prevalence of mental health disorders reported a 47% lifetime prevalence rate of substance abuse drugs and alcohol among people with schizophrenia compared with 16% in the general population, and found that more than 60% of people with a diagnosis of bipolar I disorder had a lifetime diagnosis of substance misuse disorder. Around one in five of the people in the NTORS sample had previously received treatment for a psychiatric health problem other than substance misuse. Drug misuse disorders complicated by other comorbid mental disorders have been recognized as having a poorer prognosis and being more difficult to treat than those without comorbid disorders; comorbid disorders are more likely to be chronic and disabling and result in greater service utilization. Lost productivity and unemployment increase with the severity and duration of drug misuse, and personal relationships are placed under considerable strain by dependent drug use. Problems with accommodation are also common in such groups.

For example, prior to intake in the NTORS, 7% of the study group were homeless and living on the street, 5% were living in squats and 8% were living in temporary hostel accommodation. Drug abuse may also have a negative impact on children and families. In Gaza there is no prevalence or incidence data of drug abuse in general, and tramadol abuse particularly.

2.12 Tramadol

2.12.1 Introduction

Tramadol is a novel centrally acting analgesic used for the treatment of mild to severe pain. It has been approved in some countries since 1980 and become the most prescribed opioid worldwide. Selecting Committee in 2002 as an analgesic.

During this period, it has been abused especially by the younger population. Tramadol binds weakly to the μ-opioid receptor and inhibits reuptake of monoamines such as serotonin and norepinephrine. Most of the analgesic effect of tramadol may be secondary to non-opioid properties, via the central monoaminergic pathways. The most common route of administration of tramadol is oral. Opioid dependency, overdose, and related complications are common in Iran in various age groups and gender. In recent years, tramadol overdose has become one of the most common causes of poisoning admissions to emergency departments in this country. An increased rate of seizure due to tramadol poisoning has also been observed It is reported that 15% to 35% of patients with tramadol overdose experience seizure. Research indicates that in high concern tractions tramadol exerts an inhibitory effect on gamma aminobutyric acid (GABA) receptors. In addition, GABA receptor inhibition induced by tramadol can be secondary to its opioid receptor agonist activity and continuing this agonist activity on opioid receptor has been proven to precipitate seizure due to inhibition of GABA pathways. In addition to overdose, seizures have been reported in patients receiving tramadol at recommended doses. Tramadol may also increase the seizure risk in patients receiving other medications such as tricyclic antidepressants, phenothiazine's, and selective serotonin reuptake inhibitors. While tramadol-related seizures can be controlled by diazepam, they are not responsive to naloxone, and tramadol-induced seizures can be precipitated by administration of naloxone, at high tramadol doses. The analgesic effect of tramadol is dose dependent. The relation between serum concentrations and analgesia varies between individuals. Itis estimated that serum concentrations of 100 to 300 ng/mL are needed for analgesia. In medical literature, no study regarding blood concentrations of tramadol-induced seizures is available.

2.12.2 Description of Tramadol

Tramadol is an analgesic medication that is a synthetic analogue of codeine. In comparison with other opiates, tramadol is renowned for having less abuse potential and less respiratory depression. In terms of specific neurotransmitter effects, at the central level, tramadol is a mu-opioid receptor agonist. The affinity of tramadol for mu-opioid receptors (analgesic effect) is 10-fold less than codeine. However, the active metabolite of tramadol, o-desmethyltramadol, has a far greater affinity (up to 200-fold) than the parent compound. In addition to its central effects on mu receptors, at the peripheral level, tramadol inhibits serotonin and norepinephrine reuptake. These latter effects are likely to be an important element in analgesia but may also account for some of the adverse properties of the drug.

2.12.3 Tramadol Poisonings Main Features and Toxicity

Originally it was claimed that tramadol is rather safe and has low potential for abuse. However, contradicting evidence has emerged in later stages. Food and Drug Administration has issued safety alert on this drug, including special cautions for patients who are simultaneously taking tranquilizers or antidepressants as well as individuals who consume alcohol excessively, or for those who suffer from emotional disturbances or depression. Potential misuse abuse and diversion were also stressed. Consistently, it has been recently suggested to place tramadol into the Schedule of the Controlled Substances Act Complications in tramadol overdose are disproportionately higher. Much of the toxicity in tramadol overdose appears to be attributable to the monoamine uptake inhibition rather than its opioid effects. Frequency of the tramadol induced complications is on the rise.

Prescription on the Internet, initial marketing on safety, low potential for abuse and diversion as well as dextropropoxyphene withdrawal in hospital settings have been contributive on this. Reported tramadol overdoses are dominantly intentional acute ingestions. Most cases become symptomatic within the first 4 hours of ingestion.

2.12.4 Adverse Effects

The most commonly reported adverse drug reactions are nausea, vomiting, sweating, itching and constipation. Drowsiness is reported, although it is less of an issue than for non-synthetic opioids. Patients prescribed tramadol for general pain relief with or without other agents have reported withdrawal symptoms including uncontrollable nervous tremors, muscle contracture, and thrashing in bed like restless leg syndrome if weaning off the medication happens too quickly. Anxiety, buzzing, 'electrical shock' and other sensations may also be present, like those noted in Effexor withdrawal.

Respiratory depression, a common side-effect of most opioids, is not clinically significant in normal doses. By itself, it can decrease the seizure threshold.

When combined with SSRIs, tricyclic antidepressants, or in patients with epilepsy, the seizure threshold is further decreased. Seizures have been reported in humans receiving excessive single oral doses (700 mg) or large intravenous doses (300 mg). However, there have been several rare cases of people having grand-mal seizures at doses as low as 100–400 mg orally. An Australian study found that of 97 confirmed new-onset seizures, eight were associated with tramadol, and that in the authors First Seizure Clinic, tramadol is the most frequently suspected cause of provoked seizures.

There appears to be growing evidence that tramadol use may have serious risks in some individuals, and it is contra-indicated in patients with uncontrolled epilepsy (BNF 59). Seizures caused by tramadol are most often tonic-clonic seizures, more commonly known in the past as grand mal seizures. Also, when taken with SSRIs, there is an increased risk of serotonin toxicity, which can be fatal. Fewer than 1% of users have a presumed incident seizure claim after their first tramadol prescription. Risk of seizure claim increases two-to six-fold among users adjusted for selected comorbidities and concomitant drugs. Risk of seizure is highest among those aged 25–54 years, those with more than four tramadol prescriptions, and those with a history of alcohol abuse, stroke, or head injury. Dosages of warfarin may need to be reduced for anticoagulated patients to avoid bleeding complications. Constipation can be severe especially in the elderly requiring manual evacuation of the bowel. Furthermore, there are suggestions that chronic opioid administration may induce a state of immune tolerance, although tramadol, in contrast to typical opioids may enhance immune function. Some have also stressed the negative effects of opioids on cognitive Seizure functioning and personality.

Physical dependence and withdrawal Tramadol are associated with the development of physical dependence and a severe withdrawal syndrome. Tramadol causes typical opiate-like withdrawal symptoms as well as atypical withdrawal symptoms including seizures. The atypical withdrawal symptoms are probably related to tramadol's effect on serotonin and norepinephrine re-uptake.

Symptoms may include those of SSRI discontinuation syndrome, such as anxiety, depression, anguish, severe mood swings, aggressiveness, brain, electric-shock-like sensations throughout the body, paresthesia as, sweating, palpitations, restless legs syndrome, sneezing, insomnia, vivid dreams or nightmares, nonsense and weird thoughts, micropsia and/or macropsia, tremors, and headache among others. In most cases, tramadol withdrawal will set in 12–20 hours after the last dose, but this can vary. Tramadol withdrawal lasts longer than that of other opioids; seven days or more of acute withdrawal symptoms can occur as opposed to typically three or four days for other codeine analogues. It is recommended that patients physically dependent on pain killers take their medication regularly to prevent onset of withdrawal symptoms and this is particularly relevant to tramadol because of its SSRI and SNRI properties, and, when the time comes to discontinue their tramadol, to do so gradually over a period of time that will vary according to the individual patient and dose and length of time on the drug.

2.12.5 Psychological Dependence and Recreational Use

Some controversy regarding the abuse potential of tramadol exists. Grünenthal has promoted it as an opioid with a lower risk of opioid dependence than that of traditional opioids, claiming little evidence of such dependence in clinical trials which is true; Grünenthal never claimed it to be non-addictive. They offer the theory that, since the M1 metabolite is the principal agonist at μ-opioid receptors, the delayed agonist activity reduces abuse liability.

The norepinephrine reuptake inhibitor effects may also play a role in reducing dependence. It is apparent in community practice that dependence to this agent may occur after as little as three months of use at the maximum dose generally depicted at 400mg per day.

However, this dependence liability is considered relatively low by health authorities, such that tramadol is classified as a Schedule 4 Prescription Only Medicine in Australia and been rescheduled in Sweden rather than as a Schedule 8 Controlled Druglike opioids. Similarly, tramadol is not currently scheduled by the U.S. DEA, unlike opioid analgesics. It is, however, scheduled in certain states. Nevertheless, the prescribing information for Ultram warns that tramadol may induce psychological and physical dependence of the morphine-type. Using tramadol as recreational drug may be preferred also because at this time, tramadol is the only opioid, that cannot be detected by the standard urinal drug-tests, due to its atypical binding to μ-opioid receptors. Dependence on tramadol has been reported to be a major social problem in the Gaza Strip.

The Hamas government has attempted to cut off supplies of the drug, and in April 2010 burnt 2 million tablets which had been intercepted while being smuggled into the territory. Because of the possibility of convulsions at high doses for some users, recreational use can be very dangerous. Tramadol can, however, via agonist of μ opioid receptors, produce effects like those of other opioids (codeine and other weak opioids), although not nearly as intense due to tramadol's much lower affinity for this receptor. Tramadol can cause a higher incidence of nausea, dizziness, loss of appetite compared with opiates which could deter abuse to some extent. Tramadol can help alleviate withdrawal symptoms from opiates, and it is much easier to control the quantity of its usage than street drugs.

It may also have large effect on sleeping patterns and high doses may cause insomnia. Especially for those on methadone, both for maintenance and recreation.

