Contingency Management, Rational Emotive Therapy and Drug Abuse Treatment among Teacher Trainees of Kano State, Nigeria

By

Bashir Sani

PhD/Cp/39882/131/DF

Department Of Counseling Psychology

College of Humanities

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DECLARATION

I **BASHIR SANI** declare that this Research report is my original work and has never been submitted to any University or any institution for award, and where other people's work have been used, due acknowledgement were made.

Signature.....

Date.....06/02/2017.....

BASHIR SANI

APPROVAL

This Research work compiled by **BASHIR SANI** has been under my supervision and guidance. His work is now ready for submission.

Signature..... Date 06/02/17

Assoc. Prof. IMBUKI KENNEDY

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OPERATIONAL DEFINITION OF THE TERMS

Drug Abuse: Use of drugs/substance, for any purpose other than medicinal to the extent that it effects the physical, cognitive and psychological development of a person.

Contingency management: Treatment using reinforcement in changing the behavior of the person.

Rational Emotive Therapy: Treatment using disputation method in changing the behavior.

Abstinence: Voluntary withdrawal from drug abuse, and observed positive changes in the previous behavior.

Effectiveness: Level at which the positive change is observe.

Reinforcement: Use of reward or punishment to control behavior

Disputation: Technique using challenge or Confrontation in the control of irrational belief

Clinical Setting: Process of assessing abstinence through diagnosing urine sample in the laboratory.

Field Setting: Process of assessing abstinence that does not involve diagnosing urine sample in the laboratory, but assessing behavior change.

Teacher trainees: Students studying teacher training courses at the institutions in Kano State.

ACRONYMS

CM----------	Contingency management
RET----------	Rational Emotive Therapy
DAST----------	Drug Abuse Screening Test- 10
COMTAQ----------	Contingency Management Treatment Assessment Questionnaire
RETAQ----------	Rational Emotive Therapy Treatment Assessment Questionnaire
DAITOTTI----------	Drug Abuse Interview for Teachers of Teacher Training Institutes
DAISOTTI----------	Drug Abuse Interview for Students of Teacher Training Institutes
NIDA----------	National Institutes of Drug Abuse
NDLEA----------	National Drugs Law Enforcement Agency
UNODC----------	United Nation Office for Drug Control
NAFDAC----------	National Agency for Food, Drug Administration and Control
DUDIT----------	Drug Use Disorder Identification Test
AUDIT----------	Alcohol Use Disorder Identification Test
NHS----------	National Household Survey
SMART----------	Self-Management and Recovery Training
ABC----------	Activating agent, Belief system, Consequence
WHO----------	World Health Organization
NHSD----------	National Health Service and Drug abuse
UN----------	United Nation
THC----------	Delta-Tetrahydrocannabinol
TEDs----------	Treatment Episode Data set
SUD----------	Substance Abuse Disorder
VBR----------	Voucher Based Reinforcement
CBT----------	Cognitive Behavior Therapy
CVI----------	Content Validity Index
STD----------	Clinic's Standard Treatment
TA----------	Treatment Plan
DA----------	Dopamine
BBC----------	British Broadcast Cooperation
DARA----------	Drug Abuse Rehabilitation Agency
Tr ----------	Teachers response
Sr----------	Students response
LSD ----------	Lysergic Acid Diethylamide

ABSTRACT

This study investigate the prevalence of drug abuse, and the efficacy of contingency management, and rational emotive therapy, in the treatment of drug abuse, among students of teacher training institutions in Kano State, Nigeria. The study approach was Quasi experimental, and sequential mixed method (the data collected separately and integrated at the analysis). The designs are descriptive, pretest-posttest, posttest only. The target population was all students studying teacher training courses at Bayero University (BUK) and Sa'adatu Rimi College of Education, Kumbotso (SRCOE). And the sampled population was 24515 students from Bayero University Kano (5000) and Sa'adatu Rimi College of Education, Kumbotso (19515). The sample size was 394 obtain using Slovene's formula. The sampling techniques were purposive (only teacher trainees are involved), cluster (homogeneous groups were used) and proportional sampling (the clusters are of different size). Questionnaires, interview and observation were use in the collection of data. Mean, Percentage and response from the interview were used to determine the prevalence of drug abuse. Paired sample t-test, interview response and observation rating scale were used to examine the efficacy of Contingency Management (CM) and Rational Emotive Therapy (RET). And posttest mean, interview response and observation rating scale were used to compare the effectiveness of the two therapies. The descriptive finding indicates high prevalence of drug abuse among students in the study area, (29.6%). Paired sample test shows that, both therapies are effective, (CM-sig (2tailed=.019), RET-sig (2tailed=.025), and the responses of the interview complimented. The finding of posttest reveals that Contingency Management treatment exerted more effect, (Mean=3.7694) as compared with Rational Emotive Therapy treatment (Mean=3.1467) on drug abuse treatment. However, the finding from the observation revealed no difference on the effectiveness of the two therapies (CM=1.70 and RET=1.71). Also, the responses of the interview were both high. The study concluded that, prevalence of drug abuse is high in the study area, and both Contingency Management and Rational Emotive Therapy are effective in the treatment. Based on the findings, the study made the following recommendations; there is a need to introduce student enlightens programs on drug abuse, and parent should be considerate in dealing with their children among others.

Key words: Drug abuse, contingency management, rational emotive therapy, abstinence.

CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

This study investigates the prevalence of drug abuse among students of teacher training institutions in Kano state, and aims to find the effectiveness of contingency management and rational emotive therapies in the treatment of drug abuse. Under this part, the historical, conceptual, contextual and theoretical perspective of drug abuse was discussed.

1.1.1 Historical Perspective

It has been established in so many countries of Europe, America, Asia and Africa that drugs abuse has become one of the most serious issues of concern which affects the entire society, Parrott, (2004). It cuts across all levels social class, age categories including young, adult and even elderly people irrespective of gender. In the past, those engage in the menace were distressed people, and those who work as drivers and others who engage in a hard labor with the perception of keeping their strength on the work. In South American silver mines, workers were chewing cocoa leaves (containing cocaine) to aid their physical and mental vigilance. Tea which contains caffeine was recommended as a general tonic by sages in ancient china. However, currently things has change, new element of addiction were emerged, spread of drugs that induced hallucination, euphoria and other fantasies that alter mind is now common, and the most dangerous aspect is the use of hard drugs including marijuana and codeine by the youth which leads to a crime. Shulgin (1986) confirmed the increase in the use of amphetamine, cocaine and heroin in recent years. In Africa also, this problem is seen as the big issue of concern. Narc (1986) shows how the trend of drug abuse in Africa changes from cannabis abuse to more dangerous drugs and

from limited number of people to wider groups. Afinnih (2002) also discloses the problems of drug abuse in so many sub-Saharan Africa which include both West, south and East African countries. His study found that, so many students in Kenya experience personal, emotional as well as physical problems, notably the cases of violence, drug abuse, bullying and students unrest which interfere with their personal and educational development. World Health Organization and World Heart Foundation in Josephine (2014) reported the statistics of tobacco use among school students between 12-17 years, indicating 22.1% in Nigeria, 19.4% in South Africa, 16.2% in Kenya and 15.1% in Ghana.

Prior to 1960 up to early 70's, there were no much incidence of drug abuse in Nigeria, particularly in Kano state talk less of the involvement of students in the act, because societies were highly vigilant and there was no much pressure on the economy (Yusif,1997). But afterward, things have changed due to the population expansion and nature of leadership in the country. Pressure are mounted on the economy, employment become a problem, infrastructures are scarce, schools are overcrowded with less facilities, political instability as military intervene into politics and many other issues affect seriously, the life of majority of the Nigerians; which leads to the persistence of so many problems including drug abuse. In Nigeria, drug abuse persists two decades after independence, before then the problem with drugs was very rare. Around 1980, Indian heroin began to funnel through Nigeria on its way to Europe, this paved way for criminals to engage in the trafficking within and outside the country. Later, around 1990s the activities of the criminals groups dealing with drugs expanded to the spread of cannabis and other psychotropic drugs, at that time cannabis begin to be produced in Nigeria. The spread and use of drugs in the country become alarming,

because the criminals achieve explosive expansion. Statistic on drugs seizure within the country shows the arrest of 16,000kg of cannabis herb and 15.6kg of cocaine in 1999, and 272,000kg of cannabis and 54kg of cocaine in the year 2000. And in 2007, the rate of cannabis seizure increases in the number of four spot. Currently, Nigerians are now among the leading members of drug trafficking in the world.

Kano State is the most highly populated state in Nigeria with about 12million people; it is located in the northwestern part of the country. The dominant tribe is Hausa and majority of its indigenes are Muslim. The state is known as the Centre of commerce because farming and trading are the predominant occupation. The commercial activities in the state attract migrants and business people into the state, from different location within and outside the country.

In the year 2000 people of the state mobilizes to pursue the federal government to implement the Islamic law in Kano, for subsequent implementation in zamfara state. The dominance of Muslims and the unanimous interest they have shown, makes it easier for the government in 2001 to implement sharia law which makes the state been governed according to Islamic rules. Hisbah board was established as a vigilante body and the sharia courts were empowered to prosecute all harams (sins) like stealing, prostitution (zina), alcoholism and other forms of addictions, and other behaviors which are against Islamic rules. The sharia plays significant role in sanitizing and whipping out lots of offences committed by people in the State. But recently, drug abuse became one of the major problems in the state.

Behavioral therapies on drug abuse have been marked by tremendous progress in the past three decades. In the past, there was little indication that

any form of psychosocial treatment was effective for any type of mental disorder, but the advent of research on treatments derived from operant and classical behaviorism changes that notion, NIDA (2012). Researches on behavioral therapies flourishes with the adoption of the technology model, which sought to systematize these therapies and the experimental methods through which they could be evaluated, to achieve a level of methodological rigor on a par with the standard for pharmacological research, (Waskow, 1984, Elkin, Dochetry, Sotsky, 1988 and Elkin et'al 1988).

Many behavioral therapies have proved to be highly efficacious in the treatment of variety of mental disorders in the middle of 1980s, which includes depression panic and obsessive-compulsive disorders. However, the methodological rigor and specificity that were characterized of these studies were not yet apparent in drug abuse studies with few exceptions (Woods, Luborsky, Mclellan, O'Brien, Beck, Blaine, Herman and Hole 1983). By the late 1980s, many behavioral approaches in drug abuse treatment program were universally available and there were continued pessimism in the field, regarding the efficacy of behavioral therapies for drug use disorders (Kleber and Gawin 1984, Onken and Blaine 1990, and Kang, Kleinman, Woody, Millman, Todd, Kemp and Limpton1991).

Early 1990s witness a remarkable development in the proliferation behavioral therapies for drug abuse treatment. Where studies in which behavioral therapies, therapist training, study population and objectives outcome measures were carefully specified. And in which participants were randomly assigned to experimental and control or comparison conditions began to appear more frequently in the drug use treatment literatures. The technology model facilitated the identification of effective behavioral treatment for substance use disorders, as it enhanced the internal validity and

replicability of research on behavioral therapies (NIDA 2012). However, the technology model also has the unanticipated effect of restricting the development of the novel therapies. The stringent methodological requirement associated with technological model (requiring investigators to have fully develop treatment manuals, therapist training protocols and fidelity rating procedures) limited the therapies eligible for efficacy evaluation to those already develop for drug abuse and to those which could be easily adopted from others areas (alcohol and depression treatment). This restriction resulted as a bottleneck not only in the introduction of new treatments but also in output as it limited research on the dissemination of behavioral treatments.

Effort on bridging these obstacles was made by National Institutes on Drug Abuse (NIDA) in 1992, where it begins to offer a comprehensive support for a broader range of scientific activity, in behavioral treatment development, spanning from origination and initial testing of novel behavioral therapies to their dissemination in community settings (Onken, Blaine and Bttjess 1996). This program was defined in three stages, stage one consist of pilot/feasibility testing for a new and untested treatment including preparation of treatment manuals, development of a training program and development of adherence/competence measures for new and untested treatments, as well as translation of findings from basic science to clinical application. Stage two, consists principally of efficacy testing to evaluate treatments that fully developed and have shown promise or efficacy in earlier studies. And stage three, aimed principally at issues of transportability of approaches to community settings (Rounsaville, Carrol and Onken 2001). This program expanded both the range and the rigor of clinical behavioral therapies, leading to emergence of multiple types of behavioral interventions; group and

individual cognitive-behavioral therapy (CBT), CBT combined with motivational enhancement therapy (MET), community reinforcement approach counseling (CRA), functional family therapy (FFT), multi-dimensional family therapy (MDFT), multi-systemic therapy (MST), brief strategic family therapy (BSFT), family support network (FSN) and family behavior therapy (FBT).

1.1.2 Conceptual Perspective

Abusing drugs become a common phenomenon in the contemporary world that makes the concept very popular. Several scholars view the concept in different ways; Balogun (2006) refer drugs as a substance that modifies perception, cognition, mood, behavior and general body function. It is also seen as chemical modifiers of the living tissues that could bring about physiological and behavioral charges (Nnachi2007). Levinthal (2008) refer drugs as a chemical substance that when taken into body, alters the structure or functioning of the body in some way, excluding those nutrients considered to be related to normal functioning. Ekpenyong (2012) view drug as any product other than food or water that affect the way people think, see and behave. This means it both affects the physical, mental and emotional functioning, then the dangers for misusing the drugs were identified. Among its effect include cognitive effect which leads to lack of concentration, failure in the academic work and loss of memory which directly affect learning, (Garba, 2003, Balogun, 2006 and Ekpanyong, 2012). Drug abuse is therefore viewed in this study as any attempt to use drug or substance of any nature which was not prescribed by the physicians, or taking the dose beyond the limit to the extent that, it alters the normal functioning of the mind.

Drug abuse has been considered more effectively treated using cognitive-behavior therapy. Contingency management (behavioral) and rational

emotive therapy (cognitive) has been used in this study. According to Blume (2002) reinforcement history is a particularly potent predictor of future addiction that is why most researchers study the operant in order to understand and control positive and negative reinforcement that maintains substance/ drug use behavior. Volkow, Fowler, Wang and Swanson (2004) portrayed that brain contains what is commonly refer as reinforcement system scientifically known as mesolimbic pathway; which made up of rein forcers that are brought to increase the levels of depomine in the brain, which has a strong motivational effect on person's attitude towards behavior. Dopamine according to Volkow et'al (2004) is the chemical associated with the feeling of pleasure and happiness which is stimulated in the brain when drugs like amphetamine, ecstasy, opiates or cocaine is used. The excitement resulted in the feeling toward experiencing the activity again (positive reinforcement). In other cases, negative experience like feeling and emotion also contributed to the reinforcement behavior where stress, anxiety and depression are strong reinforces that result in the use drugs as a means of to get relief by some people, and significant hurdle to break for many addicts to overcome is breaking of these positive and negative reinforces.

Behavioral therapy can help people abusing drugs to participate in the treatment; offer strategies for coping with drugs cravings; teach ways to avoid drugs and prevent relapses; help individual deal with relapse and can also help people improve communication, relationship and parenting as well as family dynamics (NIDA 2010). Some behavioral therapies that proved effective in drug treatment include; functional family therapy (FFT) which is a strength-based model with a focus on those risk behaviors adopted by youth abusing drugs and protective factors that impact the adolescent and his/her environment (Sexton and Alexander, 2000). Family behavior therapy (FBT) as

another approach to dealing with drug abuse is an outpatient behavioral treatment aimed at reducing drug and alcohol use in adults and youth that drives from the community reinforcement approach and included a validated methods of improving enlistment and attendance (Carrol aand Onken, 2005, Liddle, 2004, and Lapota, Donohue, Warren and Allen, 2011). Cognitive-Behavior Therapy for individual and group has also an effective behavioral approach for drug and substance abuse treatment (Marques, 2001 and Sobell, 2009).

Multi-dimensional Family Therapy (MDFT) is another behavioral approach for adolescent drug abuse treatment. It is an outpatient family based approach to the treatment of adolescent substance abuse and associated mental health problems which integrates the clinical and theoretical traditions of developmental psychology and psychopathology, the ecological perspectives and family therapy. It uses research derived knowledge about risks and protective factors for adolescent drug and related problems as the basis for assessment and intervention in four domains; The adolescent as an individual and as a member of the family and peer group, as an individual adult and in his/her role as a father or mother, the family environment and relationship as evidenced by family transactional patterns and lastly, the extra-familial source of positive and negative influence, (Liddle, Rodriguez, Dakof and Marvel, 2005).

Contingency management is a behavioral treatment strategy used in inpatient and outpatient rehab setting where clinicians provide positive consequences to encourage positive behavior change and negative or punitive consequences for undesirable behaviors (addiction blog 2011). Good behavior could be rewarded by giving transportation vouchers, money, prizes, gifts, certificates and praises, while bad or unwanted behavior could

be controlled or punished by giving probation, officer reports lost privileges etc. Petry (2000) viewed contingency management as a strategy of utilizing reinforcement procedures systematically to modify behaviors of substance abusers in positive and supportive manners.

Rational emotive therapy is operationalize as a cognitive therapy which use a broadly defined set of clinical procedures whose description and rational often rely on existential approaches to meaning in life, and is an experimental and functionally analytical approach to clinical data, relying on objective and measurable outcomes. In this study therefore, two groups were treated; the first group was treated based on the assumption behavior caused drug abuse, and person could be conditioned to change by introducing reinforcements which could diminish the occurrence of the caused behavior. Therefore, rewards inform of money, praises, prize and gifts were used to motivate the occurrence of the positive behavior developed in the process of the treatment. So also and punishment in form of withholding the reward and officer report was used to stop the occurrence of the unwanted behavior during the treatment. On the other hand, the second group was treated with the assumption that faulty thinking process cause drug abuse to occur. Therefore, the cause was traced using A-B-C model, and then such faulty thinking was confronted and challenged to the extent that the persons willingly realize their faulty thinking process and determine to change.

1.1.3 Theoretical Perspectives

It is believed that thought triggers habits or action, Skinner (1953) and Ellis (1962). This means, thinking about drugs satisfaction may triggered a drug abuse, and it is based on this idea that, cognitive/behavior therapy is considered as the best way of modifying the thought of the drug abuser. Ellis (1962) and Williams (1996) believed that, there is nothing either good or bad,

but thinking makes it so, and they show how behavior could be control through distorting a dysfunctional thought process and irrational beliefs. A common premise of all cognitive theories is that "how people think largely determines how they feel and behave". Burns (1980) point out that "every bad feeling you have is as a result of your distorted negative thinking". Skinner (1953) and Levinthal (2008), on the other hand believe that, in any situation or in respond to any stimulus, the person has available repertoire of possible responses, and emits the behavior that is rein-forced or rewarded. This implies the need to rein- force or rewards the desired or appropriate behavior, and ignore inappropriate one, because the behavior which was not rewarded will undergo a process of extinction, and fade out of the repertoire. Many therapeutic settings use group therapy to capitalize on the social reinforcement offered by peer discussion and to help promote drug free lifestyles. The theoretical rational of drugs counseling according to NIDA (2012) is that it works by first helping the client recognize the existence of a problem and the associated irrational thinking, then to encourage the client to achieve and maintain abstinence, and develop the necessary psycho-social skills and spiritual development to continue in recovery lifelong. Research has shown that, when group therapy either is offered in conjunction with individualized drug counseling or is formatted to reflect the principle of cognitive-behavior therapy or contingency management, positive outcomes are achieved, NIDA (2012).

In this study, contingency management and rational emotive therapy were examined and observe their impact in the treatment for drug abuse. Contingency management treatments are based upon a simple behavioral principle that if a behavior is reinforced or rewarded, it is more likely to occur

in future, (Petry 2002). While rational emotive therapy assumed that person engages in drug abuse to avoid withdrawal symptoms, escape reality, loss of friends etc, (Blume 2002).

1.1.4 Contextual Perspectives

Teacher's role in the society is not a subject of compromise, as those whose plaque of the society rely on them, they are expected to be well behave, highly discipline and have high sense of commitment. The rise in the attitude towards drugs in Kano State by both young, adult and even elderly is observed mostly during ceremonies and other forms of gathering both in schools and outside. This attitude towards drugs and substance has been uprising; it is now common during political rallies, wedding ceremonies and even in schools including teacher training institutions where students used drugs at the time of examination graduation ceremonies and student elections. Currently in Kano State, the responsibility of curving drug abuse was shouldered on the non-professionals (police, NDLEA and Hisbah), that is why, there was virtually very less in-terms of counseling the drug abusers, instead, clients were detained and punished for committing a criminal offence, and professional counselors are busy teaching the course at the university and higher institutions. Drug abuse as contextualized in this study is seen as a behavior that could make an individual experience psychological distress. Which could temper with his/her functional reasoning and eventually it leads to functional impairment in normal cognitive processing. That could make perception and interpretation of events become highly selective, egocentric and rigid, eventually, affecting the person's ability to concentrate, recall or reason. In view of that, appropriate corrective measure is required to help students undergoing teacher training to stop using drugs, so as to be more constructive in thinking and behavior. NIDA (2010) suggested that,

combination of behavioral therapies are generally appear to be more effective than either approach alone, because they work on different aspects of addiction. And generally it is believed that cognitive – behavior therapies are the most effective therapy intervention for treating drug problem. Specifically among all cognitive – behavior therapies, this study apply contingency management therapy on behavioral side and rational emotive therapy on the cognitive angle to treat drug abuse among the sample using group counseling.

1.2 Statement of the Problem

The study of Dankani (2012) reported that more than six million bottles of cough syrup were sold on daily basis in northern Nigeria with Kano State having the highest consumption rate. And recently, National Drugs Law Enforcement Agency (NDLEA 2014) report rated Kano State on the top of the list of state with high prevalence of drug abuse in Nigeria. This is not a surprise because the menace penetrated every angle including the schools.

Although, a lot has been done by the government of the State to control the menace through banning the sales and consumption of alcohol and other hard drugs/substance in the state, by empowering sharia courts, establishment of Hisbah Board to ensure compliance to the policy in 2001, introduction of A dai-dai ta sahu (An enlighten program geared towards attitude change) in 2004, and supporting NDLEA in their surveillance, yet the problem persists.

Recently, it was observed that students of teacher training institutions in Kano State abuse drugs during examination period, graduation ceremony and students elections. Victimization surveys indicate that many teacher trainees in Kano State have experience physical violence during their school time, and two out of five teacher trainees have experienced some forms of sexual violence. And the changes in the attitudes of teacher trainees has been observed violating the real teacher expected discipline, which effect their performance, and their interpersonal relationship with parents, friend and teachers (Counseling Directorate SRCOE, 2015).

The factors responsible to this are not fully understood, that is why this study was conducted with the aim of addressing the issue, perhaps, it is seen as a serious challenge to the entire nation as the same students will become teachers at different levels and will be responsible for impacting knowledge and disciplines to the younger generation.

1.3 Aim and Objectives

The main purpose of this study is to examine the effectiveness of contingency management and rational emotive therapy on drug abuse treatment.

The specific objectives are:

- To determine the prevalence of drug abuse among teacher trainees in the institutes in Kano state.
- To examine the efficacy of Contingency management on drug abuse treatment among teacher trainees in the institutes in Kano state.
- To examine the efficacy of Rational Emotive Therapy on drug abuse treatment on teacher trainees in the institutes in Kano State.
- To determine the effectiveness of contingency management and rational emotive therapies on drug abuse treatment among teacher trainees in the institutes in Kano State

1.4 Research Hypotheses

- Contingency management therapy has no significant effect on drug abuse treatment among teacher trainees in the institutes in Kano State
- Rational Emotive therapy has no significant effect on drug abuse treatment among teacher trainees in the institutes in Kano State
- There is no significant difference between contingency management and rational emotive therapy treatment on drug abuse treatment among teacher trainees in the institutes in Kano State.

1.5 Justification of the Study

This study provides information about the prevalence of drug abuse at teacher training institutions of Kano State. And examines the role played

using contingency management therapy and rational emotive therapy in the treatment of drug abuse. Teacher training institutes were selected because students are trained to become teachers with full awareness of their potential skills, creative thinking, to develop necessary life and social skills, to be well discipline and highly responsible, and to be posted to teach younger ones at primary and junior secondary school. Discovery of this nature is needed to support the stakeholders in dealing with the situation.

1.6 Significance of the Study

The issue of drug abuse masterminds all aspect of development; the most important area for curtailing it is through effective educational provision in which students will learn to value their life through acquisition of appropriate norms, values, shape their beliefs and make them disciplined. That is why trained teachers have to be carefully monitored. The findings will enable the school counselors' to focus on the use of contingency management and rational emotive therapies, in dealing with drug cases in their schools. Also, the information to be provided on the level of drug abuse will help the management of the schools, the government and the parent to have adequate knowledge on the cause of drug abuse so as be more tactical in addressing the menace.

1.7: Scope and Delimitation

The scope of this study has been divided into four parts which include; geographical, theoretical, content and time as itemized below:

1.7.1: Geographical scope

This study covers all institutions offering teacher training courses in Kano state, which comprises Sa'adatu Rimi College of education, Kumbotso, Federal college of education Kano, Federal college of Education (Tech) Bichi, Bayero university Kano, Kano State University of Science and technology Wudil, Northwest University Kano, College of arts, science and remedial

studies (CAS), Aminu Kano School of Legal Studies (AKSILS), School of Technology Kano, Nigeria, and only students offering teacher training courses will be involved.