Though there is no scientific proof tramadol lessens effects or is a mixed agonist-antagonist, some people get the impression it is, while someone else might benefit being prescribed both for pain and breakthrough pain.

2.12.6 Tramadol and Serotonin Syndrome

Serotonin syndrome (SS) has been reported with tramadol overdose-induced SS remains unknown; however, it probably does not exceed 5 % in hospital settings. SS may occur during single tramadol use, but it appears to be more common following either excessive use or overdose or with the co-administration of other medications, particularly antidepressants. No association was found between the frequency of SS and the alleged dose of tramadol overdose. Tramadol could have a synergistic effect on another drug induced SS. It may occur with tramadol monotherapy, but SS has been documented in combinations of tramadol and the following medications, citalopram, fluoxetine, fluvoxamine, moclobemide-clomipramine, mirtazapine, paroxetine, sertraline and venlafaxine. Interestingly, we are convinced that true rate of tramadol-induced SS might be even higher than currently reported, if agitation, tachycardia, confusion, and hypertension were considered as possible mild SS symptoms, which easily could be missed in clinical settings.

33SS may develop via:

i. Excessive serotonergic agonism of serotonin receptors in the central and peripheral nervous systems
ii. As a result of increased serotonin synthesis.
iii. Decreased serotonin metabolism

iv. Increased serotonin release

v. Inhibition of serotonin reuptake (e.g. SSRIs)

vi. Direct agonism of serotonin receptors. Tramadol, in addition to affecting μ-opioid receptors, stimulates pre-synaptic release of serotonin and inhibits serotonin reuptake. Otherwise, SSRIs can inhibit the CYP2D6 isoenzyme metabolizing tramadol, resulting in therapeutic overdose of tramadol and, in susceptible individuals, idiosyncratic induction of SS. overdoses.

Biological features Tramadol overdose may induce a rise of creatinine phospho kinase (CPK). Although CPK rise could be independent from seizure, in cases with seizure, CPK rise is more dramatic and may be associated to acute renal failure. Increase in white blood cell count has been reported. Bleeding risks due to tramadol interaction with oral anticoagulants has also been stated.

2.12.7 Availability of Tramadol

Tramadol is classified as a central nervous system drug usually marketed as the hydrochloride salt (tramadol hydrochloride); the tartrate is seen on rare occasions, and rarely (in the US at least) tramadol is available for both injection (intravenous and/or intramuscular) and oral administration. The most well-known dosing unit is the 50mg generic tablet made by several manufacturers. It is also commonly available in conjunction with APAP (paracetamol, acetaminophen) as Ultracet, in the form of a smaller dose of 37.5mg tramadol and 325mg of APAP. The solutions suitable for injection are used in patient-controlled analgesia pumps under some circumstances, either as the sole agent or along with another agent such as morphine. Tramadol comes in many forms, including:

- Capsules (regular and extended release)
- Tablets (regular, extended release, chewable, low-residue and/or uncoated tablets that can be taken by the sublingual and buccal routes)
- Suppositories
- Effervescent tablets and powders
- Ampules of sterile solution for SC, IM, and IV injection
- Preservative-free solutions for injection by the various spinal routes (epidural, intrathecal, caudal, and others)
- Powders for compounding
- Liquids both with and without alcohol for oral and sub-lingual administration, available in regular phials and bottles, dropper bottles, bottles with a pump similar to those used with liquid soap and phials with droppers built into the cap
- Tablets and capsules containing (acetaminophen/APAP), aspirin and other agents

2.12.8 The Factors Responsible for Tramadol Abuse

Scholar like Isanedighi (2010), depicted that the reason for tramadol abuse among youths is the need to survive in other, to cope with challenges of life that includes hunger, sex drive and altered state etc.

In a study carried out by Ibrahim (2016) on tramadol abuse among patients attending an addiction clinic in North-Eastern Nigeria, the primary reasons why subjects abused tramadol on a continuous basis were; to relieve tiredness (28.7%, n=37), to prolong time of sexual intercourse (22.5%, n=29), and compulsive urge (14.7%, n=19) respectively. Curiosity and experimentation (33.3%).

Haladu (2009), opined that, experimental curiosity is one of the factors that is responsible for tramadol abuse thus motivates adolescents into abusing drugs. That the first experience in drug abuse produces a state of arousal such as happiness and pleasure which in turn motivate them to continue. Peer pressure plays a major role in influencing many adolescents into tramadol abuse. This is because peer pressure is a fact of teenage and youth life. As they try to depend less on parents, they show more dependency on their friends. In Nigeria, as other parts of the world, one may not enjoy the company of others unless he conforms to their norms. Many parents have no time to supervise their sons and daughters. They have little or no interaction with family members, while others put pressure on their children to pass exams or perform better in their studies. These phenomena initialize and increases tramadol abuse.

Increased economic deterioration which leads to poverty disempowerment of the people has driven many parents to send their children out in search of a means of earning something for contribution to family income. These children engage in hawking, bus conducting, head loading, scavenging, serving in food canteens and they are prone to use tramadol to gain more energy to work for long hours.

Adolescents with personality problems arising from social conditions have been found to abuse drugs such as tramadol. The social and economic states of most Nigerians is below average.

Poverty is widespread, broken homes and unemployment is in the increase, therefore our youths roam the streets looking for employment or resort to begging. These situations have been aggravated by lack of skills, opportunities for training and re-training and lack of committed action to promote job creation by private and community entrepreneurs. Frustration arising from these problems lead to recourse in tramadol abuse (Isanedighi, 2010).

In many countries, drugs have dropped in prices as supplier have increased. If a drug is stopped, the user experiences what is termed "withdrawal symptoms" pain, anxiety, excessive sweating and shaking characteristics. The inability of the user to tolerate the symptoms motivates him to continue. In the opinion of Mahmoud (2011), the factors responsible for tramadol abuse can be linked to fact that; it creates a morphine-like euphoric effects that can last up to eight hours, it has desired effects similar to other opiates including; feelings of euphoria, feeling numb or detached from one's body, feeling lethargic and heavy, also feeling relaxed and calm. A contributing factor is its accessibility and its offer for premature ejaculation in men.

2.12.9 Socio-Demographic Characteristics Of Patients With Tramadol Abuse

A survey conducted by Adelekan (2012), using a sample of 988 University students in Ilorin, Nigeria, found the rate of tramadol used to be 18.5%. He asserted that, multiple factors are involved which act together to cause the menace which include; age, sex, educational qualification, occupation and marital status. According to World Drug Report (2015), the most common age of tramadol abuse is 17-30 years. A survey by Jordan-Jinez et al (2009), on the clinical parameters of onset of tramadol abuse, found out that, 28.24 years and over two-thirds of the users were between 18 and 37 years of age.

Weller (2010), stated that 64% of youths within the ages of 18-25 years are reported for highest incidence of tramadol abuse. He opined that adolescents and young adult are more vulnerable to substance abuse than the middle aged and older age groups due to their high levels of exposure, association and interactions. Callen (2010), reported that, the period of major initiation to aggregate or abuse substances peaks between ages 16 and 18 and is completed for the most part of age 20.

In the study by Schilling (2000), conducted in Ota, 60 participants of 30 boys and 30 girls-64% of boys admitted to the use of tramadol, while 20% of girls admitted to the use of tramadol. Whiteborne (2011), explained that men are more likely to abuse tramadol than women due to the availability and affordability of drugs. NACAD (2014), found that experimentation with illicit drugs is higher among men compared with women which is 56% and 35% respectively. James et al (2010) found out that poor academic performance and low academic aspirations significantly influence the onset of tramadol abuse. In a study by Thompson (2011), it was found that, youths who are employed during their school years are more susceptible to abusing drugs than those who do not work with 6.1%. In a study in Ogun, conducted by Jones (2013), he asserted that, gangsters were found to be more involved in substance related abuse than those in well civilized society. He found out that, most gangsters were found to live majority of their life in the ghetto and shanties, which poses challenges to law enforcement agencies to patrol and arrest defaulters. Lang (2013), report that tramadol abuse is common among undergraduate or school dropout.

Teenagers may experience a drop-in grade, may be suspended from school or arrested for drug use. Martinez (2011), asserted that, people that abuse tramadol and other substances are alcohol abusers (dealers) usually unemployed. According to Lee (2013), single men and young females tends to abuse drugs than married men and women.

2.12.10 The Effect of Socio Demographic Factors on Tramadol Abuse

Socioeconomic characteristics of a population is expressed statistically, such as age, sex, education level, income level, marital status, occupation, religion, birth rate, death rate, average size of a family, average age at marriage. A census is a collection of the demographic factors associated with every member of a population.

In this case the study will explore some related literature and surveys on the effects of socio-demographic factors that influence the use of tramadol. A survey conducted by Viney S (2012) [3] found strong correlations between drug use and education and employment. Those with only a primary school education or less were most likely to become drug abusers. The unemployed, trade laborers and artists also represented the highest percentages of addicts.

It also shows that males are three times more likely to use substances than females, and the youngest recorded age of an addict has now dropped to only 10 years old, where previously it was thought to be 12 or 13 years old. Religion was also considered, finding that Christians are more likely to casually use drugs, but Muslims are more likely to develop an addiction Viney S (2012). In view of this, Progler Y (2010) indicated that among people who abuse opioids, who formed the predominant in-treatment population, most individuals develop dependence in their late teens or early twenties, several years after first using Tramadol, and continue using over the next 10–30 years.

Although drug abuse can affect all socioeconomic groups, deprivation and social exclusion are likely to make a significant contribution to the maintenance of drug abuse ACMD (1998). That said, an association has been found between income in adolescence and early adulthood Makkai T, McAllister I (1997), which may reflect the recreational nature of most of the Tramadol use.

2.12.11 Knowledge and Practice of Tramadol

Tramadol is one of the most popular and potent prescription painkillers than have been widely prescribed for long-term management of severe pain. Although the dependence potential of Tramadol is low, it is still one of the most widely abused painkillers AERS (2004).

Abuse of tramadol has become a serious problem in Egypt and abuse has also been reported in Iran, Jordan, Lebanon, Libya, Mauritius, Saudi Arabia and Togo. In 2010, an increase of non-medical use (abuse) of tramadol in Gaza was reported Progler Y (2010). In the United Arab Emirates, the phenomenon of selling Tramadol in an unlawful manner has been on the rise. According to Hassan N (2018), health workers, parents, civil society organizations and the security agencies, are all worried about the abuse of Tramadol in the Kpandai District, little did they know that there are more dangerous substances that are killing the youth slowly. Whilst the use of Tramadol has gained notoriety among the drugs that the youth widely abuse in the District, there are more dangerous substances in the communities which are abused on daily basis. The smoking of substances such as neem tree and pawpaw leaves and soaking of “wee” leaves in alcohol, which is consumed as breakfast, the inhaling of psychoactive substances such as petrol, turpentine and Venegra among the youth to get them intoxicated.

2.12.12 Reasons Underlying the Use Of Tramadol

People abuse drugs for various reasons. These may range from curiosity, availability and previous drug use to emotional and social pressures. Drug use and abuse as a habit unfortunately could begin quite early in life as part of culture in some societies. There is a substantial body of literature on the reasons or motivations that people cite for using alcohol, particularly amongst adult populations. For example, research on heavy drinkers suggested that alcohol use is related to multiple functions for use Sadava S (1975). Similarly, research with a focus on young people has sought to identify motives for illicit drug use.

There is evidence that for many young people, the decision to use a drug is based on a rational appraisal process, rather than a passive reaction to the context in which a substance is available Boys A, et al. (2000), Wibberley C, Price J (2000).

Reported reasons vary from quite broad statements (e.g. to feel better) to more specific functions for use (e.g. to increase self-confidence). However, much of this literature focuses on `drugs' as a generic concept and makes little distinction between different types of illicit substances. People may abuse Tramadol because it causes a sense of extreme relaxation or euphoria (Isanedighi, 2010). Those who have severe pain may take more than recommended to treat their conditions. Tramadol's lower price and availability with or/and without prescription makes it very popular. A WHO (2004) report, entitled "Neuroscience of Psychoactive Substance Use and Dependence", details many environmental and individual factors, including genetics that contribute to Substance Abuse and Addiction. Genetics contribute to the increased likelihood that an individual will abuse drugs, and to what extent the substance abuse may escalate.

Environmental risk factors include availability of drugs, poverty, social changes, peer influences, employment status, type of occupation and cultural attitudes. Individual risk factors include being a victim of child abuse, personality disorders, and extreme changes in family situation, inter-family dependence problems, academic stress, poor academic performance, social deprivation, depression, and suicidal behavior. College student are particularly influenced by several different factors, including peer pressure, separation from family and friends, academic performance pressures, and biological mental duress. Teenagers and college students are among the largest groups who abuse prescription pain medications.

This is since they are usually easy to access, they are inexpensive compared to many kinds of street drugs, and they are perceived as safer than illegal drugs because they are often prescribed by a doctor. Other research indicates that most of the youths have become addicted to Tramadol, using it in large doses and mixing it with some energy drinks such as Storm, 5star, Rush and many others to boost their energy without medical prescription. He believes that, the youth, including students, reportedly also take the drug to increase their desire during sexual intercourse with their partners and to help them to sit over night to learn, which is not healthy for the human body.

2.13 The Public Health Impact of Drug Abuse

The harms associated with illicit drugs use include increased mortality from overdose and from other directly or indirectly associated harms such as increased risk of infection with blood-borne viruses HIV, hepatitis B and hepatitis C; high levels of depression and anxiety disorders; social problems such as disrupted parenting, employment and accommodation; and increased participation in income-generating crime.(Oppenheimer et al., 1994) and 22 times (Frischer et al., 1997) that of the general population. In England and Wales, there were 1,382 drug-related deaths in 2005 (National Program on Substance Abuse Deaths, 2005). The majority (59%) were cases of accidental poisoning, although a sizeable proportion (16%) was a result of intentional self-poisoning. Opioids alone or in combination with other drugs accounted for some 70% of the deaths, and cocaine 13%. Many of the deaths appear to be due to multiple drug toxicity, especially the presence of central nervous system depressants for example, alcohol and benzodiazepines, rather than simply an overdose of an opioid.

This is supported by research that shows those whose deaths were attributed to overdose have opioid levels no higher than those who survive, or than heroin users who die from other causes (Darke & Zador, 1996). Recent cohort studies have shown that mortality rates from methadone-related death are decreasing (Brugal et al., 2005). Psychiatric comorbidity is common in drug abuse populations, with anxiety and depression generally common, and antisocial and other personality disorders in opioid-using populations (Regier et al., 1990, 1998).

The national US Epidemiological Catchment Area study of the prevalence of mental health disorders reported a 47% lifetime prevalence rate of substance abuse drugs and alcohol among people with schizophrenia compared with 16% in the general population, and found that more than 60% of people with a diagnosis of bipolar I disorder had a lifetime diagnosis of substance misuse disorder. Around one in five of the people in the NTORS sample had previously received treatment for a psychiatric health problem other than substance misuse (Marsden et al., 2000). Drug misuse disorders complicated by other comorbid mental disorders have been recognized as having a poorer prognosis and being more difficult to treat than those without comorbid disorders; comorbid disorders are more likely to be chronic and disabling and result in greater service utilization. Lost productivity and unemployment increase with the severity and duration of drug misuse, and personal relationships are placed under considerable strain by dependent drug use. Problems with accommodation are also common in such groups. For example, prior to intake in the NTORS, 7% of the study group were homeless and living on the street, 5% were living in squats and 8% were living in temporary hostel accommodation (Gossip et al., 1998). Drug abuse may also have a negative impact on children and families (ACMD, 2003). In Gaza there is no prevalence or incidence data of drug abuse in general, and tramadol abuse particularly.

2.14 The Aims of Treatment of Drug Abuse

The clinical management of drug abuse may be categorized into three broad approaches: harm reduction, maintenance-oriented treatments and abstinence-oriented treatments. All treatments aim to prevent or reduce the harms resulting from use of drugs. Care planning and key working should form a core part of subsequent treatment and care.

2.14.1 Harm Reduction

Aims to prevent or reduce negative health or other consequences associated with drug abuse, whether to the drug-using individual or, more widely, to society. With such approaches, it is not essential for there to be a reduction in the drug use itself although, of course, this may be one of the methods of reducing harm. For instance, needle and syringe exchange services aim to reduce transmission of blood-borne viruses through the promotion of safer drug injecting behavior.

2.14.2 Maintenance

In the who context primarily refers to the pharmacological maintenance of people who are opioid dependent, through the prescription of opioid substitutes (methadone or buprenorphine). This therapy aims to reduce or end their illicit drug use and the consequential harms.

2.14.3 Abstinence

Aim to reduce an individual ‘s level of drug use, with the goal of abstinence. The NTORS found that approximately one third of those entering treatment services were abstinent 5 years later (Gossip et al., 2003). However, these treatments may be associated with an increased risk of death from overdose in the event of relapse after a period of abstinence, during which time drug tolerance is lost (Verger et al., 2003). Consequently, it is particularly important for abstinence-oriented treatment to include education on post-detoxification vulnerability to relapse (Gossip et al., 1989) and to overdose, and for wider psychosocial rehabilitation support to be provided. The clinical management of drug abuse may be categorized into three broad approaches: harm reduction, maintenance-oriented treatments and abstinence-oriented treatments.

All treatments aim to prevent or reduce the harms resulting from use of drugs. Care planning and key working should form a core part of subsequent treatment and care.

2.14.3 Continuous Practice

Only a minority entering treatment initially chooses abstinence and enforced abstinence appears ineffective. However, approximately one third entering treatment services generally are abstinent 5 years later at least for a period of time (Gossip et al., 1998).The most common types of psychosocial interventions programed specifically targeting drug-use behaviors might be based on one of a number of models, including cognitive-behavioral for example, motivational interviewing and relapse prevention, humanistic and 12-step approaches (Wanigaratne et al.2005). Often this is unfocused, and therapist and client may not have a clear understanding of the therapeutic goals or therapeutic method.

In addition, there exist formal psychological therapies delivered within adult mental health settings, aiming to address drug users coexisting mental health problems (NTA, 2006). Brief interventions, typically empathic in nature and lasting up to two sessions, have a variety of potential advantages in the treatment of drug misuse, including ease of delivery and retention of drug users. These interventions can be conducted in a variety of settings, opportunistically to people not in formal drug treatment and as an adjunct to formal, structured drug treatment (Ashton, 2005). Although brief interventions are an important component of psychosocial treatment in open-access drug services.

2.14.4 Drug Abuse and The Family

In the literature, drug abuse is seen as both a problem of the family and a problem for the family '(Bancroft et al., 2002). The evidence that points to traumatic family experiences, such as childhood neglect, homelessness, abuse, loss and bereavement, increasing the likelihood that a person will go on to have drug problems (Kumpfer & Bluth, 2004) be a problem of the family. As 60–80% of people who abuse drugs live or are in regular contact with their family (Stanton & Heath, 2005), and approximately 2–3% of all children under the age of 16 years have parents with a drug problem (ACMD, 2003), drug abuse can also be said to be a problem for the family. The impact may be psychological for example, depression and anxiety, physical raised blood pressure and ulcers (Velleman et al., 1993), social feelings of isolation and work, family and social difficulties (Hudson et al., 2002) and financial. Appropriate involvement of family members and careers in the assessment and treatment process may also support the family member/career and facilitate a more successful outcome for the user. There is evidence that families including parents, children and siblings have a role to play in effective treatments.

2.15 Previous Studies

2.15.1 On-demand tramadol hydrochloride use in premature ejaculation treatment

The purpose of this study is to determine the efficacy of tramadol in premature ejaculation (PE) treatment compared with placebo. A single-blind, placebo-controlled, crossover study was conducted with 60 lifelong (primary) patients with PE. The patients were randomized into 2 groups, each consisting of 30 patients, who took tramadol or placebo on demand. PE was defined as an intravaginal ejaculation latency time of ≤60 seconds in 90% of intercourse episodes.