Kano State is located in North-Western Nigeria was created on May 27th, 1967. The State borders Katsina State to the north-west, Jigawa State to the north-east, Bauchi State to the south-east and Kaduna State to the south-west, Its slogan is "Centre of Commerce". Kano population reached about 9, 383, 682 (Census, 2006), 11,058,300 as at 2011 estimate, (Nigeria: Federal States and Major Cities statistics, 2014), which makes it the most populous state in Nigeria. The state has the total area of 20,131km2 (7,773sq mi), which comprise of forty four (44) local governments. It is four hundred and eighty one (481) meters above sea level, and it lies to the north of Jos, Plateau state in the Savanna region that stretches across the south of the state. It is a Hausa and Fulani dominated state which is strategically located as well as a commercial hub in the sub-Saharan Africa.

1.7.2: Theoretical scope

This study confines by the cognitive –behavioral Therapy; Contingency Management therapy and Rational Emotive Therapy were selected based on the assumptions that Drug Abuse is a behavioral problem and could be effectively control using behavior and Cognitive based approaches. The treatment was given using group counseling.

1.7.3: Content scope

The study uses Contingency Management and Rational Emotive Therapy in the treatment of Drug abuse. The constructs for the contingency Management are: reinforcement which implies the use reward and punishment,(rewards include, transportation vouchers, money, prizes, gifts and praises, while punishment include officer reports, lost privileges and withholding positive reinforcement), and the constructs for the Rational Emotive Therapy treatment were confrontation and challenge. Activating agent and belief system that causes behavior to occur were confronted and challenged until person dispute them willingly. And the effectiveness was

examined by the change observes from the responses of pre-test and post-test obtains after the group counseling.

Other factors could also have an influence on the prevalence of drug abuse in the area of study, which include; peer group influence, social/economic status of the students, availability/accessibility of drugs, but for this study, positive (excitement) and negative (avoidance of consequences) reinforces were considered.

1.7.4: Time scope

The exercise was conducted within the period three month within which the sessions hold at the interval of two weeks, making six consecutive meetings. National Institute on Drug Abuse (NIDA, 2012) opined that because model of addiction counseling is time limited and focused on behavioral change and 12-step ideology and participation, the most similar approach would be short-term cognitive behavioral therapy to treat addiction or short-term counseling based on the 12-step approach to recovery. Contract form was signed by all the clients at the beginning of the session to ensure that regular attendance is maintained.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents and critically analyzes the Contribution by different scholars in the area of study. It also presents the theoretical and conceptual framework which will serve as a baseline of the entire research study; the review of related literature helps to identify the gap which this study attempts to bridge.

2.1 Theoretical Framework

Many theories attempt to explain the phenomena of drug abuse, each looked at it in a different perspective.

Personality theory derived from the work of Sigmund Freud (1856-1939), focused on internal psychological disturbance that begin in early childhood. Psychoanalyst Otto Fenichel as cited in Lavinthal (2008), postulates that, people engage into drug abuse to satisfy their basic needs fixated at the oral stage of development. Other personality theories, view drug dependence in terms of an unconscious death wish, the ultimate form of self-loathing. And self-destructive life style of drug abuse is viewed as a failure of ego functioning that, under normal healthier circumstances should promote self-care, self-protection and self-esteem, (Levinthal, 2008). Personality theory of drug abuse also, emphasizes that individual possess certain traits or characteristic that abuse drugs. This traits or characteristics includes: delay gratification, low tolerance for frustration, poor impulse control, and high emotional dependence on the other people, poor coping ability and low esteem. The theory assumes that individuals with those characteristics find it difficult to abstain from drug abuse. Availability-proneness theory is another

theory of drug abuse propounded by Smart. It assumed that, drug use can start only when the values for both of the factors are above zero for an individual, Users will start using a drug because they meet in their everyday lives, example, when their friends, associates, older siblings, or parents use drugs. But, the theory has no independent empirical validation for most of its propositions, and the major concepts of "availability" and "proneness" are not very scientific, but just a global concepts with a variety of meanings, and also, there are evidences of several situations in which availability is high, but drug use is low as the case of west who are the producers of drugs in Nigeria and north who are the major consumers.

Behavioral theories, emphasizes the role of learning through reinforcement. According to behavioral point of view, practically, all human behavior is learned. Behavioral therapy can help people abusing drugs to participate in the treatment; offer strategies for coping with drugs cravings; teach ways to avoid drugs and prevent relapses; help individual deal with relapse and can also help people improve communication, relationship and parenting as well as family dynamics (NIDA 2010). Some behavioral therapies that proved effective in drug treatment include; functional family therapy (FFT) which is a strength-based model with a focus on those risk behaviors adopted by youth abusing drugs and protective factors that impact the adolescent and his/her environment (Sexton and Alexander, 2000). Family behavior therapy (FBT) as another approach to dealing with drug abuse is an outpatient behavioral treatment aimed at reducing drug and alcohol use in adults and youth that drives from the community reinforcement approach and included a validated methods of improving enlistment and attendance (Carrol and Onken, 2005, Liddle, 2004, and Lapota, Donohue, Warren and Allen, 2011). Cognitive-Behavior Therapy for individual and group

has also an effective behavioral approach for drug and substance abuse treatment (Marques, 2001 and Sobell, 2009).

Multi-dimensional Family Therapy (MDFT) is another behavioral approach for adolescent drug abuse treatment. It is an outpatient family based approach to the treatment of adolescent substance abuse and associated mental health problems which integrates the clinical and theoretical traditions of developmental psychology and psychopathology, the ecological perspectives and family therapy. It uses research derived knowledge about risks and protective factors for adolescent drug and related problems as the basis for assessment and intervention in four domains; The adolescent as an individual and as a member of the family and peer group, as an individual adult and in his/her role as a father or mother, the family environment and relationship as evidenced by family transactional patterns and lastly, the extra-familial source of positive and negative influence, (Liddle, Rodriguez, Dakof and Marvel, 2005).

Learning theory of drug abuse also maintained that dependence or abuse of drugs occur as a result of learning; maintained that, drug taking behavior leading to drug abuse and dependence is a consequence of having modified one's behavior in a specific ways and according to specific principles, in other words, situation have the capability of stimulating powerful drugs craving brought on by memories of past pleasurable experiences, (Goode, 2005). Biological theory also maintains that drug abuse is determined by the individual biological or genetic factors which make them vulnerable to drug addiction. It focused primarily on genetic, physiological factors and neurochemical system in the brain. Genetically, it assumes that several genes play role in determining the level of drug risk. Physiologically, it focuses on the metabolic processes in the body. And neurochemically, it is assumed that

use of substances like amphetamine, cocaine, heroin, alcohol, and nicotine results in a similar pattern of compulsive behavior based on intense craving for repeating experience. This similarity among these drugs and across species is numerous enough to entertain the idea that exist a common neurochemical system in the brain that links them together, (Patricia and Robert, undated).

A sociological perspective maintains that, environmental and social factors plays vital role leading to drug abuse. Sociological theories include; Anomie/strains theory, social control/bonding, differential association theory, labelling theory and subcultural and socialization theory. Anomie/strains propound by Robert merton, 1968, focus on feelings of frustration and alienation. Social control/bonding propound by Akers, 1992, focused on weakened social bonds between an individual and social entities, such as family, school, religious affiliation and community. According to the theory, all human beings are by nature, rule breakers, the bonds that people have to society and its moral code are what keep them from breaking the law and remaining socially controlled, (Lavinthal, 2008). Differential association theory of Sutherland, 1939, based upon the premise that drug abuse is learned from interaction and communications with other individuals. Labelling theory assumes that virtually everyone has experimented with drugs at some time his/her life. It emphasizes the process by which a drug user internalizes a newly acquired label of deviance and continues a pattern of drug taking behavior that is based on the expectation of others. And subcultural recruitment and socialization theory focus on the dynamic relationships among drug abusers as a cohesive group, (Goode and Bruce, 2005)

For all mentioned theories, the etiology of drug abuse was explained in different perspective, which means, it is a multi-determined concept. This

shows that drug abuse is acquired depending on a host of personal inclinations and environmental factors. Therefore, dealing with problem of that nature, requires counseling theory that is relevant to the nature and predisposition of the clients.

Person centered established by Carl Rogers developed in 1951, is based on the beliefs that problems originate from emotional blocks or conflicts and that people already have the necessary objective knowledge for deciding what should be done about their problem. The theory stressed that individual could take charge of life, make decision and act on the world could be used. The theory assumed that people are positive, forward moving, basically, good and ultimately self-actualizing. But, the theory fail to provide adequate information to help the client, it focus strictly on the client information, making too much emphasis on effective emotional feelings as determinant of behavior and less emphasis on intellectual, cognitive and rational factors. As such it may not be adequate for clients who require to be challenged before accepting responsibility for their problems.

Individualistic therapy established by Alfred Adler (1969) could also be relevant, which stresses that behavior can be controlled by attempt to compensate for feelings of inferiority. It focuses on the understanding of behavior in relation to social environment. And thus, assumed that man is free to make his own choice and select his own life. Also stress that, the basic cause of abnormal or maladaptive behavior is a heightened sense of inferiority within the individual. Yet it only relies on intellectual insight to bring about change, and over emphasis "soft" determinism (subjective experience, values and interest determine behavior).

Therefore, in the context of this study, the suitable theories that address the problem under investigation are the combined cognitive behavior

therapy. NIDA (2012) suggested that a combination of behavioral therapies is generally appearing to be more effective than either approach alone. Rawson et'al (2002), Epstein, Hawkins, Covi, Umbricht and Prestol (2003) and Farranatos, Dursteler-Macforland, Wiesbeck and Petitjean (2013) conducted studies using contingency management and cognitive behavior therapy in treating cocaine dependence. Brown et'al (2001), used cognitive- behavior therapy to help people with history of depression to quit smoking. Basic to behavioral counseling used in this study is the principle of reinforcement which is the creation of desirable consequences that will strengthen or facilitate certain behavior. The assumption of behavioral therapies according to Skinner (1953) is any behavior exhibited by person has been elicited by a stimulus, and is reinforced by its consequences. In view of this, contingency management theory was focused as an approach of operant conditioning which emphasizes observable behavior and change through contingent reinforcement.

Contingency management theory is based on the view that alcohol and drug use are behavior that is influenced by neurological and environmental factors; therefore, the destructive substance can be changed by offering consistent environmental consequences or alternatives that reinforce more positive, healthy behavior changes (Petry 2012).It was found very effective in drug addiction treatment in United State(Miller,1975; Ersner – Hershfield, Connors, and Maister,1981; and Scott and Kreet, 2013).It was also found effective in the outpatients treatment of people who are dependent on heroin, cocaine, alcohol or multiple drugs (Petry et'al,2004). Brigham et'al (1981) reported a positive outcomes using contingency management in reinforcing abstinence among adolescent alcohol abusers. Glenn (1990) also posited

that token economy could be used in prisons, classrooms, and Juvenile correction institutions.

Iguchi, Belding, Andrew, Lamb and Stephen (1997) used three groups to examine the effectiveness of contingency management. Using vouchers to reinforce either the provision of urine samples testing negative for illicit drugs (VA), or the completion of objective of individually define, treatment-plan-related task (TP) and the third group was assigned to the clinic's standard treatment (STD). Participants were randomly assigned to groups after 6 weeks baseline periods. Urine specimen were collected thrice weekly throughout the study. In the VA group, participants earn $5 in voucher for each drug free, Participants in TP group earned $15 in vouchers per week for demonstrating completion of treatment plan tasks by the counselor. Contingencies were in effect for 12 weeks, after which all participants receive the clinic standard treatment. The urinalysis result indicated that TP intervention is more effective in reducing illicit drugs use than VA and STD intervention.

Bickel et'al (1997) and Higginset'al (1998) found that providing money, voucher incentive or dinic privileges contingents on objective indicators of drugs abstinence reduces illicit drug use among opioids dependent patients. Higgins and Petry (1999), also confirmed that, alcohol and other drugs abuse treatment incorporating contingency management are more effective than standard case management, 12 – steps oriented counseling and behavior therapies, delivered without contingency management component. And contingency management is particularly useful in group therapy settings which meet once or several times per week, (NIDA 2012, &addiction blog 2011). Petry et'al (2004) used contingency management in evaluating the

efficacy of low cost contingency management on cocaine patient within the period of three month.

The basic principles of contingency management are that; firstly, the behavior that is trying to change should be frequently monitored through either drug screening, taking attendance or verifying work. Secondly, providing tangible immediate positive reinforcement each time that the behavior occur by giving special privileges, money, methadone doses, vouchers, praises or prizes, and thirdly, withholding the positive reinforcement when the behavior does not occur.

On the cognitive side, **Rational Emotive Therapy** was used. The theory hold that disturbed behavior exist as a result of irrational or illogical thinking and believed that behavior can be change if those irrational or illogical thinking is effectively disputed and rationally challenged (Alao 1990 and Sarah 2005).Rational emotive therapy was established by Albert Ellis (1957). The goal is to help clients see the ways in which they have learned how they often needlessly get upset, teaches them how to "un upset" themselves and how to empower themselves to lead happier and more fulfilling lives. And it commonly posits that, at the core of irrational beliefs there often are explicit or implicit rigid demands and commands. And, that extreme derivatives like awfulizing, frustration, intolerance, and people deprecation and over generalizations are accompanied, (Dryden & Neenan, 2003). In other words, the major goal of rational emotive therapy is to help people change self- defeating habits of thoughts or behavior thorough teaching of ABCs of RET. According to Ellis (1957), the acronyms A-B-C offered insight into how to overcome a self-defeated behaviors and cognition. Where "A" stands for "adversity" which means the everyday obstacles and

difficulty that everyone is forced to deal with just as a consequence of interacting with the world, While "B" stands for "belief" and concerns whether or not the individual in question believes that a positive outcome is possible or whether or not the adversity really can be overcome. And "C" stands for consequences that arise as a result of belief.

The theory describes person's evaluative emotional and behavioral belief system contributed immensely to unrealistic, arbitrary and crooked inferences, and distortions thinking. It also posits that, when people in an insensible and devout way overuse absolutistic, dogmatic and rigid "should", "must" and "ought", they tend to disturb and upset themselves. Sarah (2005) believed that, ability to create irrational belief by oneself shows the biological derive towards irrational thinking, and the capability to make one's desires and goals and change them into absolute "must", "should" and demand, along with this self-defeating capability is the innate human derives towards self-actualization and positive growth, and this could be through disputation. According to Sarah (2005), "RET is a form of cognitive-behavior therapy which suggests that; peoples' develops core irrational beliefs based on their interpretation of the events that happen to them".

Describing rational and irrational thinking, Wilde (1996) sees rational beliefs as those beliefs which are true and logical, can be supported by solid proof, are not absolute commands but are rather desires, wishes, hopes and preferences, that they, lead to moderate emotions such as sadness, disappointment, and are concerns which help to motivate the individual to attain the goal. But irrational beliefs are described as those beliefs that are demanding, absolute, over dramatic, catastrophizing, global evaluation of

human worth, activated automatically and lead to emotional disturbances such as depression, panic and anger, (Sherin & Caiger 2004).

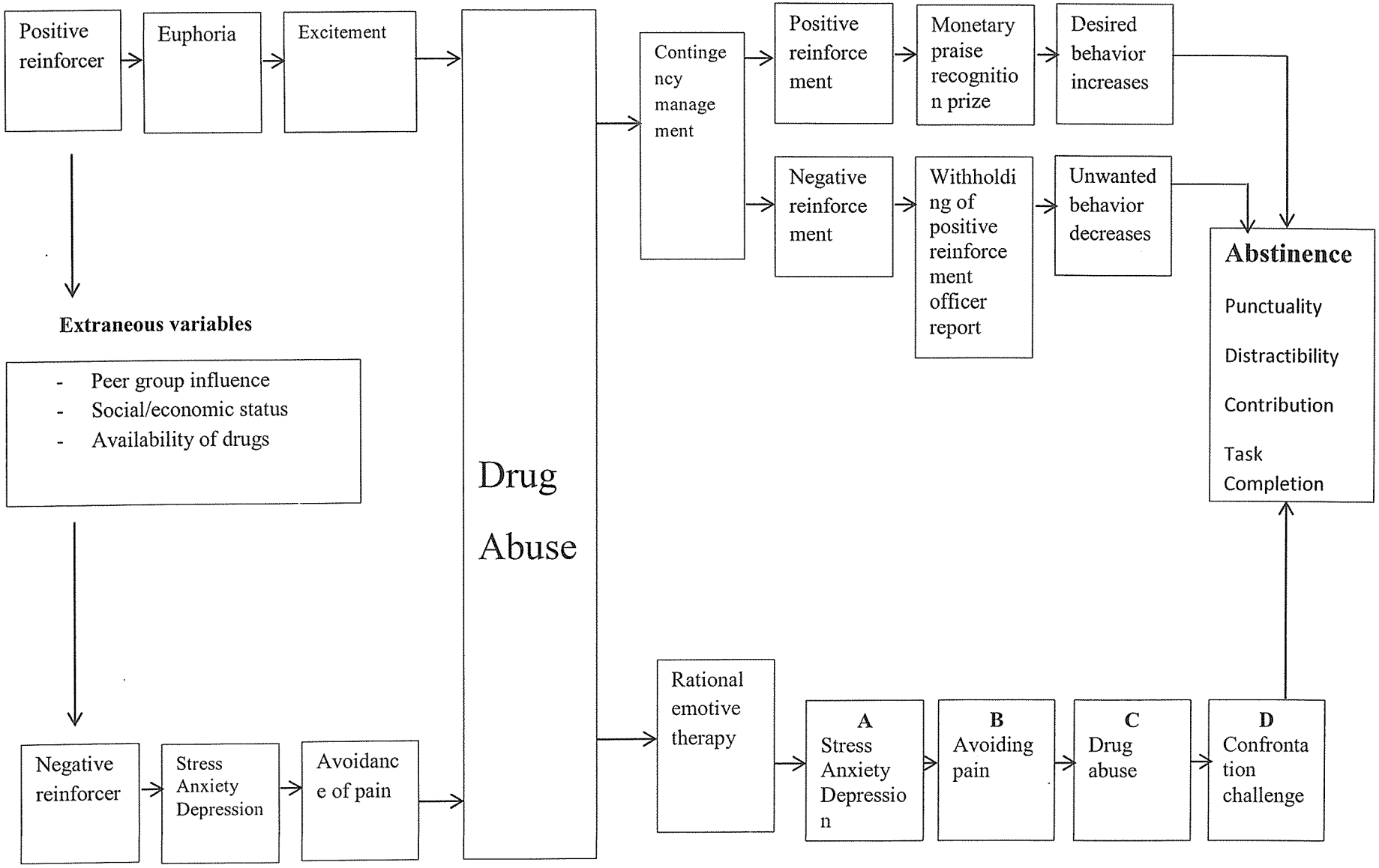
It was found effective in self-management and recovery training (SMART) in supporting addiction recovery, in addition to a variety of specialized treatment and applications, (Lyons and Woods 1991).Rational emotive therapy was found very effective in reducing maladjustment and improving adjustment in adult. Moore (1999) supported the efficacy of using rational emotive therapy with school aged population. Ellis (2001) believed that, individuals undergoing some forms of rational therapy would be taught that having negative beliefs reinforces and contributes to negative outcomes, and that having positive belief about confronting adversity naturally leads to good positive results. Sarah (2005) found RET very effective in treating children. Barlow (2007) confirmed that rational emotive therapy was highly significant in reducing parental depression-dejection, parental distress, parental guilt and parental irrational beliefs and very effective in treating substance abuse and addiction.

A vast amount of outcome and experimental studies support the effectiveness of RET, as one of the most investigated theories in the field of psychotherapy and a large amount of clinical experience and substantial body of modern psychological researches have validated and substantiated many RETs theoretical assumptions on personality and psychotherapy,(David et'al, 2005;Cohlin& Felman, 2007, and Ellis 2008).

National Institutes of Drugs and Addiction, NIDA (2012), posited that treatment programs which employ both individual and group therapies, and cognitive-behavior therapy are being adopted for group settings to improve

efficiency and cost effectiveness. That is why this study uses the two therapies to examine their effectiveness in the treatment of drug abuse among the students of teacher training institutions in Kano State.

2.2 Conceptual framework



2.3 Review of Related Literature

2.3.1 Drug and Drug Abuse

Drugs have been defined by various scholars in a different ways, for example drug is conceptualized from different perspectives; legal, social, medical or pharmacological, (Mukhtar, 2014). Okoye (2001) and Garba (2003) sees drug as a substance that could bring about a change in the biological function, through its chemical action. WhileBalogun (2006) sees drugs as a substance that modifies perception, cognition, mood, behavior and general body function. And Nnachi (2007) described it as chemical modifiers of the living tissues that could bring about physiological and behavioral charges. Other studies perceive drugs medically as any substance which is use for treatment or prevention of disease in human beings and animals. Levinthal (2008) refer drugs as a chemical substance that when taken into body, alters the structure or functioning of the body in some way, excluding those nutrients considered to be related to normal functioning. Ekpenyong (2012) describe drug as any product other than food or water that affect the way people think, see and behave, this means it both affect the physical, mental and emotional functioning. In view of those definitions, drugs are therefore any substance which when used could alter the body function in any form.

Drug abuse on the other hand has been described by many scholars. According to Odejide (2000) "drug is said to be abused when its uses is not pharmacologically necessary especially when used in the face of legal prohibition or when a socially acceptable beverages is used excessively". Haladu (2003) and Manbe (2008) see it as an excessive and persistent self-administration of a drug without regard to medically or culturally accepted patterns. Levinthal (2008) refer drug abuse as drug –taking behavior resulting in some form of physical, mental, or social impairment. While, Afolayan (2010), view drug abuse is the continuous, uncontrolled and compulsive use of drugs not only to include intoxication but also avoid the tortures of withdrawal. American

psychological association (2006), Abdullahi (2009), NAFDAC (2010), Fareo (2012), Dankani (2012), Mahmoud, Al–Sanousi and Abdulwahab (2013), viewed drug abuse as the use of substance such as alcohol and other drugs to the point where a person develops a physical or psychological need for it and which cause so many health problems to the person.

Generally this study assumes that drugs when use legally, is very helpful to the body and indiscriminate and un-prescribed use of drugs is seen as abuse of drugs, and it is fact that most of the people now in Nigeria and other countries especially youth are not using it accordingly, in other words are abusing drugs.

2.3.2 Prevalence of Drug Abuse

British Broadcasting Cooperation, BBC (2000) discloses the estimation by the United Nation that, there are more than 50 million regular users of morphine diatate (heroin), cocaine and synthetic drugs worldwide. The UNODC (2004) statistic shows that USA and Brazil has the highest prevalence of Opiate (0.6), while in Europe, Russia has the highest (2.1%) and Iran has the highest in Asia (2.8%). Also, Spain has the highest prevalence of cocaine in world (2.6%), followed by USA (2.5%) then Ireland (2.4%) and South Africa (0.8%).

In United State, a nation survey on rates of substance abuse show that 48.2% of 12^{th}graders having used an illicit drug at some point in their lives (Johnston, O'Malley, Batchman and Schulenberg, 2011), they further stated that, 30 days prior to the survey 41.2% of 12^{th} graders had consumed alcohol, and 19.2%of 12^{th} graders had smoked tobacco. And Barker (2003) reported that, World Health Organization (WHO) estimation revealed that around 140 million people were alcohol dependent and another 400 million suffered alcohol related problems. National Household Survey (2005) revealed that, abuse of drugs is the number one cause of preventable illness and death in United State. According to the report, 500,000 deaths are attributed to drug abuse, and alcohol is the most commonly psychoactive substance. The finding shows that, 28% between

the age 12-20, and 55% aged 21 and above uses alcohol in United State. NHSD (2005) also revealed that, 20% of youth aged 15 and 40% aged 18 years reported using marijuana, and (6.4%) youth aged 12-17 were dependent on drugs.

The danger of misusing drugs especially among adult worldwide has been presented in several studies to affect the entire societal wellbeing. This is a serious concern to the health and the social and economic development of most countries in the world. National Health Service and drug abuse (2010) discloses how social and economic cost of drugs affects United Kingdom. The estimate was about 20 billion pounds (in excess) been the social and economic cost of drugs a year in the United Kingdom, in terms of crime, absenteeism and sickness. United State also faces the debilitating effect of drug abuse as the rate has become alarming. National Institute of Drug Abuse (2010) discloses that 7 million people were taking prescription drugs for non-medical use, and the report further confirms that, nearly 1 in 12 high school seniors reported non- medical use of Vicodin, and 1 of 20, reported abuse of OxyConten. Bureau of Justice and Statistics (1994) also reported that, the majority of female arrestees had a history of alcohol and marijuana use, and 40 percent reported using heroin. And UNODC (2014) report shows that the population of women imprisoned for drug related offences is on the rise.

In Africa also, this problem is seen as the big issue of concern. Narc (1986) shows how the trend of drug abuse in Africa changes from cannabis abuse to more dangerous drugs and from limited number of people to wider groups. Afinnih (2002) also discloses the problems of drug abuse in so many sub-Saharan Africa which include some Western, southern and East African countries. The statistic by UN also shows that, 28 million Africans abuses drugs and at least 37000 people were dying annually from diseases associated with consumption of illegal drugs (Nduda, 2013). The findings of UNODC (2004), shows that, Africa has the highest prevalence of cannabis with Ghana (21.6%), Serrieleone (16.1%), Zambia (15.0%) and Nigeria (13.8%). The

statistics also shows that, Mauritius has the highest prevalence of Opiate in Africa (0.8%), followed by Ghana (0.7%), then Nigeria (0.6%). And Nigeria has the highest level of Amphetamine (1.1%) in Africa.