The efficacy of the drugs was assessed using the intravaginal ejaculation latency time, ability of ejaculation control, and sexual satisfaction scores after an 8-week treatment period. All participants completed the study voluntarily. Two groups were similar in terms of the patient demographics. Increases in the intravaginal ejaculation latency time, ability of ejaculation control, and sexual satisfaction score between the placebo and tramadol groups were compared with the baseline values in both groups. At the end of study period, the tramadol group had significantly (P<.001) greater values for all 3 parameters compared with those in the placebo group. On-demand use of low-dose tramadol is effective for lifelong PE.

Study of (Liu ZM,1999)

2.15.2 Drug Dependence and Abuse Potential of Tramadol

This study aimed to assess the drug dependence and abuse liability of tramadol. Subjects of opiate addicts with history of tramadol abuse were 219. Physical dependence of tramadol was assessed using opiate withdrawal scale (OWS), psychic dependence was assessed by association test of Addiction Research Center Inventory-Chinese Version (ARCI-CV);

the degrees of craving experienced for tramadol was self-reported on visual analogue scale (VAS).The scores of OWS of tramadol were 0.05-1.07; 3 scores on scales in particular being used the identify euphoric effects--MBG, sedative effects--PCAG, and psychotomimetic effects--LSD of ARCI were 7.3, 6.1, and 3.4, respectively ($F = 38.1$, $P < 0.01$); 57.1% of tramadol abuse subjects had craving for tramadol (chi $2 = 75.86$, $P < 0.01$). Tramadol produced high abuse potential among opiate addicts.

3.0 Chapter 3

3.1 Introduction

The previous chapter was about literature review. Through that chapter various readings related to this study were reviewed. This chapter describes the methodology of this study. It is about the materials, methods and techniques used in the study as well as generally showing how the study was done. As aforesaid, the purpose of this study was to assess the Knowledge, Attitude and Prevalence of Drug Abuse among Adults and Teenagers in Surulere Local Government Area (L.G.A), Lagos State, Nigeria; a Case Study of Tramadol. Methodologically, this dissertation adheres to its plan, structure organization, interpretation and presentation of data and information, thereby enhancing its validity and reliability. This chapter covers the study design, population and sampling techniques, data collection methods and data analysis as well as presentation.

3.2 Methodology

The method section of this paper provides the methods and procedures used in a research study or experiment. This part of the research paper is critical because it allows other researchers to see exactly how the research was conducted. This will allow other researchers to reproduce your experiment if they want and to assess alternative methods that might produce differing results.

3.3 Study Design

Research design refers to the arrangement of conditions for collecting and analyzing data in the manner that relates to the research purpose. Research design provides the researcher with systematic arrangement and strategies that make it possible for the researcher to accomplish the research objectives. It can be defined as a set of methods and procedures used in collecting and analyzing measures of the variables specified in the problem research. The design of a study defines the study type (descriptive, correlation, semi-experimental, experimental, review, meta-analytic) and sub-type (e.g., descriptive-longitudinal case study, research problem, hypothesis, independent and dependent variables, experimental design, and, if applicable, data collection methods and a statistical analysis plan. A research design is a framework that has been created to find answers to research questions.

The study design which was applied in this research is the descriptive cross-sectional study among teenagers and adult in Surulere Local Government Area (LGA), Nigeria. More so, a Retrospective Research design will be used to assess the prevalence of the of tramadol abuse since it deals with historical events and assessments of records for a condition within a given period.

3.4 To assess the prevalence of the drug abuse;

A research study was conducted at Randle General Hospital, Surelere. Randle General Hospital is one of the Lagos State general hospital that offers a wide range of general medical care including primary health care services and related others.

3.5 Other departments within the hospital setting are;

1. The Administrative Department
2. Medical/Clinical Service Department
3. Occupational/Recreational Department
4. Finance and Supply Department
5. Catering Department
6. Works and Maintenance Department
7. Co-operate Service Department

The Hospital is headed by the Medical Director, while the Department has a Head of Units. Chairman Medical Advisory Committee is the overall head of clinical services and training. The Director of Administration, Head of Internal Audit and Chairman Medical Advisory Committee are directly responsible to the Chief Medical Director who is the overall head of the establishment. The hospital has a school of psychiatric nursing and residency training program.

3.6 Services provided

The Neuropsychiatric Hospital deals with the treatment and rehabilitation of mentally ill patients.

- Support psychotherapy and counseling on mental health
- Recreational facilities for the mentally ill patients
- Consultative services on psychiatric matters
- Catering services
- Post graduate training in psychiatry
- Outpatient services for discharged patients and patients with minor mental problem.

The data used on this study was the secondary data from the hospital on patients admitted and treated for tramadol abuse from 2013-2017.

The instrument used for data collection was the checklist. It is a structured instrument used to elicit data from the medical records regarding patients that have been admitted from 2013-2017 to have abused tramadol in the hospital, the checklist was divided into three (3) parts.

Part A covered the prevalence of tramadol Abuse among the patients from 2013-2017.

Part B was designed to elicit information on the socio-demographics characteristics of the patients.

Part C was structured to obtain information on the factors responsible for the patient to have indulged in tramadol abuse

Data from the retrospective research design is analyzed using simple percentages as well as ratios and presented on frequency tables, charts etc.

To assess the knowledge and attitude on Tramadol abuse, a descriptive cross-sectional study was used.

3.7 Variables

A variable is defined as anything that has a quantity or quality that varies. Variables are generally divided into two broad categories in research, independent variables and dependent variables. However, researchers refer to them by many different names, and there are other types of variables, as well.

Independent Variable:

Independent Variables are defined as a characteristic that we (ones who are conducting the experiment) manipulate to identify a particular factor. Independent variables are also known as factor or prediction variable. The fact about the independent variable is that the participants of the experiment do not change it. Only the researchers who are conducting the experiment are allowed to control and change it. Multiple levels can arise in an experiment due to independent variables. Having at least two levels in an experiment is necessary. In any experiment, there must be at least one independent variable. It is advisable to have at most two independent variables in an experiment. This is because independent variables can start interacting with each other, giving rise to complex behavior. For example, if we have two independent variables, the two variables will interact with each other and produce different results than expected. Hence, if the number of independent variables is large, it gets difficult to reach the conclusion. Independent variables can be better understood by some examples.

Dependent Variable:

Dependent Variables are the second type of variables that are measured using independent variables. Dependent variables answer the question: 'What is it that we are testing?' and 'What is the measured response to various levels of the independent variable?'. Dependent variables are the result of the participants' actions and can be altered as the outcome of the participants' actions. The number of dependent variables in an experiment should be more to get stronger and concrete results. In an experiment, the number of dependent variables should be more than one.

The dependent variables were those related to practice about tramadol use and abuse and the independent variable will be those which are related to knowledge attitude and prevalence characteristics which will be inclusive of class, age, religion, sex, and hobbies.

Surulere local government is a commercial and residential Local government area which is located on the mainland of Lagos in Lagos State, Nigeria. The state has an area of 23 km squared and based on a census which was conducted in 2006; it had a population of 503,975 inhabitants and a population density of 21, 864 inhabitants in every square kilometer. The neighboring states include Yaba, Ebute – Metta and Mushin.

3.8 Reason for Choice of The Study Area

Surulere being one the local government within Lagos state indicates increased use and abuse of drugs both the adults and teenagers. Research indicates that the predominant dwellers of the area tend to indulge in drug consumption terming it as social culture.

More so, in the youthful birthday parties, there is a tendency of drugs being distributed is one type of refreshment (Ekpenyong, 2012). People from this region have grown to become drug users seeing no harm. There are several seizures of the tramadol which have been carried in the area and culprits arrested after they are found having the drugs. This makes Surulere an ideal place to have a research analysis conducted.

3.9 Study Population

The people targeted in this study include both teenagers and adults. The problem of tramadol abuse is not only with the youths but also the elderly and in this regard, everyone will be incorporated in the study while considering all genders. A total of 120 respondents will be included in the study.

3.10 Sampling

Purposive sampling was relied to enable the researcher to recruit participants with a variety of demographic characteristics and thereby garner a diversity of perspectives. This sampling technique was also used due to its usefulness in making assessment of respondents who have particular characteristics, such as drug use. Also, snow-balling sampling technique was used to get the sample for this study. “for snowballing you identify one member of the population and speak to him or her. You ask that person to identify others in the population and speak to them; you ask them to identify others and so on. The sample thus snowballs in size.” These techniques were used in order to get the actual respondents needed

3.10.1 Selection of The Study Subjects

The whole area of Surulere was covered in the study though it is only 300 respondents who will be required. To have the 300 respondents, a multistage sampling method was conducted, and this was as follows;

The area was first subdivided into the towns which are within the local government and which include; Iresa-Adu, Iresa-Apa, and Igbon. After this division, the total number respondent was divided among the towns and indication that only 100 people was required from each.

This population ought to include teenagers and adults which is an indication that 50 people from each group will be required. In the population of the 50 people, both genders are required which is an indication that there has to be a representation by 25 people from each gender. Thereafter, the random selection of the required number of each stratum will be carried out. It is important to note that teens will be classified under the group of 10 – 19 years and adults are people above 19 years.

3.10.2 Inclusion Criteria of Study Subjects

Any person who will be included in the study as a respondent has to prove that he or she is a resident from the area being covered

More so, he or she must be consenting to participate in the study

3.10.3 Exclusion Criteria of Study Subjects

Any person who does not consent to include in the study will exclude

3.11 Validity and Reliability

Items of the questionnaire were constructed in consideration of the requirement of each variable and objective of the study. The supervisor and two other colleagues examined the contents of the instruments to ensure that they are valid. External validity was determined by selecting a representative sample with regard to the target population. Internal validity was determined

through random selection of the study sample in order to have a control over the extraneous variables. Reliability is the degree to which the research instruments give consistent results after repeated trials. To test for reliability of the instrument, a test-re-test technique was used in a pilot study. A sample of twenty people from Ojo was randomly selected and used to ensure reliability of the instrument. Ojo LGA was chosen because it has similar characteristics to Surulere. Test retest reliability technique was used to determine whether the instrument was reliable across time. Test retest reliability test has a condition that the time period tests should be long enough to prevent learning, carry over effects or recall. To meet this condition, the retest was given to the respondents in duration of three weeks. Cronbach's alpha internal coefficient was determined by using SPSS statistics version 20. A reliability coefficient of 0.8 is considered acceptable. The reliabilities obtained for the teenagers and adults were 0.8, 0.79 and 0.8 respectively. They were therefore considered quite appropriate for the study

3.12 Data Collection

Both secondary and primary data collection methods were used during the research. Secondary data sources were used to access information from books, journals, magazines, reports and the Internet. Under the primary data collection method, quantitative (survey structured questionnaire) was used through well-structured questionnaire. The questionnaire was the major instrument used for the collection of data. The questionnaire has some open-ended questions as well as closed or multi-choice questions that required respondents to choose from already listed possible answers. Data required was collected in a minimum of two months where all the selected respondents where be issued with a standard self-administered questionnaire written in proper English. There was be a designed questionnaire with an average of 40 questions which will be presented to 300 respondents from Surulere Local Government (LGA).

Before the actual data was collected, necessary changes on the questionnaire will be carried out after a pre-test it has been performed. The respondent answered the questions in whichever place they will be because the study will be conducted in any setting. The investigator explained to the respondent the purpose of the survey and strongly emphasize the anonymous nature of the questionnaire. While the questionnaires are being filled, it was upon the investigator to ensure that individual response though there will be focus group discussions and in-depth interviews which will be facilitated following well-prepared guidelines. These discussions where be moderated by the investigator while a research assistant records the discussion.

3.13 Pilot testing of the instrument

Pilot testing is a small-scale trial, where a few examinees take the test and comment on the mechanics of the test. They point out any problems with the test instructions, instances where items are not clear, and formatting and other typographical errors and/or issues. In the case of computer-based testing, pilot-test examinees also comment on any issues with the computer interface. Once all issues with the test items and forms have been addressed, the tests are ready for large-scale field testing.

The primary purpose of field testing is to construct an initial picture of test validity and reliability. The test is administered to an adequate number of examinees (this number varies depending on the type of statistical analyses that will be carried out), and the raw data is used in the psychometric analysis. A preliminary testing was done on the data collection to identify likely problems. The researcher took necessary actions in time before the actual data collection.

3.14 Minimizing Errors and Barriers

While selecting the study subject, errors and bias must be minimized through random selection of the subjects from the specific strata. While in the process of preparing to collect data, training will be facilitated to the research assistant on the study objectives and methodology. There will be a standard questionnaire written in proper English and this will be used on all respondents. The questionnaire will be pre-tested first before it is used in the field.

3.15 Data Processing and Analysis

After collecting data from the field, it was coded and entered. The study used statistical package for social sciences SPSS to analyze quantitative data. Data collected using questionnaires were analyzed using descriptive statistics and inferential statistics. In quantitative analysis, the data was grouped according to the research objectives and questions. Data was analyzed through frequencies, percentages and t-tests. Frequency distribution Tables and percentages were used to determine the peer-oriented activities used to provide knowledge about Substance Abuse, change attitude towards Substance Abuse, and reduce the prevalence of Substance Abuse among students. The researcher used t-test and percentages to determine if there existed significant differences between students in schools with peer-oriented activities and students in schools without peer-oriented activities in their knowledge about Substance Abuse. Percentages and t-test were also used to determine if significant differences existed between adults and teenagers in Surulere with peer-oriented activities and students in schools without peer-oriented activities in their attitude towards Substance Abuse and prevalence of Substance Abuse.

Any form of descriptive statistic will be determined why carrying out the analysis while applying appropriate tests of significance, namely chi-square test (x^2) and logistic regression with an aim of identifying the factors that tend to be related to the practice towards drug use and abuse (Yunusa et al, 2017). Any data that will be collected from the in-depth interviews and group discussions will be first transcribed before being synthesis and categorized in the relevant themes.

3.16 Limitations of the Study

The limitations of the study are those characteristics of design or methodology that impacted or influenced the interpretation of the findings from your research. They are the constraints on generalizability, applications to practice, and/or utility of findings that are the result of the ways in which you initially chose to design the study or the method used to establish internal and external validity or the result of unanticipated challenges that emerged during the study.
The limitations of this study include factors such as time constraints due to the fact that the researchers have to spend much time at the study area in data collection and the inability to reach some respondents at the right time since most of these people are not well versed with fluent English. Language barrier served as one of the limitations of the study- to overcome this, research assistants who were fluent in local language were recruited to participate in the survey to facilitate easy communication**.**

3.16.1 Delimitations

In order to address the limitation, the researcher had to make a thorough introduction as well as assuring them of maximum confidentiality as well their right to withdraw from the study any time they felt.

3.17 Ethical Considerations

Conducting a scientific research does not only require expertise and rigorous methods. It also requires humility, honesty and integrity. This is essentially important as to protect the rights of respondents and not to harm them in any way. In this regard, this study highly ensured the privacy, right to self-determination and informed consent. They were also told of their right not to participate in the exercise, at any time they liked, without penalty.

Clearance was carried out for all the respectful offices and any other relevant body and this will be done while explaining all the objectives of the study to all those stakeholders. Similar explanation was also be done to the people whom data will be collected from.

Informed verbal consent will be sought from all those people data will be conducted from before they fill in the questionnaire and they will all be assured of the confidentiality of their responses. Any of the interviewees who required any help concerning drug use and abuse was advised accordingly by offering timely repose to their concerns and providing them with information as to where any victim can get help. The researcher explained the purpose of the study to the respondents to help them make an informed decision about participating in the study.

The respondents were given assurance that the information given was for purposes of research only. They were also assured that information collected would be held in confidence and that data collected was going to be handled by the researcher only and that it will be destroyed after the analysis. The respondents were required not to write their names in the questionnaires to objective method of data analysis determine the peer oriented activities used to change attitude towards substance abuse, reduce prevalence and provide knowledge of substance abuse among students in Nigerian frequency distribution tables, percentages to determine if there are significant differences in knowledge between students in schools with peer oriented programs and those without the programs frequency distribution table, and t-test to determine if there are significant differences in attitude towards substance abuse between students in schools with peer oriented programs and those without the programs frequency distribution table and t-test to determine if there are significant differences in knowledge about substance abuse between students in schools with peer oriented programs and those without the programs frequency distribution table and t-test ensure that respondents remain anonymous. The schools which participated in the study were also not identified.

4.0 Chapter Four

4.1 Results and Discussion

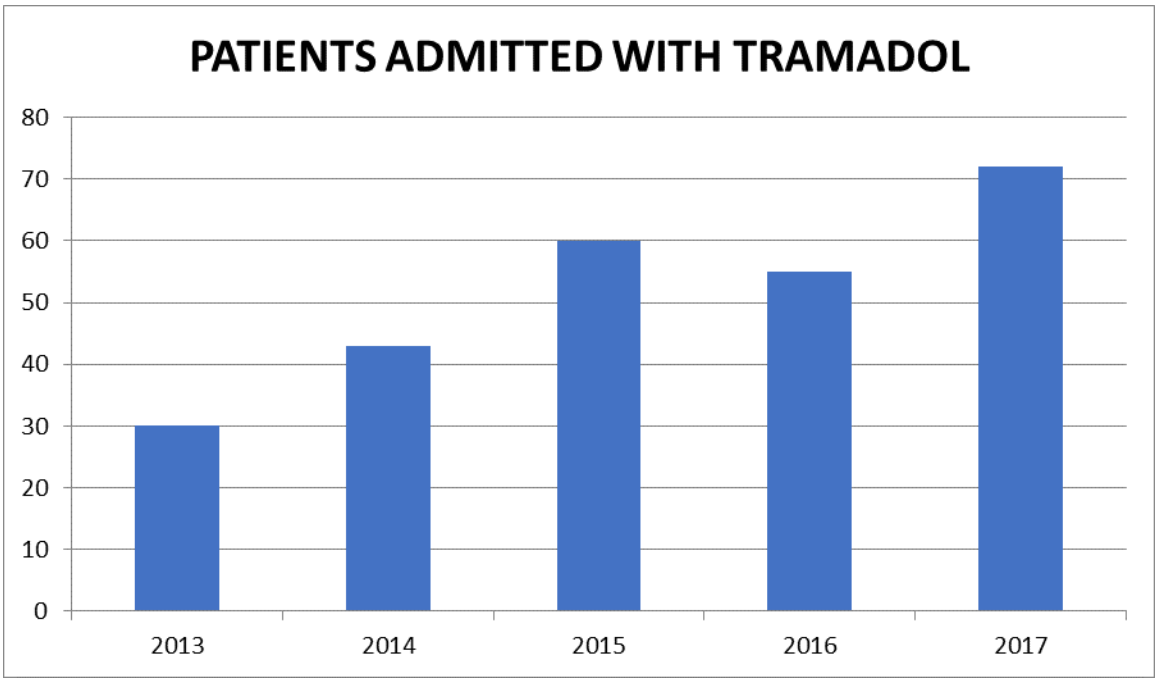
This chapter presents results and discussions of the results with reference to the specific research objectives and hypotheses. This chapter presents the results and discussions of the results of the study. The presentation of the results is based on the objectives. The chapter starts with descriptive statistics of the study variables, correlation analysis and test of hypotheses. This chapter is primarily devoted to the analysis of primary data obtained from the field survey and the secondary data obtained from the hospital.

Analysis of the secondary data

Table one: The prevalence of tramadol abuse among patients in Randle General Hospital, Surulere from 2013-2017

Year	**Number of patients admitted**	**Percentage**
2013	30	11.5%
2014	43	16.5%
2015	60	23.3%
2016	55	21.1%
2017	72	27.6%
Total	**260**	**100%**

FIGURE 1



Section A above, shows the prevalence of tramadol abuse among psychiatric patients to be 260 from 2013-2017. The table shows the highest number of patients admitted was 72 with 27.6% in 2017, 2013 with 30 (11.5%) being the lowest prevalence in 2013.