2:3:3 Prevalence of Drug in Nigeria

The issue on drugs in Nigeria becomes a serious problem after independence. In the first two decades after Nigeria gain independence, drugs trafficking are very rare. But things began to change in the 1980s. Indian heroin began to funnel through Nigeria on its way to Europe. The criminal groups handling these wares soon forge alliance with South Americans illicit drug manufacturers and add cocaine to the drugs they were distributing. In 1990s, cannabis began to produce within Nigeria, the government has been vigilant in the control of drugs in the country, yet, and its prevalence is persisting. Haladu (2003) categorizes the most common types of abused drugs in Nigeria as;

- Stimulants which are substance that directly act and stimulate the central nervous system which the major source is caffeine substance.
- Hallucinogens which are drugs that alter the sensory processing unit in the brain. Thus producing distorted perception, feeling of anxiety and euphoria, sadness and inner joy, they normally source from marijuana and Lysergic Acid Diethylamide (LSD).
- Narcotis drugs that relieve pains induce sleeping and they are addictive, which are found in heroin, codeine and opium.
- Sedatives that relieve stress and anxiety, some induce sleeping, ease tension, cause relaxation or help person to forget his problems, and they are found in valium, alcohol, promotazine and chloroform.
- Miscellaneous which are group of volatile solvent or inhalants that provide euphoria, emotional disinhibiting and perpetual distortion of thought. The main sources are glues, spot removers, solutions (tube repair), perfumes and chemicals.

- Tranquilizers which are believed to produce calmness without bringing drowness, they are found in Librium, valium etc.

Statistic on drug seizure shows that in 1999, 16,000kg of cannabis herb and 15.6kg of cocaine, and in 2000 the figure leapt to 272,000kg of cannabis and 54kg of cocaine. And in 2007, the rate of marijuana increase in the number of four spot. This is the scenario, which shows the flourish of illicit drugs in the country. Supporting this, National Drug Law Enforcement Agency (1997) cried out that drug abuse is the major problem in Nigeria. Fayombo and Aremu (2000) discloses that the misuse of marijuana had reached an epidemic level in Nigeria, and, Chikere and Mayowa (2011) state that, psychoactive substance especially alcohol has for many years been an issue of increasing health and social importance in Nigeria. Ekpenyong (2012) found that the use of marijuana is very high and can increase the risk of subsequent illicit drug use in Nigeria. Marijuana has become one of the major substances used by the youth in Nigeria. Dankani (2012) confirmed the prevalence of marijuana and cough syrup use in northern Nigeria and further disclose that over 6 million bottle of cough syrup are sold daily and is associated with drug abuse in Northern Nigeria.

Kano state currently is suffering the effect of the menace; NDLEA (2014) reported that, "Drug Abuse in northwestern Nigeria's largest city (Kano) has been on the rise in recent years, with anti-narcotis officials and experts warning of serious social consequences, if the problem is not tackled'. The State has the highest drug abuse rate base on the number of seizures, arrest of addicts and convictions of arrested leaders. The report further reiterated that, in December 2014, 10 metrics tones of cannabis, cocaine and methamphetamine with an estimated street value of $1.4million was destroyed in the State and at the same time, Hisbah board (morality police) impounds 100,000 cartons of glue during raid on a city warehouse. The report also disclosed that, more unconventional drugs are also used, not just

codeine-laced cough syrup which has become popular among married women, but solvents and powerful horse stimulants.

The involvement of students irrespective of gender is a serious issue of concern. Even though, the government is doing her best in controlling the situation through dismantling of the expired and fake drugs, but still the situation requires more commitment. The unfortunate practice of dealing with drugs abuse issues has made it continues practice, because it is not rightly handed. The control is vested under police, Hisbah board, court and National Drugs Law Enforcement Agency who may not necessarily be professionally trained counselors. That makes the case being treated as criminal offence (which may be dealt with punishment) rather than psychological problem that requires counseling. And this perception made it difficult for the victims to willingly present their problems.

2.3.4 Prevalence of Drug Abuse by Age

Many studies discovered the prevalence of drug abuse among various age levels. Among those studies review includes, Lambo (1984), which disclosed that young people were ruining their lives through drug abuse. Also, Idowu (1987) stated that "in Canada children of nine years of age were reported "shoot speeding", that is injecting amphetamine". National Drug Law Enforcement Agency (1997) revealed that the use and abuse of drugs by adolescents have become one of the disturbing health related phenomena in Nigeria and in other parts of the world. UNODC (2004), NHSD (2005) and NIDA (2010) reported that, teenagers and youth are more vulnerable to drug abuse globally.

These youth have problematic behavior, emotion and ways of thinking that affect not only their families but also their communities. Effiom, Ejueand Effiong (2005) confirmed the prevalence of drug abuse among youth in Calabar, stating that, kola nut, coffee, beer, palm wine, local gin and factory gin are the commonly drugs been abused, while, snuffs and marijuana as the least abused substance. Oshikoya and Alli (2006)

stated that experimentation with drugs during adolescence (10-25) is common because at that age the young generation try so many things. They further stated that adolescents use drugs for so many reasons which includes curiosity, because it feels good, to reduce stress or to feel grown up.

World Health Organisation (2009) also reported the rate of consumption and drinking to excess among the general population and asserted that heavy episodic drinking among young people are on the rise in many countries. Chikere and Mayowa (2011) found that majority of students initiated into the use of alcohol at a tender age of 16 to 20 years. And NDLEA (2014) report confirmed the use of hard drugs among youth and reiterated that it had become a real social menace and cut across all social strata, with children from both rich and poor background deeply in it.

Other studies have contrary view. Those studies opine that drug abuse elderly people engages in the menace like young people. They believed that aging brings about so many changes in the body which may require treatment with substance that have a potential for abuse. Other psychological disorders, like anger, depression and anxiety can be associated with aging process. Gfroerer (2003) posits that, with age comes, a higher incidence of chronic painful physical disorders emerges which craves for the use substance. And further, predicts the higher number of substance abuse among older adults in the year 2020.In Support of this,Chikere and Mayowa (2011) states that "prevalence of alcohol consumption among youth aged 26 years and above is high in Owerri".

Feidler, Pertica, Leary and Strohl (2002) found substance abuse among aging adults aging 55 years and above, and disclosed that, alcohol and to a somewhat lesser extent, prescription medications, and illicit drugs are abused by this population. And asserted that with time when the baby boomers rich the older adulthood, the rate of illicit drug use among the older adult will rise. Lon and White(2004) have contrary view,

having studied elderly Japanese- Americans born between 1900-1919 and confirmed that as people grown older, their alcohol habit decline

2.3.5 Prevalence of Drugs Abuse among Students in Nigeria

The emergence of drug abuse among students is not a recent phenomenon. Research of seventies have shown that 70% of students in American Colleges and universities smoke or have used marijuana, and in Canada, marijuana smoking by high school students jumped from 6-7% in 1968 to 22.9% in 1974(Idowu, 1987). A survey carried out by Martino and Truss (1973) in 20 campuses in United State, shows that 60% of the samples have used marijuana.

The trend of drug abuse in Nigerian school poses a serious threat to the future of the country. World Health report and World heart foundation data posit that in Nigeria, 22.1% of school youth age between 12-17 years us tobacco. According to Olatunde (1979), Nigerian students take drugs such as amphetamines and pro-plus as aids for success in examinations. The findings of Adesina (1975), Ekpo (1981) and Orubu (1983) also revealed that Nigerian students use drugs to help them succeed in the exams, gain social acceptance and initiation of peers. Egba (1985) confirmed the prevalence of smoking and drug abuse among secondary school students in Cross Rivers State. Idowu (1987) also conducted a study on the prevalence of drug abuse among secondary school students in Ilorin Metropolis, and confirmed that students use drugs.

Prevalence of drug abuse was also confirmed in some universities and colleges in Nigeria. Adelekan, Abiodun, Obayan, Oni and Ogunremi (1994) revealed the prevalence of pattern of substance use among undergraduate students of the university of Ilorin, reporting salicylate analgesic, alcohol, stimulants and hyno-sedatives as the commonly drugs been abused. However, discloses cannabis, organic solvent, hallucinogens, and cocaine and narcortic analgesic as low consume by the students. Their study concludes that, the corresponding use rate was relatively lower, and majority of users use substance on occasional basis. Ade and Eke (1997) also found that, out of 640 secondary school students in Anambra State surveyed on drug use, 57% have used alcohol.

In another study by Hutchinson, Petock-peckham, Cheong and Nagoshi (1998), 203 college alcohol-using students complete the questionnaire on their level of alcohol use, moderate to severe problems with alcohol use and measures of stress, impulsivity, compulsivity, irrational beliefs and depression. Impulsivity were found to be a significant predictor of alcohol use problems, while stress, compulsivity irrational beliefs and depression were found to only be significant predictors of alcohol use problems. When irrational belief, compulsivity and impulsivity were combined to form "irrational coping" scale were found to completely mediate the effect of stress on alcohol use problems.

Individuals who smoke marijuana develop both dependence and withdrawal symptoms (Watson 2000 and John 2001). Ashton (2001) examines its users and discloses that, its main recreational purpose is its euphoric high. Describing its withdrawal symptoms to include; restlessness, insomnia, anxiety, increased aggression, anorexia, muscle tremors and autonomic effects. Chikere and Mayowa (2011), establish a high prevalence of alcohol among undergraduate students in Owerri, Nigeria. Similarly, Josephine (2014) confirms the alarming rate, effect and consequences of substance abuse among students in Benin.

The notable drugs abuse by the youth and especially students in Kano state are marijuana (cannabis sativa) and cough syrup (Dankani, 2012).Goldberg (2008) asserted that Marijuana is the second most abused drug in the world after alcohol. It contains over 200 compounds and very hard to describe in a single perspectives, (NIDA 2004). It is a preparation of leafy material from the cannabis plant, the most important and primary active ingredient in marijuana is Delta-a tetrahydrocannabinol (THC). Staff (2012) discloses that, substance like Indian hemp which is frequently produced in Nigeria and other substance like methamphetamine and tablet with codeine capable of intoxication are found in schools. The other drug commonly abuse in the State is cough syrup (Dankani, 2012). Its non- medical consumption in northern Nigeria has become a subject of concern largely due to its potential danger to the society. NAFDAC (2010)

notes that, the relative cheapness and ease access made cough syrup the highest drug abuse and the most commonly abused cough syrups are those containing codeine, which is very dangerous to health.

2.3.6 Prevalence of Drug Abuse by Gender

Many studies conducted in the past on the prevalence of drug abuse among gender, have shown that, males were more engaged in the menace compared to females. However recently, some studies reveal the up rise of drug abuse among females. National Household Survey on Drug Abuse study (1997) reported a greater occurrence of illicit substance use among males than among females. According to the report, men has high rate of illicit substance than women, with men having 8.5 percent and women with 4.5 percent. The report further indicate the rate of alcohol abuse among men as 58 percent while women has 45 percent, and men has .9 percent on cocaine use with women having .5 percent. In another study, men were reported having high rate of marijuana use compared to women (Office of Applied studies, 1997).

Johnston O'Malley and Batchman (1997) reported the same pattern which shows men with high rate of illicit drugs use than females, and further states that, men use all illicit drugs at a higher frequency and in a larger quantity than females. Adelekan et'al (2000), also found the prevalence of alcohol drinking among males and females students at the University of Ilorin with 24 percent for males and 17 percent for females. World Health Organisation report (2001) shows the percentage of frequent drinkers among males and females, with 5 percent for male and 1 percent for females. And Fatoye and Morakinyo (2002), found the total percentage of prevalence rate of drinkers among secondary school students in southwestern Nigeria to be 20 percent for males and 7.4 percent for females.

UNDOC (World Drug Report, 2014) also reported that, men are 2 to 3 times likelier than women to have used illicit substance. Supporting this, Treatment Episode Data set (TEDs 2014) reported that, out of 1.84 million admissions to substance abuse

treatment in 2011 from 46 states at districts of Colombia and Puerto Rico. 609,000 were females which constitute 33 percent, and 1.23 million were men, constituting 66.9 percent. Greenfield et'al (2010) disclosed that, males are more likely than females to report marijuana and alcohol use, and, females are more likely than males to report non- medical use of prescription drugs.

Other studies confirmed the prevalence of drug abuse between genders among college students. Adelekan et'al (1994) found that, men were more current users of tobacco and alcohol, while female abuse stimulants more. Wechler, Dowdall, Devenport and Rimu (1995), examine the relationship of volume of alcohol-related problems among male and female college students, their findings revealed that Women who typically drink four drinks in a row were found to have roughly the same likelihood with men who drink five drinks in a row. Johnston et'al (1997) discovered substantial gender difference among high school seniors in heavy drinking. They reported 38% of heavy drinkers among males as against 2%amongfemales, and confirm the same patterns among college students. Stanley and Odejide (2002) found a very close tight in alcohol drinking rate among males and females in Kugiya town of Jos, their findings revealed that, males has 54% and females has 46%.

WHO GENECIS Report (2002), reveals the rate of drinking among males and females aged 20-65 years to be 27.8% in males and 36.1% in females. And, Mamman, Brieger and Oshiname (2002) found that out of 300 women studied in Igbo-Ora, 64% were found to have tested alcoholic beverages, and 32.7% were current consumers of alcohol. This findings was supported by Wallace, Bachman, Johnston, Schulenburg, Cooper and O'Malley (2003) who conducted a longitudinal study on Gender and ethnic differences in smoking, drinking and illicit drug use among American 8^{th} , 10^{th} and 12^{th} grade students. Their findings shows that, there have been important changes in girls drug use over time, and that 'girls' and 'boys' drug use pattern are converging. The study further, confirmed that drug use is widespread among American adolescent girls.

Also, UNODC (2014), reports high rate of opium and heroin use among women in Afghanistan, and stressed that the involvement of women in the drug trade is reported on the rise worldwide especially among women who lack education, economic opportunity or have been victims of abuse. And the report asserts that, the more advanced the country, the higher the proportion of female among the drug users.

2.4 Contingency Management Therapy

Contingency management or systematic use of reinforcement is a type of treatment used in the mental health or substance abuse fields.The theory is based on the assumption that alcohol and drug use are behavior that is influenced by neurological and environmental factors; therefore, the destructive substance can be changed by offering consistent environmental consequences or alternatives that reinforce more positive, healthy behavior changes (Petry 2012). It is perhaps the most existing development in drug abuse treatment research in the past years, and has shown to be consistently effective for many types of substance users and in many applications. It is believed that every behavior has its consequences, in other words, consequences is the motive behind certain behaviors, example, for gaining something positive like financial rewards, recognition, social praise, vacation, peace and harmony, or avoiding something negative like fines, social displeasure, societal sanctions and interpersonal conflict. Reward according to Petry and Stitzer (2012) are variety of things used to encourage a desired behavior, some are purely symbolic (grades), others are money in terms of salary and bonuses, while some involves praises or showing displeasure. Patients' behaviors are rewarded (or, less often, punished); for the adherence to or failure to adhere to program rules and regulations or the treatment. The relationship between a behavior and its consequences is termed "contingency", which means applying reinforcement to modify behavior has the most impact when the reward is given contingently. Forness, Kavale, Blum and Llyod (1997) believed that its

procedures produce one of the largest effect sizes out of all mental health and educational interventions.

According to Pearson, Lipton, Cleland and Yee (2002), the use of behavioral learning techniques by contingency management help in changing the general adaptive behavior of the clients. This means to have the clients return to their natural environment with new repertoires of skills, so they can obtain reinforcement in socially acceptable ways. Reinforcement history is a particularly potent predictor of future addictive behaviors (Blume, 2002). Petry and Stitzer (2012) posits that contingency management programs must ensure that rewards delivered for abstinence are of sufficient value to the individual that he/she will find abstinence more reinforcing then using drugs. Addiction blog (2011) discloses that contingency management is a treatment strategy used in inpatient and outpatient rehab setting where clinicians provide positive consequences to encourage positive behavior and used negative or punitive consequences for changing unwanted behavior, and is particularly useful in group therapy settings which meet once or several times per week.

Petry et'al (2000) studied 42 alcohol dependent veterans who were reinforced for provided alcohol free breath samples and completing goal related activities. They use contingency management and standard treatment. The result shows that 61% in the contingency management group were abstinent from alcohol, after eight weeks of treatment, compared to 39% of those in standard group. Haertzen, Kocher and Miyasota (1983) in Blume (2002), disclosed that, positive reinforcement which may be directly related in strength to the level of euphoria, certainly can lead to habitual use of substance after initial experimentation. Other studies believed that negative reinforcement is also a strong predictor of problems with substance abuse over a lifetime, (Carey and Correia 1997).

Carrol and Onken (2005) posits that contingency management have been shown to be potent intervention for several forms of addiction, asserts that, contingency management in which patients receive incentives or rewards for meeting specific behavioral goals (verified abstinence) has particularly strong, consistent and robust empirical support across a range types of drugs use. Prendergast, Podus, Finney, Greenwell and Roll (2006) examine the effectiveness of contingency techniques in treating substance used disorders (SUDs), and found that it improves the ability of clients to remain abstinent. This finding contradicts the findings of Crowley (1999) that the effects of contingency management tend to weaken after the contingencies are terminated. Olmstead, Sindelar and Petry (2007) used contingency management in the out-patients treatment of people, who are dependent on heroin, cocaine, alcohol or multiple drugs, and also, described it as the most effective and cost efficient therapy for drug abuse treatment.

But for Crowley (1999) the cost of providing rewards and administering contingencies management system has been a barrier to the adoption of these approaches by the clinical community. Considering the cost effectiveness of contingency management treatment, Petry et'al (2002) provides solution to the cost issue of using contingencies. But Caroll and Rounseville (2003) posit that even though the lower cost contingency management approaches that use reinforcers without monetary value, and that reinforced behavior other than provision of drug free urine samples are promising strategies. Still there are no cost effectiveness data that might persuade policy makers and third party payers to support the approaches in clinical practice.

While, Lamb and Petry (2004) disclose that Token economies, Voucher programs and Level system are the major approaches in contingency management. Token economy as form of contingency management is structured to reward desired

behaviors with tokens or points that may eventually be exchanged for tangible rewards. Stitzer, Bickel, Bigelow and Liesbson (1986) and Stitzer, Iguchi and Feltch (1992), pointed out that, allowing a patient the privilege of taking home methadone doses, contingent on the patient's providing drug-free urine specimens is associated with significant reduction in illicit drug use. Dolan, Black, Penk, Robinowitz and Deford (1985), and Onken, Blaine and Boren (1993) have the same opinion, maintaining that, positive incentives (reward of desired behavior) are more effective in producing improved substance use outcomes and in retaining patients in treatment.

However, NIDA (2012) points that, Voucher based reinforcement (VBR) is another approach of contingency management in which monetary value can be exchanged for food items, movie passes or other goods or services in consistently with drug-free life style. Silverman et'al (1996), asserted that Voucher- based incentives has been proved highly effective in reducing cocaine use in the context of methadone maintenance. Their study assess the effectiveness of voucher- based reinforcement therapy in producing sustain cocaine abstinence, use 52 patients consecutively admit injecting heroin and 37 patients with heavy cocaine use during baseline period using randomized controlled trial. Their findings conclude that voucher- based reinforcement produces sustained cocaine abstinence in injecting polydrugs abuser. Supporting this also, Bickel, Amass, Higgins, Badger and Esch (1997), found VBR effective in reducing smoking as well as illicit substance use among opiod addicts in a methadone maintenance program. Silverman et'al (1998), found VBR effective in improving retention and abstinence in outpatient opiods detoxification. Shoptaw et'al (2002), found it very effective in reducing frequency of marijuana use. Budney, Higgins, Randonovich, and Novy (2000) and Carrol et'al (2002) found it effective in improving medication compliance among opioids dependent individuals treated with neltraxone maintainance.

Prize incentives contingencies apply similar principles as voucher bases reinforcement, but uses chances to win cash prizes. Treatment can take at least three month, one or more times a week, (NIDA 2012). The chance for obtaining the cash defends on the submission of drug-negative urine or breath tests draw from a bowl. Client may also receive draws for attending counseling sessions and completing weekly goal-related activities. The number of draws begins at one and increases with consecutive negative drugs tests and /or counseling sessions attended, but resets to one with any drugs-positive sample or unexcused absence. Petry, Tedford, Austin, Carrol and Rounsaville (2004) evaluated the efficacy of low-cost contingency management intervention for reducing cocaine use. One hundred and twenty were randomly selected as sample to one of the three twelve week condition, and standard treatment plus contingency management with an expected maximum of $80 of reinforcement or standard treatment plus contingency management with an expected maximum of $240 of reinforcement. Drug use was measured at intake and throughout a three month treatment period. Their finding revealed that, in the $240 contingency management condition achieve more abstinence than clients in the standard condition. However, other study asserts that task accomplishment plan when used with voucher is more effective in addiction treatment (Iguchi, Belding, Andrew, Lamb and Stephen 1997).

2.5 Rational Emotive Therapy

Rational emotive therapy is a therapeutic approach that focuses on currently held attitudes, painful emotions and maladaptive behaviors that can be disruptive or self-defeating (National Survey of Substance Abuse Treatment 2010). The theory assumes that humans have both innate rational (self-helping, socially helping, and constructive) and irrational (self-defeating, socially defeating, and unhelpful) tendencies and learning. And the goal is to achieve a state where in the client is able to emote and behave in a manner that is more constructive and perceptive, and permits them a better quality life.,,

in other words, to diminished or even totally eradicate the self-destructive beliefs and cognitive processes that lead to disappointment or upsetting interaction with the world, (Ellis 2001).

The rational emotive therapy view on addiction is that people engage in such unhealthy behaviors because of their irrational beliefs. The initial reason for why the individual turns to substance abuse may be guilt, shame or depression (DARA). Albert (1982) examine the use of RET in the treatment of alcohol and drug abuse. A male person was used as a subject presented to illustrate the use of concept of "Disputing" in which the person was taught to use the scientific method to solve his problems to give up irrational beliefs. Albert (1982) revealed that, some of the major techniques used in RET to help addicts make a profound philosophical change in their disordered way of perceiving themselves, others and the world. And RET consciously attempt to be the most comprehensive and in-terms of the use of variety of techniques, a highly eclectic form of therapy.

Those irrational tendencies effect person's evaluative emotional and behavioral belief system and contributed immensely to unrealistic, arbitrary and crooked inferences and distortions thinking, and when person in an insensible and devout way overuse absolutist, dogmatic and rigid "should", "must" and "ought", they tend to disturb and upset themselves (Alao 1990). According to Ellis (2001),rational emotive therapy claims that people to a large degree consciously and unconsciously construct emotional difficulties such as self-blame, self-pity, clinical anger, hurt, guilt, shame, depression. Other behavior tendencies like procrastination, over-compulsiveness, avoidance, addiction and withdrawal by the means of their irrational and self-defeating thinking, emoting and behaving. It is then applied as an educational process in which the therapist often active-directive teaches the client how to identify irrational and self-defeating beliefs and philosophies, which in nature are rigid, extreme, unrealistic, illogical and absolutist, and then to forcefully and actively question and dispute them and replace them with more rational and self-helping ones.

Rational emotive therapy also assumes that human thinking, emotion, and action are not really separate or disparate processes. But that they all significantly overlap and are rarely experienced in a pure state. But emotions and behaviors significantly influence and affect thinking, just as thinking influences emotions and behaviors (Ellis 2001). The major goal of rational emotive therapy is to help people change self-defeating habit, thought or behavior through the teaching of A-B-Cs of RET, (A-activating agent, B-belief system and C-consequence). Ellis (1957) described the mental wellness goal of RET as "one's cognitive processes including one's view of life and one's expectations of the world, determine the ways in which one interact with life. According to Alao (1990), "the theory hold that described behavior exists as a result of irrational or illogical thinking". And posits that, behavior can be changed if those irrational and illogical thinking is effectively disputed and rationally challenged. Blumes (2002) posited that drug abuse is caused by either positive reinforcers (excitement) or negative reinforcers (avoidance of consequences), therefore, the treatment should geared towards the causative factor. Anderson and Bech (1981) and Larberg (1990) opined that since avoidance of aversive consequences is one key aspect to continue substance use, one strategy is to block avoidance of these consequences via response prevention. This means a client should be confronted to face the aversive consequences that she/he fears and typically avoids or escapes.

Higgins (1993) shows how Rational Emotive Therapy help clients to see ways in which they have learned how they often needlessly upset themselves, teach them how to un-upset themselves and empower themselves to lead a happier and fulfilling life. An ideal successful collaboration between the RET therapist and the client result in changes to the clients philosophical way of evaluating himself or herself, others and his or life, which likely yield effective result (Ellis, 2003).

In another study by Hutchinson, Petock-peckham, Cheong and Nagoshi (1998), two hundred and three (203) college alcohol-using students completed the questionnaire on their level of alcohol use, moderate to severe problems with alcohol use and measures of stress, impulsivity, compulsivity, irrational beliefs and depression. Impulsivity were found to be a significant predictor of alcohol use problems, while stress, compulsivity irrational beliefs and depression were found to only be significant

predictors of alcohol use problems, when irrational belief, compulsivity and impulsivity were combined to form "irrational coping" scale were found to completely mediate the effect of stress on alcohol use problems. Parents in most cases contribute in the emotional instability in their children. According to Sarah (2005), "in most cases, parent's cause their children emotional difficulties, which in turn leads to irrational thinking". This happens when they become upset with the behavior of their children, and ceased all the support given to the child. This affected seriously the child's emotion leading to guilt, anger, anxiety and having low frustration tolerance. And which could be dealt effectively by using disputation techniques (Sarah, 2005).