Socio demographic characteristics of patient with tramadol abuse

Table 2

Age distribution of patients	**Number of patients admitted per year (2013)**	**Percentage**
15-20 years	4	13.3%
21-24 years	5	16.6%
25-30 years	8	26.6%
31-34 years	10	33.3%
35-40 years	2	6.6%

41 and above	1	3.4%
Total	**30**	**100%**
Age distribution of patients	**Number of patients admitted per year (2014)**	**Percentage**
15-20 years	3	7.0%
21-24 years	4	32.6%
25-30 years	7	16.3%
31-34 years	12	27.9%
35-40 years	5	11.6%
41 and above	2	4.6%
Total	**43**	**100%**
Age distribution of patients	**Number of patients admitted per year (2015)**	**Percentage**
15-20 years	10	16.7%
21-24 years	11	18.3%
25-30 years	20	33.3%
31-34 years	10	16.7%
35-40 years	4	6.7%
41 and above	5	8.3%
Total	**60**	**100%**

Age distribution of patients	**Number of patients admitted per year (2016)**	**Percentage**
15-20 years	8	14.5%
21-24 years	10	18.1%
25-30 years	15	27.3%
31-34 years	7	12.7%
35-40 years	10	18.1%
41 and above	5	9.1%
Total	**55**	**100%**
Age distribution of patients	**Number of patients admitted per year (2017)**	**Percentage**
15-20 years	11	15.3%
21-24 years	15	20.5%
25-30 years	13	18.1%
31-34 years	20	27.8%
35-40 years	7	9.7%
41 and above	6	8.3%
Total	**72**	**100%**

The table above shows the highest age of patient that abused tramadol in 2013 to be 31-34 years with 33.3% and the lowest age to be 40years and above with 3.4% respectively.

In 2014, the highest number of age of patient that abuse tramadol were 27.9% (31-40 years) and 4.6% for 41 and above respectively. In 2015 the highest age group of patients were 33.3% (25-30years) and lowest 8.3% (40years and above). The table above also shows the highest age characteristics of patient in 2016 to be 27.3% (20-30 years) and the lowest age characteristics to be 9.1% (40 years and above) respectively. From findings above, the highest age characteristic in 2017 were 31-34years with 27.8% and lowest 40 years and above with 8.3% respectively.

Analysis of the primary data

Table 3: Demographic variables of the respondents

Variables	**Response**	**Frequency (N=300)**	**Percentage (%)**
Sex	Male	258	86.0
	Female	42	14.0
	Total	**300**	**100.0**
Age Group (years)	11-15	12	4.00
	16-20	85	28.3
	21-25	138	46.0
	26-30	47	15.7
	>30	18	6.00
Minimum = 13; Maximum = 35			

	Total	**300**	**100.0**
Marital Status	Married	81	27.0
	Single	137	45.7
	Co-habitation	82	27.3
	Total	**300**	**100.0**
Religious Affiliation	Christian	243	81.0
	Moslem	35	11.7
	Traditionalist	22	3.7
	Total	**300**	**100.0**
Level of education	Basic	118	39.3
	S.H. S	97	32.3
	Tertiary	27	9.0
	None	58	19.3
	Total	**300**	**100.0**
Type of Occupation	Artisans	100	33.3
	Small scale miners	76	25.3
	Farming	60	20.0
	Unemployed	24	8.0
	Trading	19	6.3

	Employed by Formal sector	12	4.0
	Employed by Private sector	9	3.0
	Total	**300**	**100.0**

4.2 Demographic Variables of Respondents

The study found majority (86%) of the respondents were males whereas the remaining (14%) were females. This could be attributed to the fact that more males are involved in activities that trigger them to use tramadol. But a higher number (46%) of respondent were between the ages of 21-25 years, followed by (28.3%) who were between the ages of 16-20 years. The minimum age was 13 years whereas the maximum age was 35 years. A close look at the age category of the respondents implies that this age group of respondents is in their early and late twenties. This is the age range where the youth is very viable and energetic to learn and contribute to their wellbeing and society as whole. Religious affiliation indicated that preponderance (81%) of the respondents were Christians. The means that the communities under the study were Christian dominated in the municipality. One will therefore be tempted to think that since respondents were Christians the level in which they abuse tramadol including other substances such alcohol, marijuana, cigarette among others will be minimal; but this is not so. The study found that a high (45.7%) number of the respondents were single followed by those who were co-habituating and married respectively (27%).

In terms of educational status, (39.3%) of the respondents had basic level education, (32.2%) were Senior High School graduates, (19.3%) of the respondents had no education, whereas just few of the respondents had tertiary level of education. Finally, when it comes to type of occupation, high number (33.3%) of the respondents were Artisans, (25.3%) were small scale miners, this was immediately followed by (20%) of the respondents who were into farming. It is deduced from the above that, the study considered different category of respondents with respect to sex, marital status, religious affiliation, educational level, and type of occupation which enabled the researchers to obtain varied information to satisfy the intended purpose of study.

Figure 2: A Representation of Whether Respondents Know About Tramadol

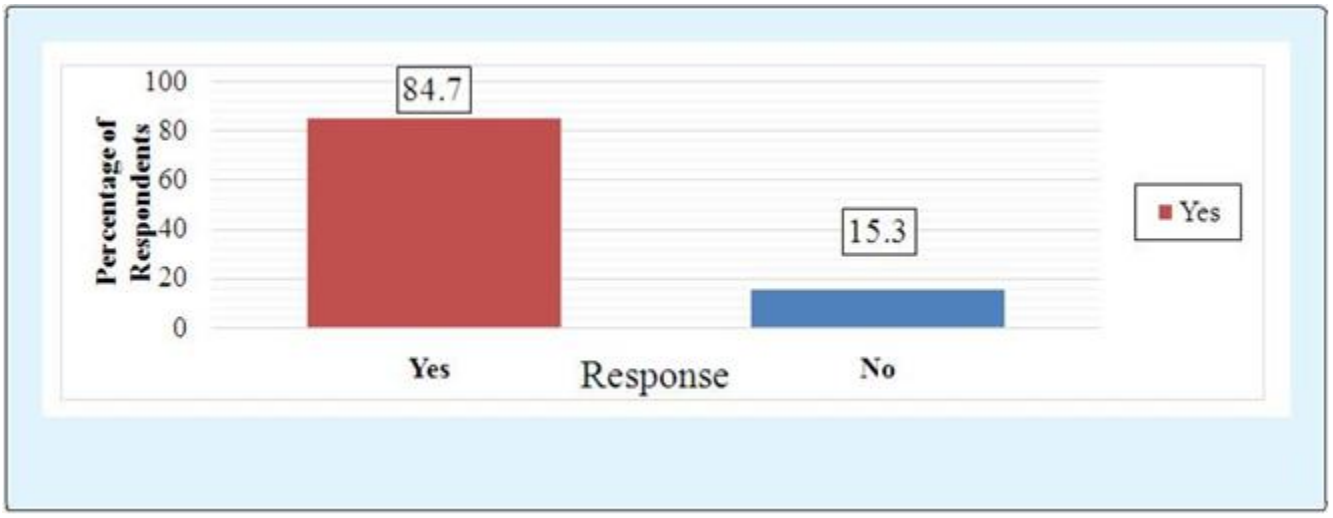


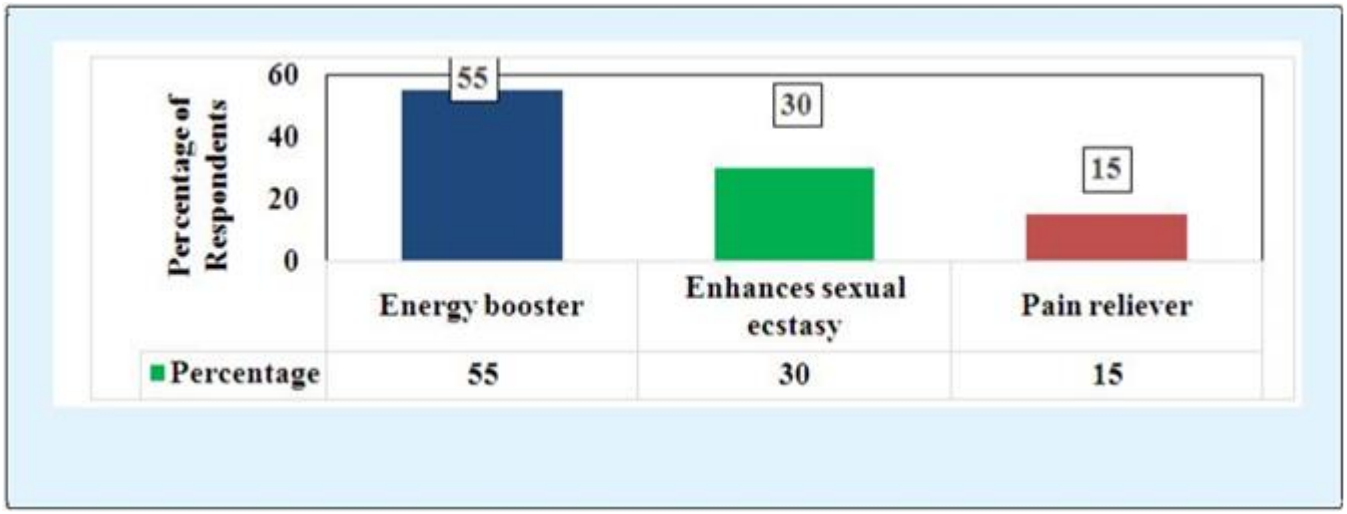
Table 4: Chi-Square Test between Demographic variables and Respondents knowledge on tramadol.