However, the rational emotive therapy has been critiques by many studies. Ellis, Abrams and Abrams (2008) criticized RET for being harsh, formulaic and failing to address deep underlying process. David et'al (2005) pointed out that about 30-40% of people are still unresponsive to RET intervention. According to Ellis (2001) "many studies claims that the discipline as a whole is too rational, and that it overlooks emotions, and others, claimed that, the theory tends to have the most success when dealing with depression or any varying neurosis".

2.6 Efficacy of Contingency and Rational Emotive Therapy in the treatment of Drug abuse.

Research has shown that when group therapy either is offered in conjunction with individualized drug counseling or is formatted to reflect the principle of cognitive-behavior therapy or contingency management, positive outcomes are achieved, (NIDA 2012).

And other studies compare the effectiveness of the two therapies to find out which is more effective. Rawson, Huber, Shoptaw, Farabee, Reiber and Ling (2002) compared Contingency management and cognitive behavior therapy in the treatment of cocaine dependence. One hundred and twenty patients were randomly assigned to 1 of 4 conditions: CM, CBT, combine CM and CBT, or treatment program only, thirty in each group, using 16 weeks requiring 3 clinical visits per week. The evaluation took place at 17^{th}, 26^{th} and 52^{nd} weeks after admission. The finding reveals that at the beginning of

the treatment CM exert more influence, while at the end cognitive behavior therapy reveals substantial effect resulting in equivalent performance of CM groups as indicated by both urinalysis and self-report cocaine use data. Epstein, Hawkins, Covi, UMbricht and Preston (2003) conducted a relevant study. One hundred and ninety three cocaine-using methadone outpatient were randomly assigned to two groups (CBT - or control condition) and (CM contingent on cocaine negative urine or non- contingent) 12 weeks group therapy. Follow up occur at 3, 6 and 12 month post treatment. The finding reveals that during treatment, initial effect of CM were dampened by CBT and post treatment shows the sign of additive benefits significant in 3 versus 12 month in contrast.

David, Szentagotai, Lupu and Cosman (2008) used 170 outpatients to investigate the relative efficacy of rational emotive therapy, contingency management and Pharmacotherapy in the treatment of non-psychotic and depression disorder. The patients were randomly assigned to three groups; first group were treated for fourteen weeks using RET, also, contingency management therapy was used to treat the second group for fourteen weeks, and the third group was treated using pharmacotherapy for the same period. The outcomes measure used were Hamilton rating scale for depression and the Beck depression inventory. Their findings show no difference among treatments conditions were observed at post-test, yet, a larger effect of RET(significant) and contingency management (non-significant) over pharmacotherapy at 6 month follow up was noted on the Hamilton rating scale for depression only. They conclude that, CM rapidly reduces cocaine use but its effect subsides after treatment. Farranado, Dursteler-Macforland, Wiesbeck and Petitjean (2013) conducted the same study. Their finding reveal that synergically effects of the combination of CM plus CBT (RET) are shown in two trials, but the 3rd trials found no additive effect. Positive, rapid and enduring effects on cocaine use were reliably seen with CM intervention, whereas, measurable effect of CBT(RET) emerge after the treatment and are not as reliable as effects of CM.

2.6.1 Causes of Drug Abuse among Students

Several factors were linked to be the causes of drug abuse which are biological and environmental. Biologically, the cause was related to the role of dopamine (DA) in the human brain. Dopamine (DA) is the neurotransmitter that has been classically associated with the reinforcing effects of drugs of abuse which have key role in triggering the neurobiological changes associated with addiction. And several studies have shown that reinforcing effects of drugs of abuse in human beings are contingent not just on dopamine per se in the striatun (including the nucleus accumbens) but on the rate of dopamine increases (Volkow, Fowler, Wang, Swanson & Telang, 2007). This means the faster the increases the more intense the reinforcing effects.

Other studies, study the relationship between the effects of drugs on dopamine and their reinforcing properties in the human brain (assessed by self-report of "high" and "euphoria") for the stimulant drugs methylphenidate and amphetamine. Methylphenidate like cocaine was found to increase dopamine by blocking dopamine transporters. Whereas, amphetamine, like methamphetamine increases dopamine, by releasing it from the terminal via dopamine transporters (Volkow et'al, 2007).

Other causes are environmental which include, Poor academic records, peer influence, a history of instability and family/social problems. Idowu (1987) discloses that some youth tend to see the smoker as one who is bold, and many youngsters have been known to smoke or use drugs at the instance of peers, elders, siblings or significant others. Odejide (1997) attributed the cause to the parental deprivation due to death, divorce, separation or discord.

Some studies relate the cause to parental negligence, prevalence of drugs in the community, pathological family background, ambitious and alienation, urbanization and unemployment and fear for academic failure (Cowley & Anumanye, 1980; Modungwo, 1985; & Garba 2003). For Taylor (2003) parents and peers influence adolescents drinking by influencing attitude about alcohol and by acting as role models. Omega (2005) asserted that some people involve in the use of illicit drugs because they want to reduce regular pressures around them. Abudu (2008) identifies the causes to include defective personality, enjoyment of induced euphoria and excitement, dissatisfaction

and disillusionment. Chikere and Mayowa (2011) reported that, student's uses alcohol for so many reasons; Out of their samples, 24. 4% reported to use alcohol because it makes them feel high, 6.6% claims that it makes them belong to the group of "most happening guys" on campus, 52.6% said it makes them feel relaxed, helps and cools their stress, and 16.4% were influenced by their best friends. Dankani (2012) outline peer influence, depression anxiety, boredom and experimentation /rebellion as the causes of drug abuse.

Another contributing factor may be linked with discipline and over crowed in schools. The scrapping of Grade 11 teacher training which provides students with background discipline in teaching profession, and the University policy of admission based on post university matriculation that forced so many candidates to join Colleges of Education led to over population and control become a problem, hence lead to social problems including drug abuse.

Haladu (2003) identified the following as the main causes of drug abuse:

- Experimental curiosity, which means the curiosity to experiment the unknown facts about drug.
- Peer group influence, which comes from pressure from friends.
- Lack of parental supervision which means the negligence from the side of the parent to properly supervise and interact with their children.
- Personality problem due to socio-economic conditions eg problems like broken home, poverty and unemployment.
- Availability of drugs
- The need to prevent the withdrawal symptoms which means the inability of a person to tolerate the psychological imbalance originated as a result of abstaining from drugs eg pain, anxiety, excessive sweating and shaking.

2.6.2 Implications of Drug Abuse

Drug abuse is seen to be highly common among youth and including mostly students; (Lambo, 1984; NHSD, 2005; Oshikoye 2006). However, Gfroerer(2003)

predict that, by 2020, the substantial number of older adults with substance problems will emerge. Other studies confirm this menace among students at secondary, tertiary and university level (Orubu, 1983; Idowu, 1987; partner, 1998; Ekpenyong & Dankani, 2012; Mahmoud et' al, 2013 & Mukhtar, 2014).

The implication of abusing drugs on individual is its cognitive effect which includes lack of concentration, failure in academic work and memory loss (Loaw, 2001; Esenck, 2002 & Ekpenyong, 2012). It also distorts thinking processes (Miller, 2002 & Diclemente, 2006) and forming a student sub –culture in Nigeria (NAFDAC, 2008).Drug abuse can also lead to the current deteriorating level of academic performance and discipline in schools, (leads to absenteeism, or loss of interest in the school work) because it affects brain function (Idowu, 1987 & Ekpenyong, 2012) , effect self- concept (Merki, 1993),interfere with individual awareness (Loaw, 2001), and create social, emotional, physical problems and psychological problems such as, new feeling of guilt , despair and helplessness. Fayombo and Aremu (2000) found that, drug abuse effect the educational performance of adolescents in Ibadan. According to Stanley and Odejide (2002), "alcohol abuse disrupts social, occupational, interpersonal and marital life and tends to induce criminal behavior". Sambo (2008) discloses that chronic use of substances can cause serious and irreversible damage to the physical and psychological development of the person. Excessive use of alcohol or even minimal use of alcohol in combination with over-the-counter medications can seriously affect the rates and increased the physical health of the older adults, leading to the high rate of hospitalization, and increase the health – care cost. Feidler et'al (2002) studied substance abuse among aging adults and found that; substance abuse has consequences on both the physical and mental health of aging adults. Brand, Bruna, Sproule, Beth, Marshman, and Joan (2003), discloses the effect of marijuana on sexual functioning and reproduction. They revealed that, marijuana use reduces the level of testosterone and sperm count in the semen of men, and results in a reduction in the

level of luteinizing hormone (LH) which is necessary for the fertilized eggs to be planted in the uterus. Williams, McGlothin and Louis West (1968), as cited in Levinthal (2008),proposed that chronic use of marijuana smoking among young people was responsible for generalized sense of apathy in their lives and an indifference to any long-term plan or conventional goals. UNODC (2014) report that, drug problem is mainly responsible for the skyrocketing level of violence in many countries, with the highest homicide rate in the world.

2.6.3 Treatment of Drug Abuse

Drug abuse is characterized by compulsive drug craving, seeking and use that persist even in the face of severe adverse consequences; this makes the treatment very complex, but yet treatable. As a chronic recurring illness, addiction may require repeated treatment to increase the intervals between relapse and diminish their intensity, until abstinence is achieved. According to Substance Abuse and Mental Health Services Administration (2011), "abstinence means voluntarily going without". New Hope Center (2014) refers abstinence as refraining or been free from the unwanted behavior. And in recovery, abstinence means no longer turning to any mood altering substance to help change the way person feel (Kendel, 2015).The treatment can help in changing the destructive behaviors, avoid relapse, and successfully remove abuser from a life of substance abuse and addiction (Health Science Centre Utah, 2014). For the treatment to be successful, patient should not only stop using drugs but also participate actively in treatment by attending the sessions and working towards positive lifestyle changes, such as getting a job, moving to a safe environment, and socializing with the non-drugs using people (Petry and Stitzer, 2012).

The goal of the treatment is to enable an individual to achieve lasting abstinence, and the immediate goals are to reduce drug abuse, improve the individual's ability to function, and minimize the medical and social implications. Although, McGuire (1996), maintained that there is no single cognitive-behavioral method, still, the nature of the

problem determines which among the methods could be relevant. The goal of substance abuse treatment is patient change, it geared towards decreasing drug seeking and drug tacking behavior, thereby increased time spent in activities with non-drugs using social support, (Petry and Stitzer, 2012). Other studies maintained that upon all the treatment, particularly on drugs, cognitive or behavior therapy is the most effective, Pearson, Lipton, Cleland and Yee (2002). Volkow et'al (2007) supports this by suggesting the use of multicomponent strategies for treating drug abuse that include; strategies to decrease the reward value of the drug, and increase the value of non- drug reinforcer, weaken conditional drug behaviors, weaken the motivational drive to take the drug and strengthened frontal inhibitory and executive control. NIDA(2012) also posits that, combination of behavioral therapies and medication are generally appear to be more effective than either approach alone, because they work on different aspects of addiction.

One of the prolonging philosophical debates in addiction counseling is between abstinence and harm reduction. According to New Hope Center (2014) abstinence focuses addiction counselling believe that recovery only exists if the addictive substance is completely removed from the life of the individual it affects. The issue on this is seen as either the person use drugs and deals with the consequences or abstains and lives a life recovery. On the other hand, harm reduction focuses addiction counseling generally follow the belief that not everyone is in a place to completely abstain, and therefore it is best to take a steps to reduce the risks to the person and others when individual chooses to per take in the addictive substance. However, Substance Abuse and Mental Health Service (2011) maintain that abstinence remains the safest approach for those with substance disorders.

2.7 Counseling Strategy

The counseling strategy used in this study is group counseling. Whiston (2001) conducted a meta-analytical study on the school counseling outcome; the findings reveal that school counseling changes students positively. Group counseling approach was also found very effective strategy for improving test performance of African-American students at rural high schools in Georgia, (Bruce 2009). Marques et"al (2001) compare individual and group cognitive behavioral therapy for alcohol and /or drug dependent patients, used a randomized clinical trial design in a public outpatient drug independent service. The subject were randomly assigned to individual (n=77), and group (n=78) treatment formats, using two phases (acquisition uses 8 sessions) and (maintenance uses 9 sessions), over eight month. The findings show no difference between individual and group in terms of consumption, dependence and associated problems (both at the baseline and follow up), concluded that, the two modalities presented similar outcomes, suggested that group format could present a better cost benefit ratio. Sobell et"al (2009) conducted a similar study using a randomized clinical trials. Used cognitive behavior motivational intervention conducted in individual and group with 212 alcohol abusers and 52 drug abusers. The treatment outcomes demonstrated significant and large reduction in client's alcohol and drug use during the treatment, and at 12 month follow up with no significant difference between the group and individual conditions. Other studies also, reported the effectiveness of group counseling in the improvement of academic and social functioning of students at middle schools, (Rose and Steen 2014). The strategy of bringing people of various differences, but with a common problem, to receive instructions and share views together could have a great impact in yielding a positive outcome. And the need for proper implementation of counseling in schools was advocated by many researchers (Mogbo, 2011 & Modo, 2013).

2.8 Gap identified

The literatures discuss in this chapter have shown that a lot has been done in the area of drug abuse and its treatments. Even though, many literatures investigate the prevalence of drug abuse among students, but their studies focuses on secondary and university students in general, (Josephine, 2014 Chikere and Mayowa 2011, Volkow, 2007; Fatoye and Marikinyo,2002; Ade-Eke, 1997; Adelekan et'al 1994; Idowu 1987,Egba 1985). None among the literatures reviewed, focuses specifically on finding out the prevalence of drug abuse among teacher trainees. Also, studies on the effectiveness of contingency management, and rational emotive therapy in treating drug abuse were also presented by many literatures (Bickel et'al 1997; Hutchson et'al; Silverman et'al 1998, Higgins et'al; Shoptaw et'al ;,2002; Carrol and Onken; Sarah; 2005, Pendergast et'al 2006,). However, all the studies conducted using contingency management in treating drug abuse uses the urine sample of their subjects, in other words is clinical in nature and they used abstinence to mean presenting drug free urine sample; none uses or seeks the responses from their clients, or observe the changes in the behavior as a result of the treatment. And, many studies were reported presenting findings on the treatment of drug abuse, the treatment use was contingency management as behavioral approach and cognitive behavior therapy, none of them focus on rational emotive therapy as a specific approach under cognitive behavior therapy. To bridge this gap, this research work investigates the prevalence of drug abuse and the effectiveness of contingency management and rational emotive therapy in the treatment of drug abuse among the students of teacher training institutions of Kano state, Nigeria. The response of the clients collected through the questionnaires, interview and observation of client's behavior during the treatment was used in determining the effectiveness of the therapies, in other words, it was determine outside the clinical setting.

CHAPTER THREE
METHODOLOGY

3.0 Introduction

This chapter covers the entire procedures followed by the researcher in the process of research. It involves the data collection method, research design, sampling technique and procedure, population of the research, research paradigm, data collection instrument and tools for data analysis.

3.1 Research Design

The designs for this study are descriptive and pretest-posttest designs, post-test only. Pretest-posttest was used because one group of subjects is observed, subjected to treatment, and then observed for the second time. In other word, pretest-posttest design was used because the information was sourced from the same subject at two different times.

According to Conrad (2013) "pretest-posttest design is frequently used to determine the effectiveness of a particular program when no control or comparative groups are available, and then pretest-posttest differences are then attributed to the treatment". Descriptive design was used because the information required on the prevalence of drug abuse is obtained through samples and mean was used to determine the level of abuse. And post-test only because data for the experiment was collected after the treatment. Convergent parallel mixed method design was used because the data for both quantitative and qualitative was sourced separately and converged in order to provide a comprehensive analysis of the research problem (Creswell, 2012).

Also, the type of mixed method used is concurrent sequential, because it is a form in which the researcher converge or merges quantitative and qualitative data in order to provide a comprehensive analysis of the research problem, and the data was obtained at the same time and then integrates the information in the interpretation of the overall results, contradictions or incongruent findings are explained or further probed.

The approach of the research is quasi - experimental in nature, because it lacks rigor in the control of the experimental setting (Amin, 2005). Campbell and Stanley (1963) refer it as "who and to whom of measurement" but lack control over the "when and to whom" of exposure or the randomization of exposure which are essential, if true experiment is to take place. And the mixed method approach will be adopted. The treatment lasted for three month, and the session has taken place twice in a month making a total of six sessions, and research assistants were properly trained to help in the collection of data.

Study Area: Map of Nigeria showing Kano State

Kano State is located in North-Western Nigeria. The State was created on May 27th, 1967. It borders Katsina State to the north-west, Jigawa State to the north-east, Bauchi State to the south-east and Kaduna State to the south-west, its slogan is "Centre of Commerce". Kano population reached about 9, 383, 682 (Census, 2006), 11,058,300

as at 2011 estimate, (Nigeria: Federal States and Major Cities statistics, 2014), which makes it the most populous state in Nigeria. The state has the total area of 20,131km2 (7,773sq mi), which comprise of forty four (44) local governments. It is four hundred and eighty one (481) meters above sea level, and it lies to the north of Jos, Plateau state in the Savanna region that stretches across the south of the state. It is a Hausa and Fulani dominated state which is strategically located as well as a commercial hub in the sub-Saharan Africa. The State since 2003 is governed under the sharia law, because the dominant religion is Islam with about 95%.

3.2 Population of the Study

The target population for this study includes all students of higher education schools in Kano State, Nigeria. The schools are; Bayero University, Kano State University of Science and Technology Wudil, North-West University, Sa'adatu Rimi College of Education Kumbotso, Federal College of Education Kano, Federal College of Education (Tech) Bichi, School of Technology, College of Arts, Science and Remedial Studies (CAS) Airport Road, School of Health Technology, School of Nursing and midwifery, College of Arts, Science and Remedial Studies, Tudun Wada, Abdu Bako School of Agriculture Danbatta, and Federal College of Agriculture Hotoro and others. And the Accessible populations for this study are those students studying teacher education courses at tertiary institutions in Kano State, Nigeria.

Table 3. 1 Tertiary Institutions and Programs in Kano State

S/N	Tertiary Institutions in Kano State	Programmes
1	Bayero University	PhD, Masters, Bachelor, Diploma and certificates
2	Kano State University of Tech (Wudil)	Bachelor
3	North-West University, Kano	Bachelor
4	Federal College of Education, Kano	Bachelor (Edu), National Certificate in Education (NCE)
5	Federal College of Education (Tech) Bichi, Kano	Bachelor, NCE
7	Sa'adatu Rimi College of Education Kano	Bachelor, NCE
8	School of Management Studies, Kano	Diploma, Higher National Diploma (HND)
9	School of Technology, Kano	Diploma, Higher National Diploma (HND), NCE (Tech)
10	School of Rural and Administrative Studies, Rano, Kano	Diploma, Higher National Diploma (HND)
11	Abdu Bako School of Agriculture	Diploma, Higher National Diploma (HND)
12	Federal College of Agriculture, Hotoro	Diploma, Higher National Diploma (HND)
13	School of Health Technology	Diploma, Higher National Diploma (HND
14	School of Nursing, Kano	Diploma, Higher National Diploma (HND

Others are; School of Midwifery, Institute of Informative (ICT), Kura, College of Hygiene and Environmental Studies, College of Sports and Recreation, College of Arts and Remedial Studies (Kano City and Tudun Wada), Custom Training College, Police Academy Wudil, School of physiotherapy Kano.

3.3 Sample Size

Sloven's formula was used to obtain the sample size from the population. Three hundred and ninety four (394) were obtained from the population of twenty four thousand five hundred and fifteen (24515).

Slovene's formula --------- S= N/1+N (p) 2

3.4 Sampling Technique

Sample is very important in the research because it make generalization possible. According to Amin (2005), A sample is a collection of some (a subset) elements of a population. Sampling is therefore a process of selecting elements from a population in such a way that the sample elements selected represent the population. In view of that, and in an attempt to have an appropriate representation, both probability and non-probability techniques was used. Cluster sampling was used in the selection of schools, because population is large and administration could be difficult and the institutions sessions were not operating at the same period. Because, the Universities have similar characteristics among themselves, so also the tertiary institutions, the researcher decides to cluster the universities and institutions. Bayero University Kano and Sa'adatu Rimi College of Education represented the cluster of the Universities and tertiary institutions respectively, because they have the characteristics of all the schools they represent.

Kakooza (2002) pointed out that any place (geographical location) within which we find an intact group or similar characteristics is a cluster. Other samples use was purposive and proportional sampling respectively. Purposive sampling is choosing because the researcher has the requirement which the subject should meet before filling the questionnaire. And that

is, to be studying a teacher training course and those students screen as drug users were used in the experiment. And proportional sampling was used in the selection of the subjects from the two clusters. Sa'adatu Rimi College of Education having the population of nineteen thousand five hundred and fifteen (19515) has three hundred and nine as their sample, while Bayero University has five thousand (5000), where eighty five students were used.
And for the experimental group the sample size were 30 students (among those screened teacher trainees who scored 6 and above) from the two clusters as authorized by Kothari and Palls (2003). The subjects were grouped into two, making 15 in each group. The groups were formed using randomized matching (the two instruments were administered to them at the interval of one hour, and based on the scores obtained, they were grouped into two (CM and RET) accordingly. The first group was treated using contingency management (1-CM), while the other group was treated using rational emotive therapy (1-RET).

3.5 Philosophical Underpinning

The word paradigm is a Greek word "Paradeknynai" which means exhibiting side by side or table of changes inform or different inform. It also refers as a way of organizing information so that fundamental, abstract relationship can be clearly understood. And it is also, views as certain way of thinking about something that is held by many people and is generally acceptable.

The main research paradigms are positivism (Naturalistic) and post- positivism (inquiry). Beck (1979) discloses that, positivist maintained that true knowledge is based on experience of senses and can be obtained by observation and experiment, hence adopting scientific method as a means of knowledge generation. Whereas, the non-positivist (post positivism) emphasized that, social reality is viewed and interpreted by the individual himself according to the ideological position he possess. Cohen, Manion and Morrison (2000), discloses non- positivist believed that reality is multi- layered and complex. Therefore, verification of a phenomenon is adopted when the level of understanding of a phenomenon is such that, the concern is to probe into various unexpected dimension of the phenomenon,

rather than establishing relationship among the components. Also, according to Creswell (2012), "Post positivist hold a deterministic philosophy in which causes probably determines effects or outcomes". Thus the problems study post positivist, reflects the needs to identify and assess the causes that influence outcomes, such as found in experiment. The knowledge that develops through a post positivist is based on careful observation and measurement of the objective reality that exist "out there" in the world, (Creswell 2013).

Another qualitative approach is a social constructivists, it is an idea of Manheim, Berger and Luekmann's (1967), the social construction of reality, and Lincoln and Guba's (1985), naturalistic inquiry. And more recently, Crotty (1998), Lincoln, Guba and Neuman (2000), and Schwandt (2007) summarize this position. Social constructivists hold assumption that, individuals seek understanding of the world in which they live and work, they develop subjective meanings of their experience, and these meanings are varied in multiple, leading the researcher to look for the complexity of views rather than narrowing meanings into a few categories of ideas (Creswel, 2012). They further, opined that the goal of the research is to rely as much as possible on the participant's view of the situation being studied. They also focused on the specific contexts on which people live and work in order to understand the historical and cultural settings of the participants.

Another opinion about research paradigm comes from the pragmatists. The word pragmatism according to Creswell (2012) derives from the work of pierce, James, Mead and Dowey (Cherryholmes, 1992). Recent scholars with this view are Rorty, Patton and Murphy (1990), and Cherryholmes (1992). Many views have emerged, but pragmatism as a world view arises out of actions, situations and consequences rather than antecedents conditions. In this approach, instead of the researcher to focus on methods, researchers emphasizes the research problem and use all approaches available to understand the problem, as a philosophical underpinning of mixed methods studies. Cherryholmes (1992), Morgan (2007) and Creswell (2013) posit that pragmatism provides a philosophical basis for research,

because it does not commit to any one system of philosophy. This applies to mixed methods research in that inquirers draw liberally from both quantitative and qualitative assumptions. Other studies held that mixed method is the answer to most research complications. The assumption to this method is, all methods have limitations, and biases inherent in any single method could neutralize or cancel the biases of other methods. Therefore, the best is to triangulate. Triangulation is a means of seeking convergence across quantitative and qualitative methods (Jick, 1979). Mixed method was originated in 1959, when Campbel and Fisk used multi-methods to study the validity of psychological traits, which encourages other researchers to employ their multi-method matrix to examine multiple approaches to data collection (Creswell, 2012). This prompts many writers to start using the methods, and soon approaches associated with field methods, such as observation and interview(qualitative data) were combine with traditional surveys quantitative data (Sieber, 1973). By the early 1990s, the idea of mixing moved from seeking convergence to actually integrating or connecting the quantitative and qualitative data.

The dimensions of the all approaches indicate that knowledge could be searched objectively or subjectively. Roszak (1970), Horkheimer (1972), Herbamas (1974) criticized the use of positivist approach because of its mathematication of nature and non-consideration of the values, informed opinion, moral judgment and beliefs. However, many researchers held that using only one paradigm may not provide sufficient knowledge about the phenomenon under investigation (Burrell & Morgan 1979). Patton (1990),Tashakkori and Teddlie (1998) and Morgan (2007) conveys its importance for focusing on the research problem in social science research and then using pluralistic approaches to derive knowledge about the problem.

In view of that, mixed methods were employed in this study. To stick to that, both Quantitative and Qualitative (mixed) approaches were used in the process of gathering the data. Mixed method involves the collection and "mixing" or integration of both quantitative and qualitative data in the study (Creswell 2013), and type of mixed method employed is

concurrent sequential mixed method, because the data was sourced separately and merged in the analysis phase.

3.6 Data collection method

The data obtained in this study is primary (collected directly from the subjects of the study and the key informants) in nature. It was obtained through questionnaires (for drug screening test), which was administered by the researcher through the research assistants. And in order to justify the result, personal interview (for the Deans of student's affairs, and Director Counseling, and Deans school of Education as key informants and teacher trainees who were screened) and observation of teacher trainees' behavior were conducted.

As for any other study, the researcher seeks permission from the institutions of the study through the introductory (transmittal) letter collected from the directory of higher degrees and research (KIU), the letter was submitted to the Deans' office of the faculty of Education and Sa'adatu Rimi College of Education, Kumbotso who had approved through stamping and signing on the letter. And to ensure that required figure was returned, 400 questionnaires were distributed.

The researcher employed three research assistants who were adequately trained to help in the administration of the instrument. The respondents were adequately educated about the need for the response and how to fill the questionnaire. The respondents give their phone numbers voluntarily for easy access in case they may fall into the experimental group, and each questionnaire was coded serially for easy identification. The administration took up to a week and pick off/left over method was used. Efforts were made to ensure the return of all the questionnaires, but still some few were not returned. Those who took part in the treatment were access through their phone numbers. To enhance the rate of return, total design method was employed. For the interview, five respondents were selected each from the teachers (those with at least ten years of teaching experience at the institutions) and the teacher trainees, making ten. The interview was conducted at the convenient time

scheduled by the respondents, and it took place within forty minutes to one hour. The observation took place within three month period of the experiment. It was recorded on daily basis during the counseling session, and cumulative record was obtained at the last day.

Table 3. 2 Summary of Total Design Method (TDM)

TDM Step	Application in research study
Maximize reward	Respondents were told that they are selected to take part in a very important study across Kano, Nigeria, and their response is important. Questionnaire was made interesting.
Minimize costs	Respondents were told of average questionnaire completion time.
Establishing trust	Confidentiality was promised and transmittal letter was shown to them to convince them that information required will be used for research only
Questionnaires format	At the top of the questionnaires is the introduction, followed by the profile and then questions.
Questionnaire distribution	Four hundred (DAST-10) Questionnaires were distributed at the study areas with the help of research assistants
Pre testing/post testing	COMTAQ and RETAQ Questionnaires were administered and returned out rightly.
Pre notice letter	Pre notice letter noting that a questionnaire for an important survey will be arriving and their input was essential to the success of the study.
Covering letter	A letter introducing the study, confidentiality and gratitude was attached to the questionnaire.
Questionnaire park	It included transmittal letter, informed consent, questionnaire and A4 addressed envelope.
Reminder	Phone call/emails were sent after two weeks.
Appreciation	Appreciation message sent to both participants
Questionnaire outcomes	Respondents were promised to receive the outcomes of the study.

Source: Developed for this research with parts adopted from Dillman (2007)

3.7 Instruments for Data Collection

The study uses mixed method approach (quantitative and qualitative). Data were gathered from the two approaches. Three questionnaires were used in data gathering. And the treatment was given to the two groups (through group counseling) over a period of three

month. The two study groups were carefully observed after the treatment. Later the key Informants (KI) Interview was used to complement the finding.

3.7.1 Drug Abuse Screening Test (DAST-10)

Drug Abuse screening test is a standardized questionnaire design by Skinner (1982), reviewed by Yudko, Lozhkina, and Fouts (2007) and reviewed by National Institute on Drug Abuse (NIDA) Clinical Trial Network (2014). It is one-dimensional and was found to be a psychometrically sound drug abuse screening measure with high convergent validity of 0.76 (Evren et'al, 2013). It is a brief screening instrument that can be used in clinical and non- clinical settings (Skinner, 1982). It was validated in USA, Spain, India and Turkey, and was found successfully used in web-based surveys in undergraduate students (McCabe, Boyd, Cranford, Morales, and Slayden, 2006; Kolayanide, McCabe, Cranford & Teter, 2007). Recently, Voluse et'al (2012) evaluates the psychometric properties of Drug Use Disorder Identification Test (DUDIT) and found high correlation with DAST-10. It was adapted in determining the prevalence of Drug abuse among students; those who score high were selected to be the subject for the treatment. The instrument has 10 items and the response scored is '1' for 'Yes' and '0' for 'No'.It has adequate concurrent convergent validity, and 85% accuracy. It has 0.92 internal consistencies.

3.7.1.1 Scoring

One point is scored for each question answered 'YES' except for question three for which 'NO' is scored '1' point.

Table 3. 3 Interpretation of DAST- 10

Score	Degree of problems related to Drug Abuse	Suggestion Action
0	No problem	None at this time
1-2	Low level	Monitor, re-assess at a later date
3-5	Moderate level	Further investigation
6-8	Substantial level	Intensive assessment
9-10	Severe level	Intensive assessment

Drug Abuse screening test (DAST-10) copyright 1982 by the addiction research foundation

3.7.2 Contingency Management Treatment Assessment Questionnaire (COMTAQ).

This is a researcher made questionnaire designed to assess the effectiveness of the treatment using contingencies. It has 10 items design to measure the constructs of reinforcement. Item 1, 4,5,6,9 and 10 measure positive reinforcement, while item 2, 3, 7 and 8 are the constructs of negative reinforcement. 5 Likert scale was used in the scoring. Strongly agree =5, Agree =4, Un-decisive = 3, Disagree = 2 and strongly disagree=1.

The interpretation was based on the five Likert intervals as follows:

4.21-5.00----------Very High

3.41-4.20---------- High

2.61-3.40----------Moderate

1.81-2.60----------Low

1.00-1.80----------Very Low

3.7.3 Rational Emotive Therapy Assessment Questionnaire (RETAQ).

This is also a researcher made questionnaire designed to assess the effectiveness of the treatment using rational emotive therapy. It has 10 items aimed at measuring the construct of rational emotive therapy. Item 1,2,8,9 and 10 measure confrontation, while item 3,4,5,6 and 7 are the constructs of challenge. Five Likert scale will be used, and the range and the interpretations is the same with that of COMTAQ.

The interpretation is based on the five Likert intervals as follows:

4.21-5.00----------Very High

3.41-4.20---------- High

2.61-3.40----------Moderate

1.81-2.60----------Low

1.00-1.80----------Very Low

3.8 Administration of the Instruments

The instrument used in this study was administered in stages. Drug abuse screening test was administered at the first. Three hundred and ninety four questionnaires were dispatched within the two institutions proportionately. Sa'adatu Rimi college of Education with the population of nineteen thousand five hundred and fifteen (19515) has the sample of three hundred and fourteen (19515/24515 multiplied by 394)= 314, while Bayero University with total of five thousand students of education has eighty, (5000/24515 multiplied by 394) = 80.

The questionnaires was distributed and returned within seven days, this happen with the help of research assistance who were adequately guided. The total questionnaires returned was 372 and remaining were not returned despite the reminders for a long time, and the used ones which are appropriately completed are 356 making 90.3 percent.

Contingency management and rational emotive assessment questionnaires were administered before and after the treatment. To determine the appropriateness of the sample used in a particular treatment, the two questionnaires were administered to both

samples (30 students obtained from the scores of six and above) at different time. And base on the responses, the researcher group them accordingly.

The interview was also conducted to five teachers and five students respectively (at their convenient time). Both respondents were adequately informed. Focus group Discussion was also organized with both students and lecturers at different time, one to two hours was utilized for each session.

3.9 Pilot study

Before the actual survey, pilot study was conducted with a sample of 40 respondents similar to the final population in the sample to refine the questionnaire, identify any loopholes in the questionnaire and anticipate any logistical problems during the actual survey. The objectives of the pilot survey were as follows.

The pilot study was conducted to gather feedback about the language used in the questionnaire. Since this study was conducted among students with differing educational levels, it is necessary to ensure that the language used in this survey is understandable by all respondents, because high level of complexity can reduce the response rate as well as induce bias towards those with higher levels of education. Respondents were asked to point out any part of the questionnaire they found to be unclear or complicated.

3.10 Validity of the Instruments

According to Siegle (2004)"validity is the ability to produce findings that are in agreement with theoretical or conceptual values". The Questionnaires used for testing objective one is standardized, although it has high convergent validity (0.76) however, because of the differences in the area where it was established and Nigeria where it will be used, it was thoroughly studied by experts and confirmed worthy for use in Nigeria. And for the researcher made, the researcher ensures that the instrument have strongly related to the traits under investigation, and also have undergoes a scrutiny by the experts in the area of research and found worthy for use, in other words, they have face and content validity. Content validity is the degree to which the test actually measures or is specifically related to the traits for which it was designed (Amin, 2005).

3.10.1 Content Validity Index (CVI)

Content validity index is a process of justifying the face validity of the instrument through judgment by the experts in the area. The three questionnaires were assessed critically by five experts as presented below:

Table 3. 4 Validation of the Questionnaires and Interview (CVI)

Variables	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Average
DAST 10	0.7	0.9	0.9	0.8	0.9	0.84
COMTAQ	0.8	0.9	0.8	0.7	0.8	0.80
RETAQ	0.8	0.7	0.9	0.9	0.9	0.84
DAISOTTI	0.9	0.7	0.9	0.7	0.8	0.80
DAITOTTI	0.9	0.9	0.7	0.8	0.8	0.82

Source: Primary source 2016.

Table 3:4 indicates the validation of the three questionnaires by five experts during the pilot study. The average for each questionnaire indicates an acceptance level above 0.70 (Amin, 2005).

Factor analysis was also performed to ascertain the strength of the construct. Field (2009) interpretation of KMO values suggest that value of 0.9 and above is superb, 0.8-0.899 is great, 0.7-0.799 is good, 0.6-0.699 is mediocre, and 0.5-0.599 is acceptable and below 0.5 is unacceptable.

Table 3. 5 Validity coefficient obtained using KMO for all constructs

Constructs	KMO Value	Interpretation
DAST 10	0.801	**Great**
Positive reinforcement	0.840	Great
Negative reinforcement	0.796	Good
COMTAQ(Average)	0.818	**Great**
Confrontation	0.789	Good
Challenge	0.842	Great
RETAQ (Average)	0.815	**Great**

Source: primary source 2016

Table 3:5 above indicates DAST 10 having KMO value of 0.801 (Great), COMTAQ having KMO value of 0.818 (Great) and RETAQ having KMO value of 0.815 (Great). Based on the interpretation model of Field (2009) the value obtains from Keiser Meiyer Olkin (KMO) are acceptable.

3.10.2 Normality test

Distribution of the scores was obtained through normality testing, the scores shows whether the distribution is normal or otherwise. Kurtosis is the peakedness or flatness of the distribution of data, whereas, skewness describes the symmetrical balance of scores on either side of the distribution. Normality of the variables of the study was assessed using skewness and kurtosis. According to Pallant (2001), "In testing normality of a distribution the closer the skewness and kurtosis values to 0, the more normal the distribution". Also, Ghasemi (2012) indicates that an absolute value of the score greater than 1.96 or lesser than is significant at $P< 0.05$, while greater than 2.58 or less than -2.58 is significant at $P<0.01$, and greater than 3.29 or less than -3.29 is significant at $P<0.001$. The following table indicates the result of normality test for the study variable;

Table 3. 6 Normality Test

Constructs	Mean	Skewness	Kurtosis
Positive reinforcement	3.7389	.299	-262
Negative reinforcement	3.4167	-273	-.915
Challenge	3.0733	.183	.270
Confrontation	3.00	-.604	-.540
DAST 10	1.6904	-.694	-.290

Source: Primary Data 2016

Table 3:6 shows the normality test, the skewness and kurtosis values indicate high degree of normality, because all the values obtained from the skewness and kurtosis are close to zero.

3.11 Reliability of the Instrument (Quantitative)

Reliability is the tendency of an instrument to be consistent in its measurement. Although DAST-10 has the reliability tested in USA (0.86), Spain (0.94), India (0.76) and Turkey (0.85), (Voluse et'al, 2012 and Evren et'al, 2013). But still, in order to ensure the applicability in Nigeria, the reliability of the instrument was tested for this study. For this instrument, pilot study was conducted twice at the interval of one week (test-retest method). Cronbach Alpha was used to test the consistency of the items for the two different administrations. Classification by George and Mallery (2003), on quality of Cronbach's Alpha value indicates that value of 0.9 to 1 is excellent, between 0.8 and 0.899 is good, 0.7 to 0.799 is acceptable, 0.6 t0 0.699 is questionable and 0.5 to 0.599 is poor, and below 0.5 as unacceptable. The average result from the two tests is 0.82 for DAST-10, 0.79 for COMTAQ and 0.72 for RETAQ which shows high consistency.

3.12. Data Analysis Procedure (Quantitative)

Descriptive statistics was used to determine the prevalence of drug abuse among the students, among the gender and among the Age categories (16-25 years, 26-35 years and 36 years and above). Paired sample t-test from the two separate treatments (pre and post-test) was used to determine the effect of the contingency management therapy and rational emotive therapy independently. Paired sampled t-test was used because the instrument was administered to the subject before treatment was given, and after the treatment, the same instrument was administered to the same subject, and the two results were compared. According to Amin (2004), "paired sample t-test is used to determine the treatment effect administered to the same subjects (source) at a different time. And the overall means of the post-test for the two groups (Contingency and Rational Emotive) was obtained which determine the effectiveness of the therapies".

3.13 Data Preparation

Data preparation form one of the salient activities before data entry and analysis begins. It focuses on defining variables, assigning appropriate numeric codes to alphanumeric data and dealing with missing data. Preparing the data involve several processes from data source to data filling (Coakes & Steed, 2008). In this part, the

steps taken during data preparation with coding and editing the data, data screening, detecting missing values and the remedies used to treat missing values were clarified and certified.

3.14 Data Coding

The data obtained from the both drug abuse screening test (DAST-10), contingency management treatment assessment questionnaire (COMTAQ) and rational emotive treatment assessment questionnaire (RETAQ) were coded before they were keyed into the computer. Coding means translating lengthy question responses and information into brief and specific categories for easy analysis. Following the usual protocol in this process, this study use character symbols to code the data and clearly identify the information represented in the data according to the thematic category it belong to, for gender (1=male and 2=female), for age (1=16-25 years, 2=26-35 years and 3=36 years and above), for institution (1= SRCOE and 2=BUK), for DAST-10 (D1-D10),for COMTAQ (positive reinforcement=PR1-PR5, and negative reinforcement= NR1-NR5) for RET (confrontation=C1-C5 and Challenge= Ch1-Ch5).

3.15 Data Editing

After collecting the data, researcher organizes it properly on the paper and cross checks it, to make sure that it is intact before the entry into the SPSS. And after the entry researcher ensures no missing value through proper check of all the data entered.

3.16 Interview Schedule

In addition to the questionnaire, interview was also employed to collect data from the selected key informants. The interview schedule consisting of five items were used to collect additional data. The interview with the key informants took average of 30 to 40 minutes. Interview is the oral questionnaire where the investigator gathers data through direct verbal questions with participants, for example, teachers, pupils and parents (Amin, 2005). It is particularly useful for getting the story behind the participant's experience. The interview attempts to use in this research is unstandardized and unstructured, because the respondents will be allowed to formulate responses the way they find it most fitting (Amin, 2005). Two different interviews were used in this research, one for teachers and the other for students. They are:

3.16.1 Drug Abuse Interview for Teachers of Teacher Training Institutions (DAITOTTI)

This interview is designed to source data on the prevalence of drug abuse and effectiveness of contingency management and rational emotive therapies in the treatment of drug abuse among students, from the teachers in teacher training institutions under investigation. It has five set of questions which was designed to gather adequate data on the variables of the research.

3.16.2 Drug Abuse Interview for Students of Teacher Training Institutions (DAISOTTI)

This interview is designed to gather data on the prevalence of drug abuse and effectiveness of contingency management and rational emotive therapies in the treatment of drug abuse among students, from the students themselves. It has five items set to source sufficient information on the variables of the study.

3.17 Credibility, Transferability, Dependability and conformability of the interview.

In this aspect, to ascertain the quality usability of the interview, cretarion group were selected. Those who score participate in the screening among the students were interviewed. This is based on the suggestion by Oppenheim (1993:148) that for interview seeking for attitudinal responses; it has to ensure that people with known characteristics are involved. Transferability means the ability of other scholars to understand and determine the applicability of the findings in their own settings (Eissenhardt, 1989 in Naluwemba 2006). To ensure transferability in this study, wording context was maintained. This is also based on the Silverman (1993) who suggested that, changes in wording context and emphasis undermine the reliability, because it ceased to be the same question for each respondent, leading questions were avoided and thick and dense description of the data collected was provided. For conformability, the researcher ensure that the outcomes and claims grow out of the inquiry, rather than the researcher bias. The issue of transcriber selection, transference and counter-transference was also taken cared. That is also based on Lee, and Morrison (1993) and Kvale (1996:163). Also, the researcher ensures that there is no drift in the definition of code, no shift of meaning of the codes .Which was taken cared by constantly comparing the data with the codes (audit trials), by writing memos about the codes, their

definitions, and by checking the transcript to ensure that, they do not contained obvious mistakes, and my supervisor reviewed the instruments, (Gibbs 2007).

Table 3. 7 Interpretation guide for the interviews

s/n	Response	Interpretation
1.	Five respondents, responded in the same direction	Very High
2.	Four respondents, responded in the same direction	High
3.	Three respondents, responded in the same direction	Average
4.	Two respondents, responded in the same direction	Low
5.	1 respondent, responded in 1 direction	Very Low

Source: Primary source 2016.

3:18 Observation

Another qualitative method of gathering data for this study is through observing the subjects patterns of behavior at the time of the sessions. Same observation rating scale was used to record the data from the two groups by two trained research assistants. Daily records was taken in form 1 (Daily Behavior Checklist), and form 2 (cumulative records)) was used to merge the five days recorded observations for each group. The constructs for the abstinence observe were, punctuality, distractibility, contributions and task completion. The effectiveness was observes from the results obtained at the end of the treatment. The contingency treatment used in the study were cash (#100) as transport allowance per one session, use Meal (food with chicken and soda, food with beef and water and food only) for punctuality. It use prize in cash (#200 and #100) for task completion, praise (clapping and appreciation) for contribution and withholding the rewards and officer report for distractions. On the rational emotive therapy side, challenge was used to improve punctuality and distractions through enlightens the influence of commitment and concentration, whereas, contribution and task completion was improves using confrontation (contribution is through active involvement, and task completion through encouraging them to face/do the task).

3.19 Data analysis Procedure (Interview and observation)

The qualitative data have been collected from the key informants through interview, the recorded responses were transcribed. During the interview the data were recorded, and were later transcribed. Thematic content analysis was used to analyze the data from the interview. The interview transcripts were read and short phrases that sum up what is being said in the text were made. The phrases for all the interviews were collected together, they were all worked through and all duplications were crossed out, hence, the number of categories was reduced. Overlapping or similar categories were refined and reduced in number by grouping them together. Lists of final themes which link to the overarching concepts were developed.

The data obtain from the observation was recorded. Daily observation was added for the whole five days for the all fifteen subjects from the two groups. It then recorded in form 2 (cumulative Behavior checklist). The overall total was used to determine effectiveness of the treatment given to the two separate groups. The scoring for attendance is 0-1=1 (Low), 2-3=2 (Average) and 4-5=3 (High).

For Punctuality, Present before the time=3, beginning to five minutes=2, and six minutes to the end of the session=1. For Distractibility, 0-1=3, 2-3=2 and 4-5=1 For Contribution 0-1=1, 2-3=2 and 4-5=3. And for Task completion, 0-1=1, 2-3=2 and 4-5=3. Where the score of 0-1=Low, 2-3=Average and 4-5=High, except for distraction where 0-1=high, 2-3=average and 4-5=low.

Table 3. 8 Interpretation guide for the observation

S/N	Average	Interpretation
1.	2.01-3.00	Highly Effective
2.	1.01-2.00	Effective
3.	0.00-1.00	Not Effective

Source: Primary source 2016

Summary of the Data Analysis

Variables	Instruments	Statistical Tools
Drug Abuse	Drug Abuse Screening Test (DAST-10)/Interview	Percentage and Mean/Interview
Efficacy of Contingency Management Therapy	Contingency Management Treatment Assessment Questionnaire (COMTAQ)/Interview and Observation	Paired Sample T-test, Thematic Content Analysis and Observation Rating Scale
Efficacy of Rational Emotive Therapy	Rational Emotive Therapy Treatment Assessment Questionnaire (RETAQ)/Interview and Observation	Paired Sample T-test, Thematic Content Analysis and Observation Rating Scale
Comparing the Effectiveness of Contingency Management and Rational Emotive Therapy	Contingency Management Treatment Assessment Questionnaire (COMTAQ) and Rational Emotive Therapy Treatment Assessment Questionnaire (RETAQ) /Interview and Observation	Posttest Mean, Thematic Content Analysis and Observation Rating Scale

3.20 Ethical consideration

In order to ensure and ascertain the practice of ethics in this research work, the following measures were taken, to ensure the confidentiality of the information provided by the respondents. The respondents were coded instead of requesting them to write their names. To confirm the willingness of the participants in the study, researcher requests them to sign a contract and informed consent form. Authors whose ideas were used were appropriately acknowledged through citations and referencing. Also all the findings of this study were presented in a generalized manner. And, permission from the authorities of the organizations (Bayero University, Sa'adatu Rimi College of Education, National Drug Law Enforcement Agency and police) used in the study was granted at the beginning of the field exercise.

CHAPTER FOUR

DATA PRESENTATION, INTERPRETATION AND ANALYSIS

4:0 Introduction

This chapter presents the test of normality, preliminary and the major findings. It also interprets and analysed the result obtained from both quantitative and qualitative data analyses.

4.1 Normality Test

Skewness and kurtosis values were used to present the normality of the distribution of the data.

Table 4. 1 Skewness and Kurtosis values showing the normality

VARIABLE	SKEWNESS	KURTOSIS
Drug Abuse	-.694	-2.90
Positive Reinforcement	.299	-.262
Negative Reinforcement	-.273	-.915
Challenge	.183	.270
Confrontation	-.604	-.540

Source: Primary source 2016

Table 4.1 reveals the skewness and kurtosis values for the all constructs. The DAST-10 items representing drug abuse constructs has skewness value of -.694 with kurtosis value of -2.90. The skewness value for positive reinforcement is .299 and the kurtosis value is -.262, while the skewness value for negative reinforcement is -.273 and the kurtosis value is -.915. And the skewness value for challenge is .183 and the kurtosis value is -.540.According to Field (2009), "data is normally distributed if the values are close to zero". Based on this, the values present in table 4.1 are close to zero and are therefore normally distribute.

Also P-P and Q-Q Plots were presented to justify the normality of the distribution

Figure 1: Normal P-P Plot of DAST-10

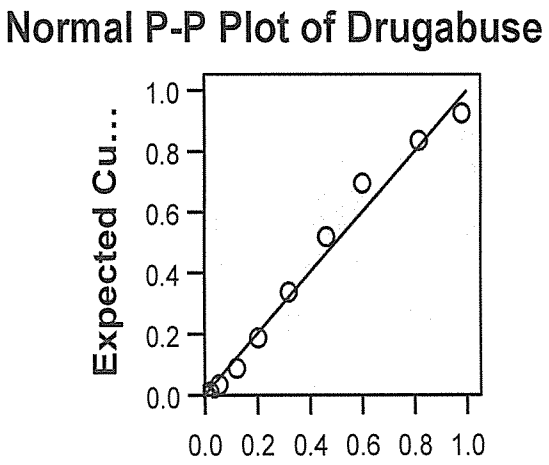


Figure 1 above shows the P-P Plot of DAST-10. The figure indicates that the dots are located on the diagonal line which means the data is normally distributed.

Figure 2: Normal Q-Q Plot of DAST 10

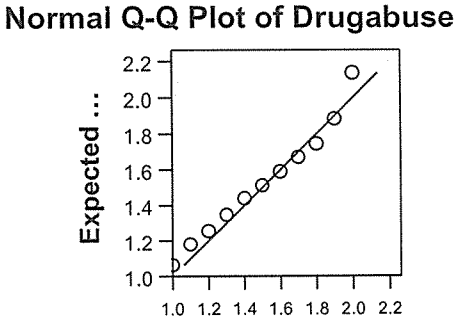


Figure 2 above shows the Q-Q plot of DAST-10. The figure indicates that the dots are located on the diagonal line which means the data is normally distributed.

Figure 3: Normal P-P Plot of COMTAQ

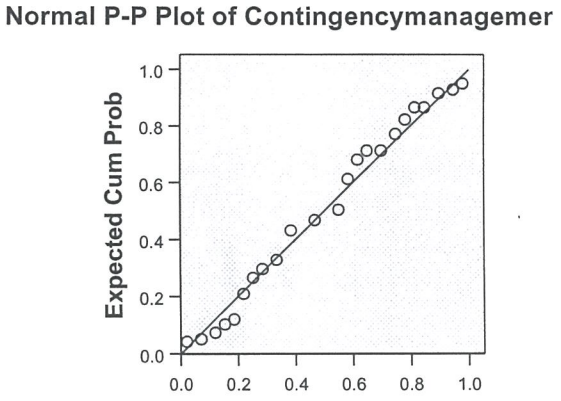


Figure 3 above shows the P-P Plot of contingency management. The figure indicates that the dots are located on the diagonal line which means the data is normally distributed.