Variable	**Response**	**Have you heard of tramadol before?**				
		Yes	**No**	**Total**	**Chi-Square**	**P-value**
		(Frq.) (%)	**(Frq.) (%)**			
Sex	Male	216(72.0)	42(14.0)	258	19.270a	0.002
	Female	38(12.7)	4(1.30)	42		
	Total	**254(84.7)**	**46(15.3)**	**300**		
Age group	11 - 15	12(4.00)	0(0.00)	12	18.618a	0.001
	16 - 20	76(25.3)	9(3.00)	85		
	21 - 25	104(34.7)	34(11.3)	138		
	26 – 30	45(15.0)	2(0.60)	47		
	30 >	17(5.70)	1(0.30)	18		
	Total	**254(84.7)**	**46(15.3)**	**300**		
Marital status	Married	70(23.3)	11(3.70)	81	.446a	0.800
	Single	114(38.0)	23(7.60)	137		
	Cohabitation	70(23.3)	12(4.00)	82		
	Total	**254(84.7)**	**46(15.3)**	**300**		

Religious affiliation	Christian	208(69.3)	35(11.6)	243	11.130a	0.004
	Moslem	24(8.00)	11(3.70)	35		
	Traditionalist	22(7.30)	0(0.00)	22		
	Total	**254(84.7)**	**46(15.3)**	**300**		
Level of education	Basic	108(36.0)	10(3.30)	118	16.331a	0.001
	S.H. S	71(23.6)	26(8.70)	97		
	Tertiary	22(7.00)	5(1.60)	27		
	None	53(17.7)	5(1.60)	58		
	Total	**254(84.7)**	**46(15.3)**	**300**		
Type of occupation	Artisans	86(28.7)	14(4.70)	100	16.718a	0.001
	Employed by Formal sector	10(3.30)	2(0.60)	12		
	Employed by Private sector	8(2.60)	1(0.30)	9		
	Farming	54(18.0)	6(2.00)	60		
	Small scale miner	57(19.0)	19(6.30)	76		
	Trading	18(6.00)	1(0.30)	19		
	Unemployed	21(7.00)	3(1.00)	24		

	Total	**254(84.7)**	**46(15.3)**	**300**		

Figure 3: Main Purpose of Tramadol.



Data gathered from the above chart found that more enhances sexual ecstasy, whereas (15%) of the than half (55%) of the respondents affirmed the main respondents indicated relieving of pains. purpose of tramadol as energy booster, (30%) said it.

Table 5: Chi-square Test between Demographic variables and use of Tramadol

Variable	**Response**	**Have you ever used tramadol before?**				
		Yes	**No**	**Total**	**Chi-Square**	**P-value**
		(Frq.)(%)	**(Frq.)(%)**			
	Male	136(45.3)	99(33.0)	235	15.43a	0.013
Sex	Female	3 (10.7)	33(11.0)	65		

	Total	**168(56.0)**	**132(44.0)**	**300**		
Age Group	11 - 15	8(2.70)	4(1.30)	12	3.946a	0.413
	16 - 20	42(14.0)	43(14.3)	85		
	21 - 25	77(25.7)	61(20.3)	138		
	26 – 30	31(10.3)	16(5.30)	47		
	30 >	10(3.30)	8(2.60)	18		
	Total	**168(56.0)**	**132(44.0)**	**300**		
Marital Status	Married	49(16.3)	32(10.7)	81	8.703a	0.000
	Single	83(27.7)	54(18.0)	137		
	Cohabitation	36(12.0)	46(15.3)	82		
	Total	**168(56.0)**	**132(44.0)**	**300**		
Religious Affiliation	Christian	134(44.7)	109(36.7)	243	4.897a	0.086
	Moslem	17(5.60)	18(6.00)	35		
	Traditionalist	17(5.60)	5(1.70)	22		
	Total	**168(56.0)**	**132(44.0)**	**300**		

Level of education	Basic	54(18.0)	64(21.3)	118	9.490a	0.023
	S.H.S	64(21.3)	33(33.0)	97		
	Tertiary	17(5.70)	10(3.30)	27		
	None	33(11.0)	25(8.70)	58		
	Total	**168(56.0)**	**132(44.0)**	**300**		
Type of Occupation	Artisans	52(17.2)	48(16.0)	100	15.193a	0.019
	Employed by Formal sector	6(2.00)	6(2.00)	12		
	Employed by Private sector	4(1.30)	5(1.60)	9		
	Farming	26(8.7)	34(11.3)	60		
	Small scale miner	51(17.0)	25(8.30)	76		
	Trading	16(5.3)	3(1.00)	19		
	Unemployed	13(4.30)	11(3.7)	24		
	Total	**168(56.0)**	**132(44.0)**	**168(56.0)**		

Data obtained from table 4 portrayed a chi-square computation test between demographic variables and use of tramadol.

Proportion by cross tabulation indicated that more than half (56%) of the respondents attested they have ever used tramadol while (44%) indicated no. A chi-square test revealed a significance evidence of association between the use of tramadol and demographic variables such as sex, educational level and type of occupation with probability values less than alpha (α=0.05)(p= 0.013, 0.023, and . 0.019 respectively) with chi-square values (X2 = 15.43a ,8.703a, and 15.193a).

Table 6: Relationship between Age group and Source of Information

Attributes	**Source of information**					**Chi-Square**	**P-value**
Age Group	Peers/friends	Radio/TV / Internet	Pharmacies or Drug stores	Books and magazines	**Total**	72.074a	.000
	Frq. (%)	**Frq. (%)**	**Frq. (%)**	**Frq. (%)**			
11 - 15	12(4.00)	0(0.00)	0(0.00)	0(0.00)	**12**		
16 - 20	62(20.7)	15(5.00)	8(2.70)	0(0.00)	**85**		
21 - 25	121(40.3)	1(0.30)	11(3.6)	5(1.60)	**138**		
26 – 30	46(15.3)	0(0.00)	1(0.30)	0(0.00)	**47**		
30 +	10(3.30)	0(0.00)	8(2.70)	0(0.00)	**18**		
Total	**251(83.7)**	**16(5.30)**	**28(9.30)**	**5(1.60)**	**300**		

Data gathered from table 11 showed, higher number (40.3%) of respondents heard the information on tramadol from their friends and peers between the ages of 21-25 years,

this was followed by (20.7%) and (15.3%) of those within the ages between 16-20 and 26-30 years old. From the Chi-square test, the study found a strong evidence of association between the age distribution of respondents and the source of information on tramadol (Chi-square (x2) =72.074a, P=.000) where p-values is less than alpha (α=0.05).

Table 7: Relationship between Marital status and Source of information

Attributes	**Source of information**					**Chi-Square**	**P-value**
Marital Status	**Peers/friends**	**Radio/TV/ Internet**	**Pharmacies or Drug stores**	**Books and magazines**	**Total**	55.958a	.000
	Frq. (%)	Frq. (%)	Frq. (%)	Frq. (%)			
Married	59(19.7)	14(4.6)	3(1.00)	5(1.60)	**81**		
Single	125(41.6)	2(0.60)	10(3.30)	0(0.00)	**137**		
Co-habitation	67(22.3)	0(0.00)	15(5.00)	0(0.00)	**82**		
Total	**251(83.7)**	**16(5.30)**	**28(9.30)**	**5(1.60)**	**300**		

Table 8: How Long Respondents Have Used Tramadol

Response	Frequency (N)	Percentage (%)
1-3 Months	9	5.40
4-6 Months	20	12.0
1-3 Years	90	53.4
5-6 Years	49	29.2
Total	**168**	**100.0**

Mode of Taking Tramadol by Respondents

Response	Frequency (N)	Percentage (%)
Swallow with water	26	8.7
Add to Alcoholic beverage and drink	187	62.3
Add to Energy drink and take it	87	29.0
Inject to my veins or muscles	0	0.00
Other	0	0.00
Total	**300**	**100.0**

Data per the above table revealed that more than half (53.4%) of those respondents who have ever used tramadol said they have been using tramadol for 1-3 years, (29.2%) 5-6 years, (12%) 4-6 months and the remaining (5.4%) 1-3 months.

Data obtained from table 10 found that majority (62.3%) of the respondents mostly take tramadol along with alcoholic beverage, (29%) indicated they add tramadol to energy drink and take, just few (8.7%) of the respondents swallow the tramadol with water. Strangely, it was further indicated by respondents that they sometimes use tramadol for enema as a way of preventing stomach upsets.

5.0 Chapter Five

5.1 Summary, Conclusion and Recommendations

This chapter deals with the discussion of findings gathered from the research study in relation to reviewed literature and research questions, implications for nursing, summary, conclusion, recommendations and suggestions for further studies.

5.2 Discussion of the primary data analysis

5.2.1 Prevalence of abuse among patients

What is the prevalence of tramadol abuse among patients admitted in the hospital since 2013 to 2017? Based on the findings, it was clearly reviewed that, the highest prevalence occurred in 2017 (n=72, 27.6%) and the lowest percentage (n=30, 11.5%) in 2013. This indicates that, the rest of the percentages representing other years under the period of study fall between the percentages above. These percentages put together make the total percentage of prevalence of tramadol abuse patients admitted in the hospital during the period of study.

5.2.2 Social Demographic Characteristics of The Patients with Tramadol Abuse

The research sought to know the sex in the "socio demographic characteristics" of patients with tramadol abuse from 2013 – 2017. Following the findings, it was revealed that tramadol abuse has the greatest tool or percentage amongst male. The analysis shows that out of the total percentage under study, males had in 2013 100%, while female had nil %, in 2014 males had 100%, while females had nil %, in 2015 males had 96.6% while female had 3.3%, in 2016 males had 96.3% while the female had 3.6% and in 2017 males had 94.4% while the female had 5.5%.

In the analysis of age bracket that the prevalence was higher, it was observed that; age 31-34years had the highest percentage (n=10, 33.3%) in 2013, while age 40 and above had the lowest percentage (n=1, 3.4%). In 2014 highest prevalence 31-34 years (n=12, 27.9%) and lowest percentage 41 and above (n=2, 4.6%), 2015 highest percentage 20-30 years (n=20, 33.3%) and lowest percentage 40 and above with (n=5, 8.3%), 2016 highest percentage 25-30years (n=15, 27.3%) and lowest percentage to be 45 and above with (n=5, 9.1%) and 2017 highest percentage 31-34years (n=20, 27.8%) lowest being (n=6, 8.3%) for 40 years and above respectively. Following the analysis above, the prevalence of tramadol abuse is highest in the age group of 31-40years. This is based on the total number of percentages for the five years for each age group.