Figure 4: Normal Q-Q Plot of COMTAQ

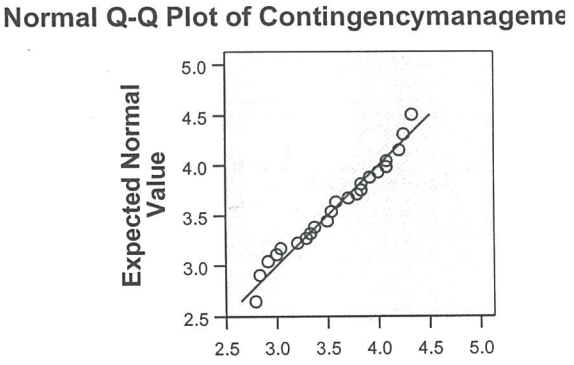


Figure 4 above shows the Q-Q Plot of contingency management. The figure indicates that the dots are located on the diagonal line which means the data is normally distributed.

Figure 5: Normal P-P Plot of RETAQ

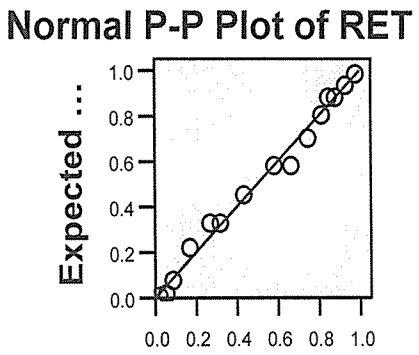


Figure 5 above shows the P-P Plot of RET. The figure indicates that the dots are located on the diagonal line which means the data is normally distributed

Figure 6: Normal Q-Q Plot of RETAQ

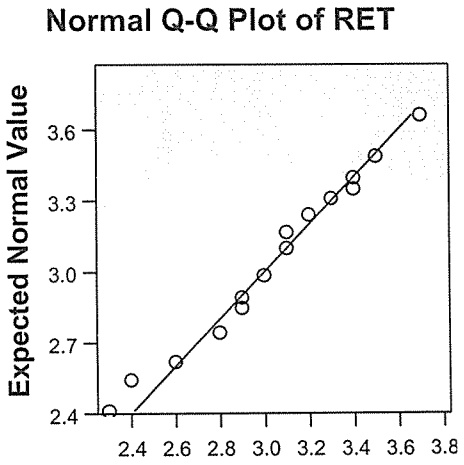


Figure 6 above shows the Q-Q Plot of RET. The figure indicate that the dots are located on the diagonal line which means the data is normally distributed

4:2 Preliminary Findings

Table 4. 2 Response Rate

Categories	Number of Respondents	Percentage
Sample of the study	394	100
Total responses	356	90.3

Source: Results of data analysis (2016)

Table 4.2 shows that the sample of the study is 394 (100%) and the returned questionnaires are 356 (90.3%).

This means, despite the efforts made by the researcher to ensure the return of all the questionnaires distributed, through reminders and follow ups for more than two weeks still 38 respondents did not return their questionnaires. Therefore, of the 394 that compose the sample for this study who also receive the DAST-10 questionnaires, 356 were able to be filled and returned. This presents a response rate of 90.3%. This high response rate could be attributed to the effort of the researcher and the research assistants in convincing respondents on the importance of their responses, and assurance of anonymity and confidentiality.

Table 4. 3 Sex of the respondents

Gender		Frequency	Percent	Valid Percent	Cumulative Percent
	male	255	71.6	71.6	71.6
	female	101	28.4	28.4	100.0
	Total	356	100.0	100.0	

Table 4.3 shows the gender of the respondents, with 255 (71.6) percent for males and 101(28.4) percent for females. This shows that majority of the respondents who form the sample of the study were male students.

Table 4. 4 Age categories of the respondents

Age Categories	Frequency	Percent	Valid Percent	Cumulative Percent
16-25	234	65.7	65.7	65.7
26-35	86	24.2	24.2	89.9
36 and above	36	10.1	10.1	100.0
Total	356	100.0	100.0	

Table 4.4 shows the age categories of the respondents, with 234 respondents aged 16-25 years, 86 respondents aged 26-35 years and 36 respondents aged 36 years and above. This shows that majority of the respondents who form the sample of the study belong to early adulthood (16-25 years) category.

Table 4. 5 Institutions of the respondent

Institution	Frequency	Percent	Valid Percent	Cumulative Percent
SRCOE	291	81.7	81.7	81.7
BUK	65	18.3	18.3	100.0
Total	356	100.0	100.0	

Table 4.5 shows that Sa'adatu Rimi College of Education Kumbotso (SRCOE) has 291 (81.7%), while Bayero University Kano (BUK) has 65 (18.3%). This means Sa'adatu Rimi College of Education has the majority (81.7%), this happens because all the students (29515) were studying teacher training courses, while Bayero University has (18.3%) because only students from the faculty of Education (5000) were involved.

Table 4. 6: Frequency of drug Abuse among Teacher Trainees

Level of Drug Abuse	Frequency	Percent	Valid Percent	Cumulative Percent
0.00	13	3.7	3.7	3.7
1.00	101	28.4	28.4	32.0
2.00	55	15.4	15.4	47.5
3.00	48	13.5	13.5	61.0
4.00	50	14.0	14.0	75.0
5.00	33	9.3	9.3	84.3
6.00	27	7.6	7.6	91.9
7.00	19	5.3	5.3	97.2
8.00	5	1.4	1.4	98.6
9.00	4	1.1	1.1	99.7
10.00	1	.3	.3	100.0
Total	356	100.0	100.0	

Table 4.6 shows the scores obtained by the individual respondents. The result indicates that, 13 respondents scored zero, having 3.7%, which means they don't abuse drugs at all. The findings alsc reveals that 101 scored one having 28.4% which means they abuse drugs at low level, while, 55 respondents scored 2, having 15.4%.This means, low level of abuse, and requires monitoring and assessed later. Also, 48 respondents score three having 13.5%, 50 respondents score 4 having 14% and 33 respondents score 5 having 9%, which means both scores of 3,4 and 5 abuse drugs at moderate level and they require further investigation.

While, 27 respondents score 6 having 7.6%, 19 respondents score seven, having 5.3% and 5 respondents score eight, having 1.4% which means both score 6,7 and 8 have a substantial drug abuse problem and require intensive assessment. And lastly, 4 respondents score nine, having 1.1%, and only 1 respondent scores ten, having 0.3%.This means they have a severe drug abuse problem and also require intensive assessment. This shows that majority of the respondent abuse drugs at a various levels

Table 4. 7: Frequency table showing the prevalence of drug abuse among the respondents

S/N	ITEM STATEMENT	YES	NO
1	Have you use drugs other than those required for medicinal reasons?	87 (24.4%)	269 (75.6%)
2	Do you abuse more than one drug at a time?	108 (30.3%)	248 (69.7%)
3	Are you unable to stop abusing drugs when you want?	202 (56.7%)	154 (43.3%)
4	Have you ever had a blackout or flashbacks as a result of drug abuse?	88 (24.7%)	268 (75.3%)
5	Do you feel bad or guilty about your drug use?	134 (37.6%)	222 (62.4%)
6	Does your spouse (or parent) ever complain about your involvement in drug?	129 (36.2%)	227 (63.8%)
7	Have you neglected your family because of your use of drugs?	65 (18.3%)	291 (82.7%)
8	Have you ever engaged in illegal activities in order to obtain drugs?	77 (21.6%)	279 (78.4%)
9	Have you ever experienced withdrawals symptoms (felt sick) when you stop taking drugs?	110 (30.9%)	246 (69.1%)
10	Have you had medical problems as a result of your drug use?	102 (28.7%)	254 (71.3%)

Source: Primary source 2016

Table 4.7above shows the frequency and the percentage of the responses of the drug abuse screening test. Item one shows that 87 respond" Yes" making 24.4%, which means they use drugs other than those required for medicinal reasons, while 269 respond" No" making 75.6%, which means they only use those drugs required for medicinal reasons. Item two has 108 respond "Yes" making 30.3% which means they abuse more than one drug at a time and 248 respond" No" making 69.7 percent, which means they don't use more than one drug at a time.

Item three has 202 respond "Yes" having 56.7% which means they could not stop abusing drugs when they want, and 154 respond "No" with 43.3% who feel they could stop drug when they wish to. Item four shows that 88 respond "Yes" making 24.7%, which means they experience blackout or flashback as a result of their drug abuse, while 268 respond "No" making 75.3% which means they don't experience blackout or flashback when they abuse drugs. Item five shows that 134 respond "Yes" making 37.6%, which means they feel bad and guilty about their drug abuse, while 222 respond "No" making 62.4%, meaning that they don't feel bad or guilty about their drug abuse. Item six shows that 129 respond "Yes" making 36.2%, which means their spouses or parents complain about their involvement in drug abuse, and 227 responded "No" making 63.8% meaning that their spouse or parent never complained about their involvement in drugs. Item seven shows that 65 respond "Yes" making 18.3%, which means they neglect their family because of drug abuse, while 291 respond "No" making 82.7%, meaning that they don't neglect their family because of their drug abuse.

Item eight shows that 77 respond "Yes" making 21.6% meaning that they engage in illegal activities in order to obtain drugs, while 279 respond "No" making 78.4% which means they don't engage in illegal activities in order to obtain drugs. Item nine shows that 110 respond "Yes" making 30.9%, which means they experience withdrawal symptoms when they attempt to stop drug abuse, while 246 respond "No" making 69.1%, meaning that they don't experience withdrawal symptoms. Item 10 shows that 102 respond "Yes" making 28.7% meaning that they had medical problems as a result of their drug abuse, and 254 respond "No" making 713%, which means they don't have any medical problem as a result of their drug abuse.

4.3: Data presentations

This section involves both quantitative and qualitative presentation, for each objective, the quantitative presentation was made, complemented with the qualitative presentation of data gathered from the interview with the key informants. The individual responses from each item of the interview were extracted and the opinion was appropriately discussed. Content Analysis was used in identifying the main themes that emerge from the responses given by the respondents using the following steps, (Kothari, 1985; Dawson, 2002 & Kumar, 2005).

- The main themes was identified
- Codes were assigned to the main themes
- Responses were classified under their themes
- Themes and responses were integrated into the report.

Objective 1: To determine the prevalence of drug abuse among students of teacher training institutes in Kano State

Table 4. 8 Descriptive Statistics of Prevalence levels of Drug Abuse among the respondents

prevalence	N	Minimum	Maximum	Mean	Std. Deviation
Total scores	356	1	2	1.6904	.21446
	356				

Table 4.8 shows the descriptive statistics on the prevalence of drug abuse among the students. The number of respondents is 356, the minimum scores is 1 and the maximum score is 2. The mean is 1.6904 and the standard deviation is 2.1446.

The table above reveals drug abuse prevalence at teacher training institution of Kano State at high level (mean=1.6904).

Interview was also conducted to seek the opinion of the participants (Teachers and Students) with regard to the prevalence of drug abuse at the institutions. The findings are as follows.

What do you think about the attitude of some students of this institution toward drugs?

Tr1- 'The situation is disheartening; student's engagement into drugs in this institution is terrible'.

Tr2- 'It is frustrating, and unfortunate. Urgent action needs to be taken to stop them before it get out of control'.

Tr3- 'Well, not really a serious matter, but some uses drugs'.

Tr4- 'There is no prevalence of drug abuse in my institution'.

Tr5- 'The drug abuse among students in this institution is alarming'.

The responses from the interview reveal that four (80%) out of the five, respondents agreed that there is a prevalence of drug abuse among students in the teacher training institutions of Kano State. while one (20%) opines that there is no prevalence of drug abuse at the institutions.

What do you think about student's involvement in drugs at this institution?

Sr1- 'Many students consider drugs as a support in their study'.

Sr2- 'Some students use drugs to overcome their academic stress'.

Sr3- 'The situation is getting tide because even some females engaged in drug usage'.

Sr4- 'I heard about it, however, I never saw or witness it by myself'.

Sr5- 'The situation is becoming out of control, some students think they could not make it without using drugs'.

The response from item one shows that four respondents (80%) opine that some students abuses drugs at the institutions. And one respondent (20%) is of the opinion that challenge could not change the behavior.

Objective 2: To examine the efficacy of contingency management therapy in the treatment of drug abuse

Hpo 1: Contingency management therapy has no significant effect in the treatment of drug abuse.

Table 4. 9: paired sample t-test showing the effectiveness of contingency management therapy in the treatment of drug abuse.

Treatment	mean	N	Std. Deviation	t	df	Sig(2-tailed)
Pair pre-test scores-	3.3861	15	.46730	-3.039	14	.019
1 posttest scores	3.7694	15	.36626			

Paired sample t-test was computed for the effectiveness of contingency management therapy in the treatment of drug abuse.

Table 4.9 shows the result obtains from a paired sampled t-test. The findings reveal that mean of the pretest =3.3861, and mean of posttest=3.7694, the number of subjects is 15, while the standard deviation obtains from the pretest=.46730, and the standard deviation obtains from posttest = .36626, the tval=-3.039, the degree of freedom is 14 and the Sig (2-tailed) = .019.

Do you think using positive reinforcement can enhance abstinence from drug abuse?

Tr1- 'Indeed, most of them require support. And if proper attention is given to them, they may possibly change'.

Tr2- 'Yes, especially if it is interms of regular and closed interaction and support'.

Tr3- 'Ofcourse yes, because in most cases poverty forced them into abusing drugs'.

Tr4- 'Yes, especially if their needs could be attended to (met').

Tr5- 'No, it could not change them in any way, because they are matured and sensible that ordinary gift could not influence them'.

The responses from the interview reveal that, four respondents (80%) opined that use of positive reinforcement could help client abstained from drug abuse, while one respondent (20%) opines that positive reinforcement could not change the behavior of drug abusers.

What is your opinion with regard to rewarding as a means of changing the behavior of drug abusers.

Sr1- 'Well, if appropriate and consistently given, I think it can help'.

Sr2- 'It could transform them, because they may feel worthy and important'.

Sr3- 'It will only spoil them more, because dependency caused them into such trouble'.

Sr4- 'Depends on the nature and regularity of the reinforcement'.

Sr5- 'Valuing them or showing concern and appreciation could change them'.

The responses above shows that, four respondents (80%) opine that appropriate reinforcement could change the perception and attitude toward drugs, while one respondent (20%) opines that reinforcement could only spoils them more.

In your opinion, what could be the impact of negative reinforcement in drug abuse treatment.

Tr1- 'Well, it could be the best way, because for some people punishment easily controls their behavior'.

Tr2- 'It could make an impact especially on adult'.

Tr3- 'It depends on the approach, because some people resisted'.

Tr4- 'It could be the fastest way of dealing with behavioral problems'.

Tr5- 'it could turn person to be good'.

The responses from the interview reveal that, three respondents (80%) opined that use of negative reinforcement could help client abstains from drug abuse, while one respondent (20%) believes that negative reinforcement could not change the behavior of drug abusers.

In your opinion, what could be the impact of negative reinforcement in drug abuse treatment.

Sr1- 'In my opinion, I think it could change person to be good'.

Sr2- 'I think it will not make positive impact'.

Sr3- 'I do not believe in using negative reinforcement'.

Sr4- 'It could be the fastest way of dealing with behavioral problems'.

Sr5- 'Of course, it could be the best way, because for some people punishment easily controls their behavior'.

The responses from the interview reveal that, three respondents (60%) opine that use of negative reinforcement could help client abstained from drug abuse, while two respondents (40%) believes that negative reinforcement could not change the behavior of drug abusers.

Objective 3: To examine the efficacy of rational emotive therapy in the treatment of drug abuse

Hpo 2: Rational emotive therapy has no significant effect in the treatment of drug abuse.

Table 4. 10: paired sample t-test showing the effectiveness of rationale motive therapy in the treatment of drug abuse

Treatment	mean	N	Std. deviation	t	df	Sig (2-tailed)
Pair pretest scores &	2.9267	15	.32175	-2.517	14	.025
1 post test scores	3.1467	15	.25598			

Paired sample t-test was computed for the effectiveness of rational emotive therapy in the treatment of drug abuse.

Table 4.10 shows the result obtains from a paired sample t-test. The findings reveal that, standard deviation obtains from pretest = 2.9267, while 3.1467 obtains from the posttest. The number of subjects are 15, standard deviation for the pre-test=.32175 and standard deviation for the post-test =.25598, the tval=-2.517, degree of freedom is 14 and the Sig (2-tailed) =0.25.

What do you think with regard to using confrontation to make a change in person's behavior.

Tr1- 'It depend on the maturity of a person, I mean a level for which he could understand'.

Tr2- 'forcing a person to face situation could make him understand the true about It'.

Tr3- 'Some people hate confrontation'.

Tr4- 'It could greatly lead to a change'.

Tr5- 'It helps a person to understand false beliefs'.

The responses above shows that out of five respondents, four respondents (80%) opine that confrontation could effectively change the behavior of a person, while,

one respondent (20%) is of the opinion that confrontation could not change the behavior.

What do you think about using confrontation in trying to change a person behavior.

Sr1- 'As a matter of fact, been polite is better'.

Sr2- 'I think the person will realize his mistake when he was shown in black and white'.

Sr3- 'Forcing a person to face situation he feared is very dangerous'.

Sr4- 'Some people need to be coerced'.

Sr5- 'It is not the best approach because it may end with conflict'.

The responses from the interview reveal that, three respondents (60%) opine that use of negative reinforcement could help client abstained from drug abuse, while two respondents (40%) believes that negative reinforcement could not change the behavior of drug abusers.

Objective 4: To determine the effectiveness of contingency management and Rational Emotive therapies in the treatment of Drug Abuse.

Table 4. 11 Post-test showing the effectiveness of contingency management and Rational Emotive therapies in the treatment of Drug Abuse.

Treatment	N	Minimum	Maximum	Mean	Std. Deviation
Contingency	15	3.21	4.33	3.7694	.36626
RET	15	2.80	3.70	3.1467	.25598

Table 4.11 shows the post-test result obtains from contingency management and rational emotive therapy.

The number of subjects is 15 from each group. The minimum scores obtain from contingency management therapy is 3.21, the maximum scores is 4.33, Mean=3.7694

and the standard deviation=.36625. While, for Rational emotive therapy, the minimum scores is 2.80, the maximum scores is 3.70, the Mean=3.1467 and the standard deviation=.25598.

Do you think challenging the belief system of drug abusers could make them understand and stops abusing drugs?

Tr1- 'Definitely, because once they understand their belief system they will make a rightful decision'.

Tr2- 'I think, if the challenge is constructive and objective, it could make a great impact'.

Tr3- 'Yes, because many have no belief of themselves, therefore helping them realized their belief about drug could help a lot'.

Tr4- 'This is the core of the whole problem, if it is adequately provided with lots of enlightens, they will stop the abuse'.

Tr5- 'I hate to be challenge, especially on my personal affairs'.

The responses from the interview reveal that all the four respondents (80%) opine that challenge which aim at educating drug abusers to understand their belief system could change the attitude of abusers toward drugs. And one respondent (20%) is of the opinion that challenge could not change the behavior.

Do you think challenging a person's behavior could make an impact in changing his/her unwanted behavior

Sr1–'Certainly, I believe, most of them doesn't have positive belief system about drugs'.

Sr2 –'Yes,because, most of bad behaviors were influenced for other reasons'.

Sr3- 'obviously, especially if the critic is objective and undisputable'.

Sr4 – 'I think it could help a lot, because pressure and other life stresses forced most of them in to drug use'.

Sr5 –'No, you cannot challenge me and expect me to go by your interest'.

The responses from item five shows that all the four respondents (80%) opine that challenging drug abusers to understand their belief system will change their perception and attitude toward drugs. While, one respondent (20%) opines that challenge could not make a person to change his behavior.

Table 4. 12 : Cumulative Behavior rating scale- Contingency Management (observation)

S/n	Grp	Attendance X/N	Punctuality X/N	Distraction X/N	Contribution X/N	Task Completion X/N	Average X/N
1	1	5	2.2	2.0	1.8	2.8	2.2
2	1	4	1.4	1.6	1.2	1.6	1.5
3	1	5	2.4	1.6	1.6	2.0	1.9
4	1	4	1.4	1.4	1.2	1.4	1.4
5	1	5	2.2	2.0	1.4	1.8	1.9
6	1	4	2.0	1.4	1.2	1.8	1.6
7	1	4	1.6	1.4	1.6	1.4	1.5
8	1	5	2.0	1.8	1.4	1.8	1.8
9	1	4	1.4	1.4	1.4	1.6	1.5
10	1	4	1.8	1.6	1.2	1.4	1.5
11	1	5	2.0	2.0	1.4	1.6	1.8
12	1	4	1.8	1.2	1.4	1.4	1.5
13	1	4	1.8	1.8	1.2	1.8	1.7
14	1	4	1.4	1.4	1.4	1.4	1.4
15	1	5	2.2	1.8	1.6	1.8	1.9
Total		4.40	1.84	1.62	1.32	1.68	1.70

Source: Primary source 2016

Table 4.12 shows the individual and cumulative result obtains from the fifteen subjects of contingency management group through observation. The individual observation shows that, for client number one, attendance is 5, punctuality is 2.2, distraction is 2.0, contribution is 1.8, task completion is 2.8 and the average is 2.2 (Highly effective). For client number two, the attendance is 4, punctuality is 1.4,

distraction is 1.6, contribution is 1.2, task completion is 1.6 and average is 1.5 (effective). For client number three, attendance is 5, punctuality is 2.4, distraction is 1.6, contribution is 1.6, task completion is 2.0 and average is 1.9 (effective). For client number four, attendance is 4, punctuality is 1.4, distraction is 1.4, contribution is 1.2, task completion is 1.4 and average is 1.4 (effective). For client number five, attendance is 5, punctuality is 2.2, distraction is 2.0, contribution is 1.4, task completion is 1.8 and the average is 1.9 (effective).

The result of client number six shows that, attendance is 4, punctuality is 2.0, distraction is 1.4, contribution is 1.2, task completion is 1.8 and average is 1.6 (effective). For client number seven, attendance is 4, punctuality is 1.6, distraction is 1.4, contribution is 1.6, task completion is 1.4 and average is 1.5 (effective). For client number eight, attendance is 5, punctuality is 2.0, distraction is 1.8, contribution is 1.4, task completion is 1.8 and average is 1.8 (effective). For client number nine, attendance is 4, punctuality is 1.4, distraction is 1.4, contribution is 1.4, task completion is 1.6 and average is 1.6 (effective). For client number ten, attendance is4, punctuality is 1.8, distraction is 1.6, contribution is 1.2, task completion is 1.4 and average is 1.5 (effective).

The result of client number eleven shows that, attendance is 5, punctuality is 2.0, distraction is 2.0, contribution is 1.4, task completion is 1.6 and average is 1.8 (effective). For client number twelve, attendance is 4, punctuality is 1.8, distraction is 1.2, contribution is 1.4, task completion is 1.4 and average is 1.5 (effective). For client number thirteen, attendance is 4, punctuality is 1.8, distraction 1.8, contribution is 1.2, task completion is 1.8 and average is 1.7 (effective). For client number fourteen, attendance is 4, punctuality is 1.4, distraction is 1.4, contribution is 1.4, task completion is 1.4 and average is 1.4 (effective). For client number fifteen, attendance is 5, punctuality is 2.2, distraction is 1.8, contribution is 1.6, task completion is 1.8 and average is 1.9 (effective).

The cumulative result obtains from the fifteen subjects of contingency management group through observation shows that total attendance for the whole session is Very High(4.40), the punctuality is Effective(1.84), Distraction is

Effective(1.62), contribution is Effective(1.32) and Task completion is Effective(1.68), and the cumulative average is 1.70 (effective).

Table 4. 13: Cumulative Behavior Rating scale- Rational Emotive Therapy (observation).

	Grp	Attendance	Punctuality	Distraction	Contribution	Task Completion	Average
S/n		X/N	X/N	X/N	X/N	X/N	X/N
1	2	4	1.2	1.4	1.4	1.6	1.4
2	2	5	1,8	1.8	2.4	2.6	2.2
3	2	4	1.8	1.2	1.6	1.8	1.6
4	2	4	1.4	1.6	1.6	2.0	1.7
5	2	5	2.0	1.4	2.0	2.0	1.9
6	2	5	2.0	1.8	1.4	2.0	1.8
7	2	4	1.6	1.6	1.0	1.2	1.4
8	2	5	2.2	1.6	2.0	2.4	2.1
9	2	5	2.0	1.6	2.0	2.0	1.9
10	2	4	1.4	1.6	1.6	1.0	1.4
11	2	5	2.0	2.0	1.8	1.8	1.9
12	2	4	2.0	1.6	1.0	1.0	1.4
13	2	4	2.2	1.6	1.2	1.2	1.6
14	2	4	1.0	1.2	1.2	1.4	1.2
15	2	5	2.2	1.6	2.0	2.4	2.1
Total		4.46	1.78	1.57	1.61	1.76	1.71

Source: Primary source 2016

Table 4.13 shows the individual and cumulative result obtains from the fifteen subjects of rational emotive therapy group through observation. The individual observation shows that, for client number one, the attendance is 4, punctuality is 1.2, distraction is 1.4, contribution is 1.4, task completion is 1.6 and the average is 1.4 (effective). For client number two, the attendance is 5, punctuality is 1.8, distraction is 1.8, contribution is 2.4, task completion is 2.6 and average is 2.2 (Highly effective). For client number three, attendance is 4, punctuality is 1.8, distraction is 1.2, contribution is 1.6, task completion is 1.8 and average is 1.6 (effective). For client number four, attendance is 4, punctuality is 1.4, distraction is 1.6, contribution is 1.6, task completion is 2.0 and average is 1.7 (effective). For client number five, attendance is 5, punctuality is 2.0, distraction is 1.4, contribution is 2.0, task completion is 2.0 and the average is 1.9 (effective).