"What are factors responsible for tramadol abuse among patients in Federal Neuropsychiatric Hospital, Calabar from 2013- 2017"? Findings from this study clearly shows that the major factors or reasons why patients abuse tramadol were to enhance sexual performance 97.3% (n=70), peer group influence 94.4% (n=68), to increase physical performance during worker's labor 83.3% (n=60) and to relieve pain 72% (n=52). Other factors identified in this study includes feelings of euphoria and relieve of stress, 69.3% (n=50) and 58% (n=42) respectively. also 27.7% (n=20), 13.8% (n=10) and 16.7% (n=12) revealed that the enhance sleep, relieve frustration, and boost appetite were factors responsible for tramadol abuse. Lastly, 20.8% (n=15) also indicated parental influence as factors responsible for tramadol abuse among patients admitted in Federal Neuropsychiatric Hospital, Calabar between 2013-2017.

5.2.3 Discussion of The Secondary Data Findings

The study revealed, more than half (53.4%) of respondents have been using tramadol for 1-3 years and (29.2%) for 5-6 years. however, some also, started using drugs for 1-6 months; this is represented by (17.5%). This implies that participants started using tramadol at different duration and this difference could partly be attributed to the time he/she got to know about the drugs, peer, curiosity, availability, among others. Soliciting the views of respondents on how they take tramadol, it turned out that majority (62.3%) of respondents mostly take tramadol along with alcoholic beverage, (29%) indicated they always add tramadol to energy drink and take it, while few swallows the tramadol with water. This practice among tramadol abusers is to heighten the effects of the drugs in their body. This can pose a very serious health threat to these individuals in our community. More so, the use of alcoholic aphrodisiacs as sex enhancers have also become the order of the day predominantly among the youth. This therefore informs the reason why these individuals prefer mixing these drinks with tramadol for quicker reaction. Strangely, it was further indicated by respondents that they sometimes use tramadol for enema as a way of preventing stomach upsets which is quite dangerous.

5.2.4 Source of Information on Tramadol

Again, study sought to establish the source of information on tramadol and demographic variables of respondents. The study found that majority (84%) of the respondents affirmed they got information from their friends/peers. However out of that, (64%) were males while the rest females. It is deduced that more males had the information on tramadol than females according to the survey.

Higher number (40.3%) of respondents had information on tramadol from their friends and peers between the ages of 21-25 years. From the Chi-square test, the study found a strong evidence of association between the age distribution of respondents and the source of information on tramadol (Chi-square (X2) =72.074a, P=.000) where P-values is less than alpha value (α=0.05). With respect to marital status of respondents, higher number (41.6%) of those who were single according to the survey had information from their peers and friends. The study found that, there is a relationship between the marital status of respondents and the source of information about tramadol (Chi-square X2) = (55.958a, P = .000) where P-values is less than alpha value (α = 0.05). It is also revealed that majority (68.7%) of Christians obtained information on tramadol from their peers and friends as compared to Moslems and traditionalist. The chi-square computation revealed that, there is a significant association between respondents' religious affiliation and the source of information on tramadol (Chi-square X2) = 21.403a, P = .002) where P-values is less than alpha value (α = 0.05).

When it comes the respondents' education level, the chi-square test indicated a significant association between one's level of education and source of information (Chi-square X2) = 52.407a, P = .000) where P-values is less than alpha value (α = 0.05). In this context, [10] and [11] argued that for many young people, the decision to use a drug is based on a rational appraisal process, rather than a passive reaction to the context in which a substance is available. Again, the study found an association between the type of occupation of respondents and source of information (Chi-square (X2) = 40.150a, p=.002) where p-values is less than alpha value (α=0.05). It means that the kind occupation informs the person to device alternative means of performing on the job especially if such kind of work requires a lot of energy.

Indicated already by respondents, majority affirmed that the main reason for using tramadol is to boost their energy level.

5.2.5 The Reasons Underlying the Use of Tramadol

Ascertaining the main reasons why participants use tramadol, it turned out that more than half (55%) of the respondents affirmed the main purpose of tramadol as energy booster, (30%) of the indicated it enhances sexual ecstasy, whereas (15%) stated that tramadol is for relieving pain. It implies that participants have varied reasons for using tramadol of which energy booster and sexual ecstasy seem to be the other of the day in such communities. However, one can also say that per the responses, boosting energy levels in order to perform can also have a relation on sexual ecstasy since both involve exertion of energy. Some are even of the view that their girlfriends or wives will leave them if they fail to sexually satisfy them.

6.0 Conclusion

The general objective of the study in assessing the abuse of tramadol in Surulere Local Government Area (LGA) of Lagos State with a major interest in the level of knowledge, attitude and prevalence of the drug have been well covered especially from chapter one through out to chapter three.

It is important to note that the specific objective via identification of knowledge and attitude of tramadol among the people using Tramadol has been well covered in the expectancy model in chapter two and the personality and substance abuse has been evaluated to assess people's attitude.

More so, the specific objective which pertains the prevalence of tramadol abuse among the patients admitted in the hospitals have well been addressed in chapters two and three whereby drug dependence, tolerance and withdrawals has been assessed among people.

The social demographic characteristic of the patients with tramadol abuse has been illustrated in the chapter two where the effect of social demographic factors on people abusing tramadol abuse has been covered.

Lastly various factors responsible for tramadol abuse have been well been covered in the chapters two and three after an understanding on tramadol and its adverse effects have been laid down. This is an indication that all the specific objectives of the study were achieved.

6.1 Relationship with Other Studies

In research question on the prevalence of tramadol abuse among patients, this question has been answered by the statistical records of such condition within the specified period in the chosen hospital, to be of high rate. These findings collaborate with the work done by Bashirian (2014), Burke (2016) and Aliyu (2016), who reported high prevalence of tramadol abuse with 54.4%, 77.5% and 50.7% respectively as stated in the literature review.

In research question on the "socio-demographic characteristics of patients with tramadol abuse". It was revealed that; the prevalence was high in males than females as revealed by the hospital records within the time frame of study. This also conform with the study carried out by Marwa (2009) in PCC-Asu Hospital in Egypt. He reported that, males had the highest prevalence of tramadol abuse with 77.2% with female 67.9%. Research question three asked "factors responsible for tramadol abuse from 2013-2017". It was analyzed as obtained from records and patients that; certain factors as seen in the discussion in the research analysis contribute to tramadol abuse which confirm the work of Haladu (2009).

He pointed that; peer pressure plays a major role in influencing many adolescents into tramadol abuse. Also, Mahmoud (2011) reported that, the factors responsible for tramadol abuse can be linked to the fact that, it creates feelings of euphoria, feeling good, calm and relaxed. Other factors such as to relieve stress, relieve pains, to enhance physical and sexual performance, relieve frustration are factors which conform to a similar research study carried out by Isanedighi (2010) and Ibrahim (2016) in a clinic in North-Eastern Nigeria.

In conclusion, the availability of tramadol in our Nigerian community should be highly regulated since its abuse among the youth is on the ascendency. It is a real issue and should be tackled with concerted effort to curtail this menace as it is time to act now.

7.0 Recommendations

Based on the findings of the study, the researchers recommend the following:

Since Tramadol is currently not under national control, government should prevent the sales of tramadol in the open market and other deadly drugs. The appropriate authorities should strictly enforce its existing laws against the abuse of tramadol through its regulatory agencies.

7.1 Suggestions for Further Studies

There are as follows:

- Study should be carried out to identify why people in the ages of 25-30 and 31-34 years have the high prevalence in tramadol abuse.
- Study should be carried out to identify why men have higher prevalence in tramadol abuse than females.
- Studies should be carried out to identify ways of preventing/reducing the high prevalence of tramadol abuse among people in Nigeria.

8.0 Appendix

Schedule Of Activities

Number	Activity	Duration in Days
1	Obtaining a sampling frame/drawing the sample from the population	3
2	Presentation/discussion schedules of interview schedules to the advisor	1
3	Pretesting of interview schedules	2
4	Analyzing the pre-test results	1
5	Presentation or discussion of pretest results to the advisor	1
6	Revision and production of interview schedules	2
7	Planning the data collection	1
8	Actual data gathering	12
9	Editing of completed interview schedules or questionnaires	5
10	Coding of answers to open-ended questions	4
11	Preparation of dummy tables and data entry	7
12	Analyses and interpretation of data	8

13	Completing the whole thesis	20
	Total	67

Checklist for collecting secondary data

Section A: The prevalence of tramadol abuse among patients in the hospital under study

Year	**Number of patients admitted**	**Total**
2013		
2014		
2015		
2016		
2017		
2018		

The socio-demographic characteristics and distribution of patient with tramadol abuse

SOCIO-DEMOGRAPHIC CHARACTERISTIC	NUMBER OF ABUSE PER YEAR					TOTAL
AGE IN YEARS	2013	2014	2015	2016	2017	
15-20						
21-24						
25-30						
31-34						
35-40						
40-above						
GENDER						
Male						
Female						
MARITAL STATUS						
Married						
Single						
Divorced						

ETHNIC GROUP						
Hausa						
Efik						
Ibibio						
Yoruba						
Ijaw						
Igbo						
RELIGION						
Christian						
Islam						
Others						
EDUCATIONAL QUALIFICATION						
FSLC						
SSCE						
HND						
B.Sc						
OCCUPATION						

Applicant						
Civil servant						
Unemployed						

Section C: Factors responsible for tramadol abuse among patients in the hospital

	Yes	No
To relieve pain		
To feel good/Euphoria		
To relieve stress		
To increase physical performance		
To enhance sexual performance		
To help/enhance sleep		
Frustration, to relieve frustration		
To boost appetite		
Parental influence		
Peer group influence		

9.0 Questionnaire

Questionnaire number

City name: _____

City code: _____

Village

Age (in years): _____

Gender: Female [ ] Male [ ]

Have you received any information about drug use? Yes [ ] No [ ]

Religion

Hindu [ ]

Muslim [ ]

Christian [ ]

Others [ ]

Type of family

Joint family [ ]

Nuclear family [ ]

Broken family [ ]

Sexual behavior of the drug abusers will be

increased [ ]

decreased [ ]

normal [ ]

Which drug and substance abuse are commonly used?

What are the sources of drug and substances abused?

What are the main reasons for students abusing drugs and substance in your location?

What is the impact of drug and substance abuse in the community?

What challenges do you face in curbing access and consumption of drug and substance abuse in the Location?

What intervention measures are in place to curb the access of drug and substance abuse?

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