The result of client number six shows that, attendance is 5, punctuality is 2.0, distraction is 1.8, contribution is 1.4, task completion is 2.0 and average is 1.8 (effective). For client number seven, attendance is 4, punctuality is 1.6, distraction is 1.6, contribution is 1.0, task completion is 1.2 and average is 1.4 (effective). For client number eight, attendance is 5, punctuality is 2.2, distraction is 1.6, contribution is 2.0, task completion is 2.4 and average is 2.1 (Highly effective). For client number nine, attendance is 5, punctuality is 2.0, distraction is 1.6, contribution is 2.0, task completion is 2.0 and average is 1.9 (effective). For client number ten, attendance is 4, punctuality is 1.4, distraction is 1.6, contribution is 1.6, task completion is 1.0 and average is 1.4 (effective).

The result of client number eleven shows that, attendance is 5, punctuality is 2.0, distraction is 2.0, contribution is 1.8, task completion is 1.8 and average is 1.9 (effective). For client number twelve, attendance is 4, punctuality is 2.0, distraction is 1.6, contribution is 1.0, task completion is 1.0 and average is 1.4 (effective). For client number thirteen, attendance is 4, punctuality is 2.2, distraction 1.6, contribution is 1.2, task completion is 1.2 and average is 1.6 (effective). For client number fourteen, attendance is 4, punctuality is 1.0, distraction is 1.2, contribution is 1.2, task completion is 1.4 and average is 1.2 (effective). For client number fifteen, attendance is 5,

punctuality is 2.2, distraction is 1.6, contribution is 2.0, task completion is 2.4 and average is 2.1 (Highly effective).

The cumulative result obtains from the fifteen subjects of rational emotive therapy group through observation shows that, total attendance for the whole session is Very High (4.46), the punctuality is Effective (1.78), Distraction is Effective (1.57), contribution is Effective (1.61) and Task completion is Effective (1.76), and the total average is 1.71 (effective).

Table 4. 14: Observation showing the contributions of the constructs in determining the Effectiveness of CM and RET

S/N	GRP	Attendance	Punctuality	Distractibility	Contribution	Task	Total
1	CM	4.40	1.84	1.62	1.32	1.68	1.62
2	RET	4.46	1.78	1.57	1.61	1.76	1.68

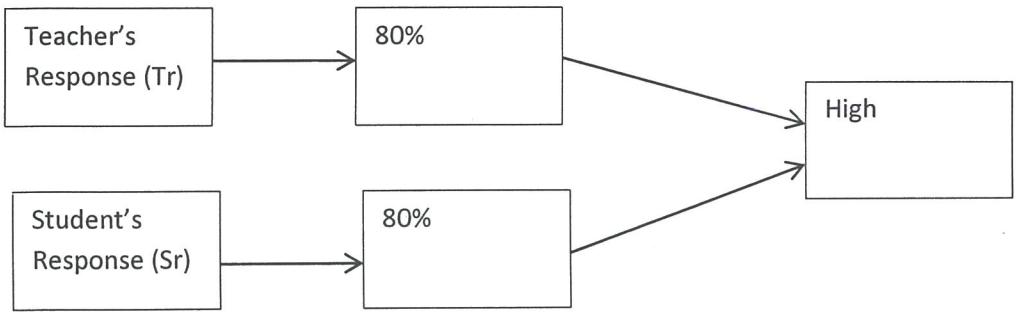
Table 4.14 shows the individual effectiveness of the treatments for all the subjects. For contingency management group, attendance is 4.40, punctuality is 1.84, distractibility is 1.62, contribution is 1.32, while, task formation is 1.62, and the average is 1.62. For rational emotive therapy group, attendance is 4.46, punctuality is 1.78, distractibility is 1.57, contribution is 1.61, while task completion is 1.76, and the average is 1.68.

4:5 Quantitative and Qualitative data analysis (Triangulation)

Table 4. 15: Descriptive Statistics Determining the Prevalence of Drug abuse

prevalence	N	Minimum	Maximum	Mean	Std. Deviation
Total scores	356	1	2	1.6904	.21446
	356				

Figure 7: Interview Result on the prevalence of drug abuse among Teacher Trainees



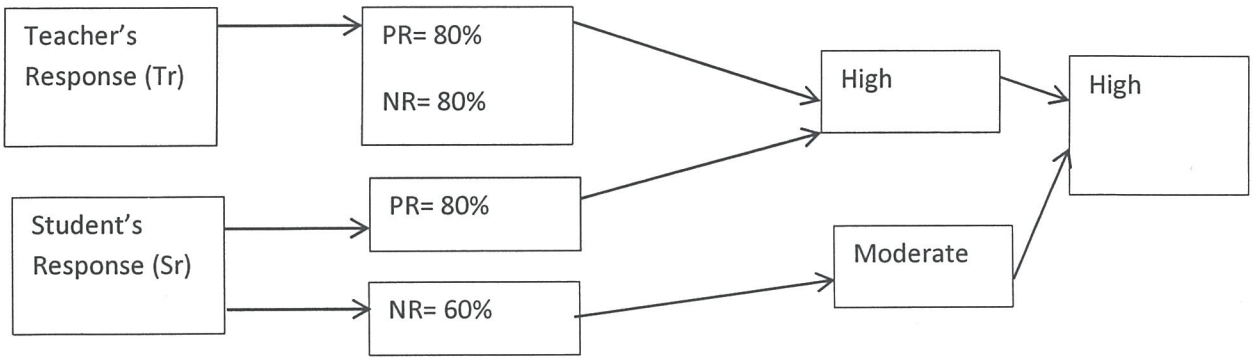
The result from the first objective in Table 4.15 reveals that the prevalence of drug abuse at teacher training institutions of Kano is "High", (Mean=1.6904), while, the result from the qualitative result in Figure 7 reveals that both teachers and students responses on the item number one agree that the prevalence is "High",(Tr=80% and Sr=80%).

Since the Mean obtained is "High" (1.6904), Tr result also reveals is "High" (80%), and Sr result also reveals "High" (80%), that indicates high prevalence of drug abuse among students in the area of study is "High".

Table 4. 16: Paired sample t-test showing the effectiveness of contingency management in the treatment of drug abuse

Treatment	mean	N	Std. Deviation	t	df	Sig(2-tailed)	Decision
Pair pre-test scores-1 posttest scores	3.3861 3.7694	15 15	.46730 .36626	-3.039	1 4	.019	rejected

Figure 8: Interview Result on the effectiveness of CM in Drug Abuse Treatment

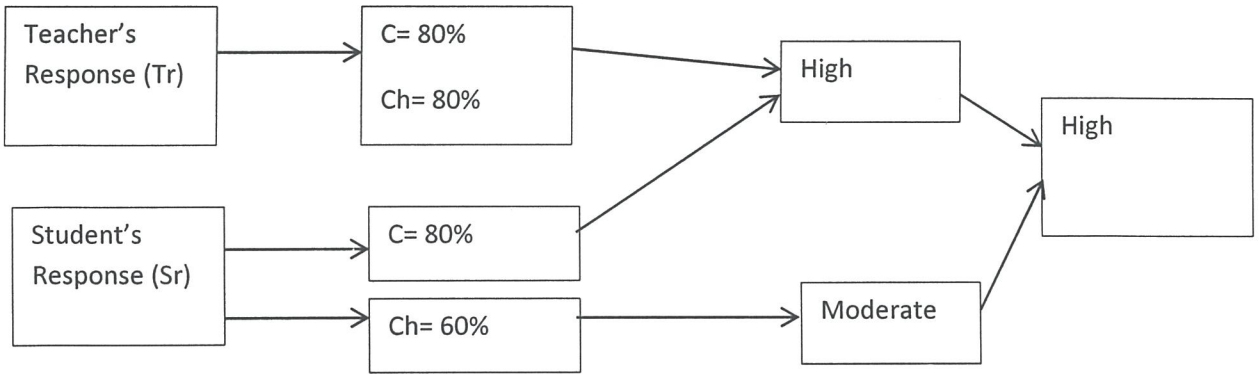


The result of the second objective in Table 4.16 reveals that, contingency management has significant effect on the treatment of drug abuse (sig 2-tailed=.019). And, the Quantitative result also in Figure 8 reveals that contingency management is effective in the treatment of drug abuse (sig 2-tailed= 0.19). And the Qualitative result also shows that (Tr-PR=80%, NR=80% and Sr-PR=80%, NR=60%). Therefore the null hypothesis is rejected ($p<0.05$). This means contingency management is effective in the treatment of drug abuse among the students.

Table 4. 17: Paired sample t-test showing the effectiveness of rational emotive therapy in the treatment of drug abuse

Treatment	mean	N	Std. deviation	t	df	Sig (2-tailed)
Pair pretest scores &	2.9267	15	.32175	-2.517	14	.025
1 post test scores	3.1467	15	.25598			

Figure 9: Interview Result on the effectiveness of RET in Drug Abuse Treatment



The result of the third objective in Table 4.17 reveals that, Rational Emotive Therapy has significant effect on the treatment of drug abuse, (sig 2-tailed=.025). And the result from the Quantitative in Figure 9 also shows that rational emotive therapy is effective in the treatment of drug abuse, (Tr- C=80%, Ch=80% and Sr-Ch=60%, C=80%). This means the null hypothesis should be rejected ($P<0.05$), which means rational emotive therapy has significant effect in the treatment of drug abuse among students.

Table 4. 18: Posttest showing the Effectiveness of CM and RET in Drug Abuse Treatment.

Treatment	N	Minimum	Maximum	Mean	Std. Deviation
Contingency	15	3.21	4.33	3.7694	.36626
RET	15	2.80	3.70	3.1467	.25598

Figure10 : Interview Determining the Effectiveness of CM and RET

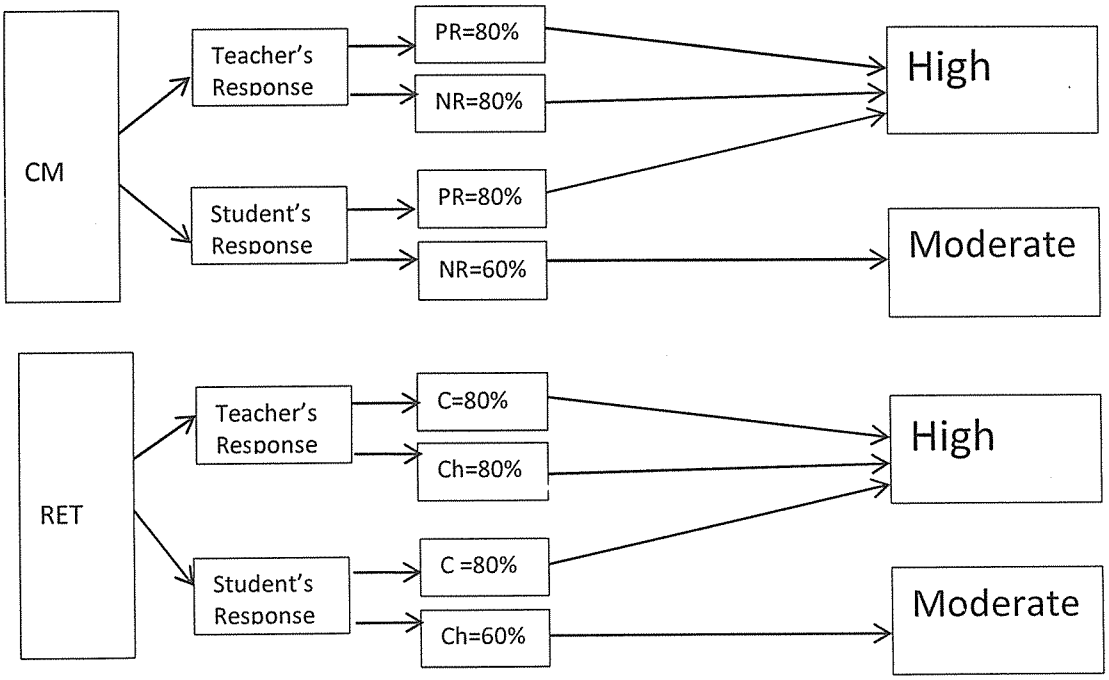


Table 4. 19: Determining the effectiveness of Contingency Management and Rational Emotive Therapy, (observation).

S/N	CM Group	Cumulative Average	RET Group	Cumulative Average
1	1	2.2	2	1.4
2	1	1.5	2	2.2
3	1	1.9	2	1.6
4	1	1.4	2	1.7
5	1	1.9	2	1.9
6	1	1.6	2	1.8
7	1	1.5	2	1.4
8	1	1.8	2	2.1
9	1	1.5	2	1.9
10	1	1.5	2	1.4
11	1	1.8	2	1.9
12	1	1.5	2	1.4
13	1	1.7	2	1.6
14	1	1.4	2	1.2
15	1	1.9	2	2.1
		1.70		**1.71**

Source: Primary source 2016

The result from the fourth objective in Table 4.18 reveals that contingency management is "High" (Mean=3.7694), while the result of rational emotive therapy treatment is "Moderate" (Mean=3.1467). And the result from the Qualitative in Figure 10 reveals no difference in the effectiveness of contingency management and rational emotive therapy in the treatment of drug abuse, contingency management (Tr-PR=80%, NR=80% and Sr-PR=80%,NR=60%), and rational emotive therapy (Tr- C=80%,Ch=80% and Sr-Ch=60%, C=80%). And the findings from observation in Table 4.19 shows that, Contingency management is effective at "High level" (Average value=1.70), and Rational emotive therapy also effective at "High level" (Average value=1.71), which also means no difference in the effectiveness.

Based on the quantitative finding (Mean=3.7694 for contingency management therapy) is higher than (Mean= 3.1467 for rational emotive therapy treatment). This means, based on the quantitative finding, contingency management therapy is more effective in the treatment of drug abuse than rational emotive therapy. However, the findings from the qualitative studies (interview and observation) reveals no difference in the effectiveness of the two therapies in the treatment of drug abuse in the area of the study, which means both therapies contributed effectively in the treatment of drug abuse.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS, CONCLUSION AND RECOMMENDATION

5:1 Background Information

The finding from table 4:3 indicates that majority of the respondents are male. This may be attributed to the culture of Hausa people where parent consider girl marriage so important. And most of times terminate the education of their daughters at senior secondary level, such that most ladies proceed their tertiary study, under the approval of their husband or unless agreement was made before the marriage. That form part of the reason why there are few number of females at higher institutions compare to male.

Also, the result obtains from table 4:4 show that majority of the respondents were between 16-25 years. These happen because, Nigeria is operating 9-3-4 system of education, and students are expected to finish secondary studies at 16 years. Which means higher education, begins at the age of 16. That form part of the reason why majority of respondents are between 16-25 years, unless if there is problem that prevent a person from joining the school at the expected time.

The finding from table 4:5 of this study indicates that majority of the respondents are from Sa'adatu Rimi College of Education, Kumbotso. This happen because the study focuses on teacher training and Sa'adatu Rimi College of Education by law is saddled with the responsibility of teacher training only. This means all the students of the college undergo teacher training courses that make their population of this research very high. While Bayero University having fewer samples were because only students of faculty of Education were considered in the study.

Also, the findings table 4.14 show that punctuality has the highest contribution in both therapies (CM=1.84, RET=1.78), follow by task completion (CM=1.68, RET=1.76), and the distraction (CM=1.62, RET=1.57), but for contribution, (CM=1.32, RET=1.61). The higher contribution for CM in punctuality is attributed to the provision of lunch in various categories (meal with chicken and soda, meal with beef and water and meal

only) while for RET, is attributed to convincing commitment through challenges, that it yields positive result. Also, the result of task completion for CM is attributed to the prize allocated for it (1^{st}=#200, 2^{nd}=#100), while for RET is attributed to the pressure to face the situation. Also, the result of distractibility for CM is attributed to withdrawal of reward, while for the RET is attributed to the convincing concentration through challenge, that it yields positive result. Lastly, the result of contribution for CM is attributed to the praises (clapping and appreciation), but for RET, is due to the effort of the counselor for activating the client to contribute in the session.

5:2 Prevalence of drug Abuse among students of teacher training institute in Kano State.

The finding from table 4.15 and figure 7 of this study reveals the prevalence of drug abuse among students of teacher training institutes in Kano State at high level (mean= 1.6904). Quantitative result describes the situation only, and qualitative result adds with the dimension and contribution of the construct as the predictors of the change.

This result agrees with the findings of Martino and Truss (1973), Adesina (1975), Olatunde (1979), Ekpo (1981), Orubu (1983), Idowu (1987), Adelekan et'al (1994), Ade Eke (1997), Fatoye and Morakinyo(2002), Chikere and Mayowa (2011) and Josephine (2014) who establish the prevalence of drug abuse among students at various levels of education in Nigeria. Also, the high prevalence of drug abuse in the higher institutions is an indication that youth involved in the menace, because majority who form the subject of the study were youth (16-25 years), this assertion was observed by Lambo (1984), Idowu (1987), Haladu and Taylor(2003) UNDOC (2004), Effiom, Ejue and Effiong (2005), WHO (2009), NIDA (2010), and NDLEA (2014) that there is high prevalence of drug abuse among younger people, and stressed that it was caused by defective personality, euphoria, excitement and need to prevent withdrawal symptoms.

This result may be attributed to a number of factors. Poverty, stress and depression were believed to be among the causes of drug abuse, and they had no boundary, the level of poverty in the State forced so many people including females into drug business and that make substances and drugs available at almost every corner in

the State. This assertion support the findings of Cowley and Anumunye (1980), Modungwo (1985), Garba (2003) that parental negligence, urbanization and unemployment and fear of academic failure as some causes of drug abuse among students and Omega (2005) who found that some people involve in the use of illicit drugs because they want to reduce regular pressures around them. Parental negligence could be another reason that forced youth into drug abuse. This assertion was supported by Odejide (1997) and Dankani (2012) that drug abuse is attributed to the parental negligence and peer influence.

Over population in the state might have an implication on the economy, leading to poverty and other forms of stress. According to the census (2006) Kano State has the highest population in Nigeria. Also, the State was known as chamber of commerce, because of the trading activities. There is mass flow of migrants and other business fellows on daily basis, which may lead to influx of drugs in the State. Although, there is drug sells policy in the State. It seems the policy is not functional, because drugs were indiscriminately sold in the State, the plan to sell drugs at a specified area and by professionals only was not fully supported and that make the drug abuse so rampant (Dankani, 2012).

5:3 Effectiveness of Contingency management in the treatment of drug abuse.

The finding from table 4.16 and figure 8 of this study indicates that contingency management therapy is effective in treating drug abuse. The quantitative result here shows the significant difference between the two tests and the qualitative result added with dimension and strength of the constructs as they lead to a change.

This result agrees with Miller (1975), Brigham et'al (1981), Dolan, Black, Penk Robinowitz and Deford (1985), Onken, Blaine and Boren (1993), Silverman et'al, (1996) Bickel et'al (1997), Higgins et'al (1998), Budney,Higgins, Randonovich, and Novy (2000), Petry(2000), Pearson, Lipton, Cleland and Yee and Shoptaw et'al (2002), Tedford, Austin, Nich, Carrol and Rounsenville (2003), Carrol and Onken(2005), Olmstead, Sindelar and Petry (2007) Scott and Kreet (2013) who confirmed the effectiveness of contingency management therapy in the treatment of drug abuse.

This result agrees that appropriate reinforcement has impact in behavior change. Example, recognition through praising and given prices to a positive behavior enhances the frequency of that behavior. Which means, the behavior could be modified by rewarding the action consistently and appropriately, whereas, withdrawal of reward especially when it is expected by the person seized unwanted behavior. Dolan et'al (1985), Onken, Blaine and Boren (1993), and Onken,(2005) posit that contingency management in which patients received rewards for meeting specific behavioral goals has particularly strong, consistent and robust empirical support across range types of drug use.

5:4 Effectiveness of Rational Emotive Therapy in the Treatment of Drug Abuse.

The finding from table 4.17 and figure 9of this study shows that rational emotive therapy is effective in the treatment of drug abuse. The quantitative result reveals the significant difference and the qualitative result adds with the dimension and the strength of the constructs as they lead to a change.

This result agrees with Bech (1981), Alao and Lanberg (1990), Lyons and Wood (1991), Higgins (1993), Ellis (2001), Epstein, Hawkins, Covi, Unbricht and Preston (2003) and Sarah (2005).

Their findings shows that, behavior can be change if irrational and illogical thinking is effectively disputed and rationally challenged, Lyons and Wood (1991) who found the effectiveness of rational emotive therapy in self- management and recovery training (SMART) in supporting addiction recovery. And also agrees with Higgins (1993) and Ellis (2001) who found the effectiveness of rational emotive therapy in the treatment through helping the clients to un- upset and empower them to lead a happier and fulfilling life. The result justifies the assumption of rational emotive theory that people in addition to disturbing themselves, are also innately constructivist, because for Sarah (2005) they largely upset themselves with their beliefs, emotions and behaviors, and they can be helped to, in a multimodal manner, dispute and question these and develop a more workable, more self-helping constructs.

The finding disagrees with David et'al (2005) that 30-40% of people are still unresponsive of rational emotive therapy treatment, and others who claimed that the therapy have the most success when dealing with depression.

5:5 Effectiveness of Contingency Management and Rational Emotive Therapy in drug abuse treatment.

The finding from the descriptive (quantitative) statistics in table 4.18 shows that contingency management is more effective compared with rational emotive therapy in the study. However, the finding from the interview (qualitative) in figure 10, and the finding from the observation (qualitative) in table 4:19 show no difference in the effectiveness of contingency management and rational emotive therapy in the treatment of drug abuse.

The quantitative finding agrees with the finding of Blume (2002) and Volkow et'al (2007) that contingency management use multi component strategies for treating drug abuse. These strategies aim at decreasing the reward value of the drug, increase the value of non-drug reinforcers , weaken conditional drug behavior and weaken the motivational derive to take the drug and strengthened frontal inhibitory and execution control. Also agree with Rawson et'al, (2002) and Farranado, Dustchler-Macforland, Wiesbeck and Petitjean (2013) who use contingency management and rational emotive therapy in their study, and found that contingency management is more effective. And agrees with Carrol and Onken (2005) that contingency management has shown to be a potent intervention for several forms of addiction, and the contingency management which reward is given for specific behavioral goal has particularly strong, consistent and rebust empirical support across a range types of drug use.

The findings from the qualitative studies agrees with Blume (2002) that drug abuse is caused by positive reinforcement (excitement) and negative reinforcement (avoidance of consequence), therefore the treatment should geared toward the causative factors.

The finding from the observation in table 4.18 shows that abstinence is achieved because the behavior of the clients has positively changed. More academic interest has

been observed particularly on punctuality; reduce distraction level, contribution and task accomplishment. This agrees with Idowu (1987) and Fayembo and Aremu (2000), Loaw (2001), Esenck (2002) and Eckpenyong (2012) that drug abuse deteriorate the level of performance and discipline which lead to absenteeism, loss of concentration and loss of interest in school, Merki (1993) that drug abuse effect self- concept.

5:6 Theoretical Contributions

The findings of this study contribute to the existing theories relating to the phenomena in the following areas:

- The findings validate the theories that reinforcement and disputation could change the behavior of addiction.
- The finding justifies that the therapies could be effective outside the clinical settings.
- The findings refine the scope of abstinence from just voluntary withdrawal from addiction, adding that physical changes in the behavior of the addicts need to be incorporated.

5:7 Conclusions

Drug abuse is a problem that is causing serious challenge to both individuals and government all over the world. The problem is prevalent among teacher trainees in Kano State, Nigeria, who in most cases are ignorant about the dangers inherent in it. The counseling strategy used in the study has significantly help the clients in changing their behaviors. The cognitive/ behavioral therapies used are contingency management on the behavioral side and rational emotive therapy on the cognitive side. After comparing the findings from the quantitative and qualitative analysis, both therapies were found to be effective in the treatment.

5:8 Recommendations

Based on the findings of this study, the following recommendations were proffered:

- There is a need for student enlighten program on drug abuse
- There should be sufficient facilities/funds provision to the counseling directorate

- Parent and communities should be considerate in dealing with children
- There is need for consistent monitoring by government, parent, teachers and counselors.

The enlighten programs on the dangers of drug abuse could significantly reduce its prevalence in the institutions. This could be done by creating Drug free club which gears towards presentation of activities that could block the negative and positive reinforcers of drug abuse. Also, to brings awareness that drug abuse is a behavioral problem that could be treated behaviorally. The programs could be through public drama, Exhibition, organized lectures inviting physicians, psychologist, NDLEA officials, and Drug repentance.etc.

Provision of sufficient facilities/funds could also make a great impact in dealing with the problem. Using contingencies either high or low requires support. For effective delivery of services by the counselors, government and the management of the institutions should consider the counseling programs in their budget and ensure that adequate fund is allocated to the directorate.

Parents and community members should understand that in most cases they cause their children emotional difficulties which in turn lead to irrational thinking, and hence leading to drug abuse. Being too strict, too aggressive, over expectations of child performance could only lead to guilt, anxiety, low frustration tolerance and depression. Therefore, having a good rapport with their children, could enhance self confidence in the child, and allows him to communicate his problems.

Consistent monitoring could also be of significant helps in tackling the menace. Parent and teachers should be more vigilant and should have an interactive forum with the counselor in order to know the primary symptoms of drug abuse. So that they could easily report to the counselors immediately the change is observed. The forum could have an avenue of communication either directly; media program or even through a social media. And the government should review its strategies for curving drug abuse from the use of force to use of behavioral approach, and should involve counselors.

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APPENDICES

APPENDIX I

COLLEGE OF HIGHER DEGREE AND RESEARCH

DEPARTMENT OF COUNSELING PSYCHOLOGY

SCHOOL OF HUMANITIES

KAMPALA INTERNATIONAL UNIVERSITY, UGANDA

Drug Abuse Screening Test (DAST-10)

Instructions

This questionnaire intended to find out the prevalence of drug abuse by age and gender among students in Teacher Training Institutions in Kano state. It is made for research purposes only. It has 10 items measuring the potentiality of been highly drugs addicted. The response is either 'YES' or 'NO'.

Institution_____ Department_____ Sex_____

Age - (16-25), (26-35), (36 and above)

Determining the Prevalence of Drug Abuse

S/NO	Statement	YES	NO
1.	Have you ever use drugs other than those required for medicinal reasons?		
2.	Do you abuse more than one drug at a time?		
3.	Are you unable to stop abusing drugs when you want?		
4.	Have you ever had 'blackouts' or 'flashbacks' as a result of drug use?		
5.	Do you feel bad or guilty about your drug use?		
6.	Does your spouse (or parents) ever complain about your involvement in drugs?		
7.	Have you neglected your family because of your use of		
8.	drugs?		
9.	Have you engaged in illegal activities in order to obtain drugs?		
10.	Have you ever experienced withdrawals symptoms (felt sick) when you stopped taking drugs?		
	Have you had medical problems as a result of your drug use?		

APPENDIX II

COLLEGE OF HIGHER DEGREE AND RESEARCH

DEPARTMENT OF COUNSELING PSYCHOLOGY

SCHOOL OF HUMANITIES

KAMPALA INTERNATIONAL UNIVERSITY, UGANDA

Contingency Management Treatment Assessment Questionnaire (COMTAQ)

Instruction

This Questionnaire was design for the purpose of research only;it is an opinion seeking intended to assess the treatment of drug abuse by the use contingency management therapy. It has ten items assessing the construct under investigation. Five Likert's scale will be used in measuring the respondent's opinion. Respondents should tick against the options most appropriate to them. Your response will significantly contribute to the understanding of the phenomenon, and confidentiality is grantee.

Institution ..... Department..... Level.....

Strongly Disagree -1, Disagree - 2 Undecided -3, Agree – 4, Strongly Agree – 5.

Table 3 : Testing the effectiveness of contingency management treatment

S.No	Statement	Response				
		1	2	3	4	5
1	I enjoy the drugs I am using					
2	Punishment control most of behaviors					
3	I don't know why I engag myself into drugs use					
4	Reinforcement enhances behavior change					
5	I enjoy having what I desire					
6	I feel very happy when my action was recognized					
7	I shouldn't have engaged myself into drug use					
8	I felt very unhappy when I expect something and fail to get it					
9	I feel very happy when I receive reward					
10	I could do everything to get money					

APPENDIX III

COLLEGE OF HIGHER DEGREE AND RESEARCH

DEPARTMENT OF COUNSELING PSYCHOLOGY

SCHOOL OF HUMANITIES

Kampala International University, Uganda

Rational Emotive Treatment Assessment Questionnaire (RETAQ)

Instructions

This Questionnaire was design for the purpose of research only, It is an opinion seeking intended to assess the treatment of drug abuse by using rational emotive therapy. It has ten items assessing the construct under investigation. Five Likerts scale will be used in measuring the respondent's opinion. Respondents should tick ( ) against the options most appropriate to them. Your response will significantly contribute to the understanding of the phenomenon, and confidentiality is grantee.

Institution ..... Department..... Level..... **Strongly Disagree - 1, Disagree -2, Undecided -3,Agree -4 Strongly Agree -5**

Table 4: Testing the effectiveness of Rational Emotive Therapy Treatment

S/N	Statement	Response				
		1	2	3	4	5
1	My happiness rely on the drugs I am using					
2	I thought everybody must like me					
3	I prefer been allowed to live my life the way I want					
4	I always thought I was not understood by most people					
5	Some people have to be challenged before they realize their problems					
6	I never thought my thinking is faulty					
7	I reckon, people attitude should not be challenge					
8	I shouldn't engage myself into drug use					
9	The best way to change a faulty belief is confrontation					
10	I feel always ready to accept what is real					

APPENDIX IV

COLLEGE OF HIGHER DEGREE AND RESEARCH

DEPARTMENT OF COUNSELING PSYCHOLOGY

SCHOOL OF HUMANITIES

KAMPALA INTERNATIONAL UNIVERSITY, UGANDA

Drug Abuse Interview forStudents ofTeacher Training Institutes (DAISOTI)

Instructions

This Interview was design for the purpose of research only, it is made to assess the prevalence of drug abuse among Students and the quality of Counseling services offered to them at teacher training institutes in Kano State, Nigeria, your response will significantly contribute to the understanding of the phenomenon and confidentiality is grantee.

Institution ..... School..... Department.....Level.....

1. What do you think about student's involvement in drugs at this institution?
   .....
   ...
   .....
   .....
   .....
   .....
2. How will you react when you are taught about your negative belief?
   .....
   .....
   .....
   .....
   .....
3. How important is reward to you after performing an action?
   .....
   .....
   .....
   .....
   .....
4. What do you think about drugs involvement among males and females in your institution?
   .....
   .....
   .....
   .....
   .....
5. What can you say about drug abuse in relation to the age of students?
   .....
   .....
   .....

APPENDIX V

COLLEGE OF HIGHER DEGREE AND RESEARCH

DEPARTMENT OF COUNSELING PSYCHOLOGY

SCHOOL OF HUMANITIES

KAMPALA INTERNATIONAL UNIVERSITY, UGANDA

Drug Abuse Interview for Teachers of Teacher Training Institutes (DAITOTTI)

Instructions

This Interview was design for the purpose of research only, it is made to assess the prevalence of drug abuse among Students and the quality of Counseling services offered to them at teacher training institutes in Kano State, Nigeria, your response will significantly contribute to the understanding of the phenomenon, and confidentiality is grantee.

Institution ..... Department..... Qualification.....

1. What do you think about the attitude of some students of this institute toward drugs?
   .....
   .....
   .....
2. Which group of students engages in drug abuse more in terms of gender?
   .....
   ...
3. What can you say about drug abuse in relation to the age categories of students in this institution?.....
   .....
   .....
   .....
   ...
4. Do you think reinforcement could help in treating drug abuse?
   .....
   .....
   .....
   .....
5. Do you think making drug abusers understand their belief system could make them stop abusing drugs?

.....
.....
.....
.....
.....

APPENDIX VI

OBSERVATION- RATIONAL EMOTIVE THERAPY EFFICACY

Cumulative Behavior rating scale

	Group	Attendance	Punctuality	Distraction	Contribution	Task Completion
S/n		X/N	X/N	X/N	X/N	X/N
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
Tot al						

KEY:1-RET Group Scoring: 3- High 2- Average 1-Low

Attendance: 0-1-----1, 2-3-------2, 4-5------3

Punctuality: Before the time---3, Beginning to 5mins---2, 6mins-End--1.

Distractibility: 0-1------1, 2-3-----2, 4-5--------3

Contribution: 0-1----1, 2-3-----2, 4-5---------3

Task Completion: 0-1---1, 2-3----2, 4-5----------3

Interpretations.

2.01-3.00-------Highly effective

1.01-2.00------- Effective

0.00-1.00-------- Not effective

APPENDIX VII

OBSERVATION- CONTINGENCY MANAGEMENT EFFICACY

Cumulative Behavior rating scale

	Group	Attendance	Punctuality	Distraction	Contribution	Task Completion
S/n		X/N	X/N	X/N	X/N	X/N
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
Total						

KEY:1-RET Group Scoring: 3- High 2- Average 1-Low

Attendance: 0-1-----1, 2-3-------2, 4-5------3

Punctuality: Before the time---3, Beginning to 5mins---2, 6mins-End--1.

Distractibility: 0-1------1, 2-3-----2, 4-5--------3

Contribution: 0-1----1, 2-3-----2, 4-5---------3

Task Completion: 0-1---1, 2-3----2, 4-5----------3

Interpretations.

2.01-3.00-------Highly effective

1.01-2.00------- Effective

0.00-1.00-------- Not effective

APPENDIX VIII

OBSERVATION- RATIONAL EMOTIVE THERAPY EFFICACY

Daily Behavior rating scale

	Group	Attendance	Total	Punctuality	Total	Distraction	Total	Contribution	Total	Task Completion	Total
S/n		1,2,3,4,5		1,2,3,4,5	X/N	1,2,3,4,5	X/N	1,2,3,4,5	X/N	1,2,3,4,5	X/N
1		✓✓✓✓✓	4	2 1 1 2 1	1.2	1 2 2 2 2	1.4	1 2 2 2	1.4	2 2 2 2	1.6
2		✓✓✓✓✓	5	2 2 2 2 1	1.8	1 2 2 2 2	1.8	1 2 3 3 3	2.4	2 2 3 3 3	2.6
3		✓✓✓✓✓	4	3 2 2 2	1.8	1 1 2 2	1.2	2 2 2 2	1.6	2 3 2 2	1.8
4		✓✓✓✓✓	4	2 1 2 2	1.4	2 2 2 2	1.6	1 2 2 3	1.6	3 2 2 3	2.0
5		✓✓✓✓✓	5	2 2 2 2 2	2.0	1 1 2 1 2	1.4	2 2 2 2 2	2.0	2 2 2 2 2	2.0
6		✓✓✓✓✓	5	3 2 2 2 1	2.0	2 1 2 2 2	1.8	1 1 1 2 2	1.4	2 2 2 2 2	2.0
7		✓✓✓✓✓	4	2 2 2 2	1.6	2 2 2 2	1.6	1 1 1 2	1.0	1 1 2 2	1.2
8		✓✓✓✓✓	5	1 3 2 3 2	2.2	1 1 2 2 2	1.6	2 2 2 2 2	2.0	1 2 3 3 3	2.4
9		✓✓✓✓✓	5	2 2 2 2 2	2.0	1 2 1 2 2	1.6	1 2 2 2 3	2.0	2 2 2 2 2	2.0
10		✓✓✓✓✓	4	1 2 2 2	1.4	2 2 2 2	1.6	2 2 2 2	1.6	1 1 1 2	1.0
11		✓✓✓✓✓	5	2 2 2 2 2	2.0	2 2 2 2 2	2.0	1 2 2 2 2	1.8	1 2 2 2 2	1.8
12		✓✓✓✓✓	4	3 2 2 3	2.0	2 2 2 2	1.6	1 1 1 2	1.0	1 1 1 2	1.0
13		✓✓✓✓✓	4	2 3 3 3	2.2	2 2 2 2	1.6	1 1 3 1	1.2	1 1 2 2	1.2
14		✓✓✓✓✓	4	1 2 1 4	1.0	1 1 2 2	1.2	1 1 2 2	1.2	2 2 1 2	1.4
15		✓✓✓✓✓	5	2 2 2 2 3	2.2	1 2 1 2 2	1.6	2 2 2 2 2	2.0	2 2 2 3 3	2.4
Total											

KEY:1-RET Group Scoring: 3- High 2- Average 1-Low

Attendance: 0-1-----1, 2-3-------2, 4-5------3

Punctuality: Before the time---3, Beginning to 5mins---2, 6mins-End------1.

Distractibility: 0-1------1, 2-3-----2, 4-5--------3

Contribution: 0-1----1, 2-3-----2, 4-5---------3

Task Completion: 0-1---1, 2-3----2, 4-5----------3 OBSERVATION- RATIONAL EMOTIVE

Interpretations.

2.01-3.00-------Highly effective

1.01-2.00------- Effective

0.00-1.00-------- Not effective

APPENDIX IX

OBSERAVATION CONTINGENCY MANAGEMENT EFFICACY

Daily Behavior rating scale

	Group	Attendance	Total	Punctuality	Total	Distraction	Total	Contribution	Total	Task Completion	Total
S/n		1,2,3,4,5		1,2,3,4,5		1,2,3,4,5		1,2,3,4,5		1,2,3,4,5	
1		√√√√√	5	2 1 2 2 2	2·2	2 2 2 2 2	2.0	2 1 2 2 2	1·6	2 2 3 3 3	2·8
2		- √√√√	4	- 2 1 2 2	1·4	- 2 2 2 2	1·6	- 1 2 2 1	1·2	- 1 2 2 3	1·6
3		√√√√√	5	2 2 3 2 3	2·4	1 1 2 2 2	1·6	1 2 2 2 1	1·6	1 1 2 3 3	2·0
4		√√√√-	5	2 2 1 2 -	1·4	2 1 2 2 -	1·4	1 1 2 2 -	1·2	2 1 2 3 -	1·4
5		√√√√√	5	2 1 2 3 3	2·2	2 2 2 2 2	2·0	1 1 2 2 2	1·6	1 2 2 2 2	1·8
6		- √√√√	4	- 2 2 3 3	2·0	- 2 2 2 1	1·4	- 1 1 2 2	1·2	- 2 2 3 2	1·6
7		√ - √√√	4	1 - 2 3 2	1·6	1 - 2 2 2	1·4	- 2 2 2 2	1·6	1 - 2 2 2	1·4
8		√√√√√	5	2 2 2 2 2	2·0	1 2 2 1 2	1·8	1 2 1 1 2	1·4	1 2 2 2 3	1·8
9		- √√√√	4	- 1 2 2 2	1·4	- 2 1 2 2	1·4	- 1 2 2 2	1·4	- 2 2 2 2	1·6
10		- √√√√	4	- 2 2 2 3	1·8	- 2 2 2 2	1·6	- 1 2 2 1	1·2	- 1 2 2 2	1·4
11		√√√√√	5	1 2 2 5 2	2·0	2 2 2 2 2	2·0	1 1 2 2 1	1·4	1 1 2 2 2	1·6
12		- √√√√	4	- 2 3 2 2	1·8	- 1 1 2 2	1·2	- 1 2 2 2	1·4	- 1 2 2 2	1·4
13		√ - √√√	4	1 2 2 2 3	1·8	2 2 1 2 2	1·8	1 - 2 2 1	1·2	1 2 2 2 2	1·8
14		√√ - √√	4	1 2 - 2 2	1·4	1 2 - 1 2	1·4	1 1 1 2 1	1·4	1 - 2 2 2	1·4
15		√√√ √√	5	2 2 2 2 2	2·2	1 2 2 2 2	1·8	1 1 2 2 2	1·6	1 2 2 2 2	1·8
Total		10,13,14,15,14	66/15								

KEY:1-Contingency group Scoring: 3- High 2- Average 1-Low

Attendance: 0-1-----1, 2-3-------2, 4-5------3

Punctuality: Before the time---3, Beginning to 5mins---2, 6mins-End------1.

Distractibility: 0-1------1, 2-3-----2, 4-5--------3

Contribution: 0-1----1, 2-3-----2, 4-5---------3

Task Completion: 0-1---1, 2-3----2, 4-5----------3

Interpretations.

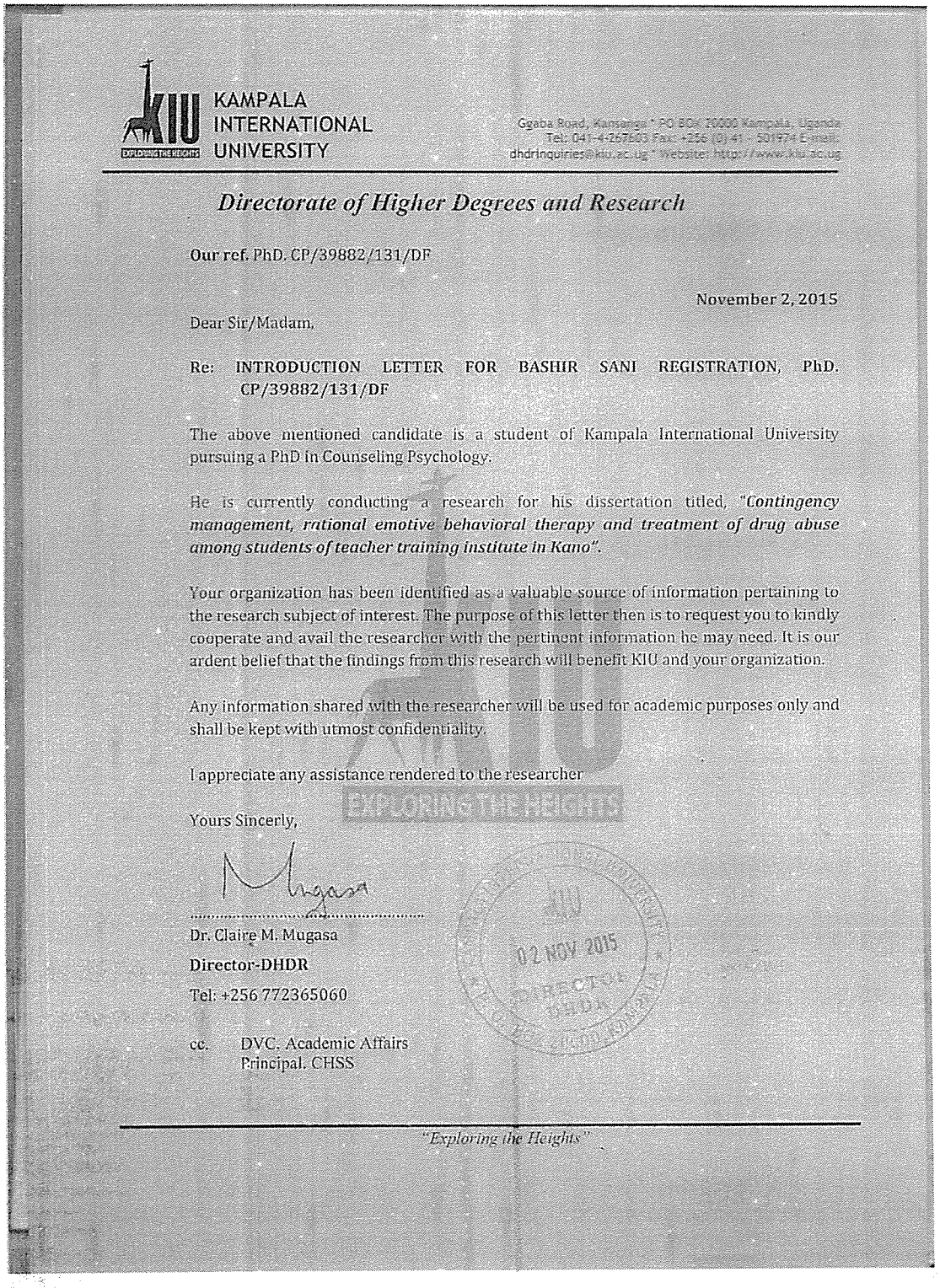
2.01-3.00-------Highly effective

1.01-2.00------- Effective

0.00-1.00-------- Not effective

APPENDIX X

TRANSMITTAL LETTER



KAMPALA INTERNATIONAL UNIVERSITY

EXPLORING THE HEIGHTS

Ggaba Road, Kansanga * PO BOX 20000 Kampala, Uganda
Tel: 041-4-267813 Fax: +256 (0) 41 - 501974 E-mail: dhdrinquiries@kiu.ac.ug * Website: http://www.kiu.ac.ug

Directorate of Higher Degrees and Research

Our ref. PhD. CP/39882/131/DF

November 2, 2015

Dear Sir/Madam,

Re: INTRODUCTION LETTER FOR BASHIR SANI REGISTRATION, PhD. CP/39882/131/DF

The above mentioned candidate is a student of Kampala International University pursuing a PhD in Counseling Psychology.

He is currently conducting a research for his dissertation titled, ***"Contingency management, rational emotive behavioral therapy and treatment of drug abuse among students of teacher training institute in Kano".***

Your organization has been identified as a valuable source of information pertaining to the research subject of interest. The purpose of this letter then is to request you to kindly cooperate and avail the researcher with the pertinent information he may need. It is our ardent belief that the findings from this research will benefit KIU and your organization.

Any information shared with the researcher will be used for academic purposes only and shall be kept with utmost confidentiality.

I appreciate any assistance rendered to the researcher

Yours Sincerly,

Mugasa

.....

Dr. Claire M. Mugasa

Director-DHDR

Tel: +256 772365060

cc. DVC. Academic Affairs
Principal. CHSS

02 NOV 2015

"Exploring the Heights"

APPENDIX XI

TRANSMITTAL LETTER APPROVED BY BAYERO UNIVERSITY KANO

KAMPALA INTERNATIONAL UNIVERSITY
EXPLORING THE HEIGHTS

Ggaba Road, Kansanga * PO BOX 20000 Kampala, Uganda
Tel: 041-4-267603 Fax: +256 (0) 41 - 501974 E-mail: dhdrinquiries@kiu.ac.ug * Website: http://www.kiu.ac.ug

Directorate of Higher Degrees and Research

Our ref: PhD. CP/39882/131/DF

November 2, 2015

Dear Sir/Madam,

Re: INTRODUCTION LETTER FOR BASHIR SANI REGISTRATION, PhD. CP/39882/131/DF

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He is currently conducting a research for his dissertation titled, *"Contingency management, rational emotive behavioral therapy and treatment of drug abuse among students of teacher training institute in Kano".*

Your organization has been identified as a valuable source of information pertaining to the research subject of interest. The purpose of this letter then is to request you to kindly cooperate and avail the researcher with the pertinent information he may need. It is our ardent belief that the findings from this research will benefit KIU and your organization.

Any information shared with the researcher will be used for academic purposes only and shall be kept with utmost confidentiality.

I appreciate any assistance rendered to the researcher

Yours Sincerly,

Mugasa

Dr. Claire M. Mugasa
Director-DHDR
Tel: +256 772365060

02 NOV 2015

OFFICE OF THE DEAN
10 DEC 2025
Bayero University PMB 3011 Kano
FACULTY OF EDUCATION

cc. DVC, Academic Affairs
Principal, CHSS

APPENDIX XII

TRANSMITTAL LETTER APPROVED BY SRCOE KUMBOTSO

KAMPALA INTERNATIONAL UNIVERSITY

Ggaba Road, Kansanga * PO BOX 20000 Kampala, Uganda
Tel: 041-4-267603 Fax: +256 (0) 41 - 501974 E-mail: dhdrinquiries@kiu.ac.ug * Website: http://www.kiu.ac.ug

Directorate of Higher Degrees and Research

Our ref. PhD. CP/39882/131/DF

November 2, 2015

Dear Sir/Madam,

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I appreciate any assistance rendered to the researcher

Yours Sincerly,

Mugasa

.....

Dr. Claire M. Mugasa

Director-DHDR

Tel: +256 772365060

cc. DVC, Academic Affairs
Principal, CHSS

KIU
02 NOV 2015
DIRECTOR
DHDR

Dean
School of Education
P. O. Box 20000, Kampala

16/12/15

APPENDIX XIII

PhD ADMISSION LETTER

KAMPALA INTERNATIONAL UNIVERSITY

Ggaba Road-Kansanga.
P.O. Box 20000, Kampala, Uganda.
Tel: +256-414-266813, +256-414-267634
Fax: +256-414-501974. Cel:+256-706-251084
E-mail: admin@kiu.ac.ug,
Website: www.kiu.ac.ug

DIRECTORATE OF ADMISSIONS

P.O BOX 20000, Kampala Uganda, Tel: 256-772-322563 or +256-41-267634 or Fax 256-41-50197

Email: admin@kiu.ac.ug or website: www.kiu.ac.ug

SURNAME : BASHIR DATE: 17-01-2013

OTHER NAMES : SANI ADMN NO: 86329

DESIGNATION : PhD/131/DNg

Dear Applicant,

ADMISSION TO A DOCTOR OF PH ILOSOPHY PROGRAMME

I am pleased to inform you that you have been offered a place on a programme of study leading to the following award:

DOCTOR OF PHILOSOPHY IN COUNSELING PSYCHOLOGY

You will complete your course within a minimum of three (3) years and a maximum of seven (7) years, effective 27-01-2013.

Your admission will lapse if you do not register within three weeks from the effective date, unless prior arrangements have been made.

You will be required to renew your registration at the beginning of each year of your study after a satisfactory progress report is received from the College of Higher Degrees and Research. You will also be required to apply for extension of your registration (at a fee as may be applicable), up to a maximum of three times, if you realise you cannot complete your studies within the specified completion period indicated above.

1

APPENDIX XIV

TIME FRAME FOR DISSERTATION

Activity	Feb.- Oct. 2015	Nov. 2015-Feb. 2016	Mar.-May 2016	Jun –Aug. 2016	Sep-Nov 2016
1. Conceptual Phase					
Chapter 1					
2. Design & Planning Phase					
Chapter 2-3					
3. Proposal Hearing for Dissertation					
4. Empirical Phase					
Data Collection					
5. Analytic Phase					
Chapter 4-5					
6. Journal Article					
7. Dissemination Phase					
Viva Voice					
8. Revision					
9. Final Book Bound Copy					
10. Clearance					
11. Graduation					