Effects of Emotional Regulation and Distress Tolerance Skills Training on Relapse Prevention among Students with Drug Abuse Addictive Behaviours

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Abstract

This study investigated the effects of emotional regulation and distress tolerance skills training on relapse prevention among students with drug abuse addictive behaviours. Pre-test, post-test, control group quasi-experimental research design was adopted for the study. Purposive sampling method was used to select n=30 undergraduate students with drug abuse addictive behaviour, male and female between the ages of 18 and 28 years from University of Port Harcourt, Rivers State, Nigeria. Emotional Regulation and Distress Tolerance Inventory (ERDTI) and Drug Abuse Relapse Prevention Assessment Scale (DARPAS) were used for data collection. Participants were randomly assigned to the three groups A, B and C. Emotional Regulation training was used on group "A", Distress tolerance training on group "B" for 8 weeks and 6 months follow-up, while group "C" had nothing. Face and content validity of DARPAS and ERDTI were ensured by test experts while the test-re-test method was used to ensure the reliability of the two instruments using Pearson product moment correlation statistics which yielded coefficient scores of 0.85 and 0.79 respectively. ANCOVA and T-test statistics were used for data analysis and the results shows that there were significant effects of emotional regulation training and distress control training on relapse prevention among students with drug abuse addictive behaviour (the mean difference is Significant at $p< 0.05$ level). The implication from the study shows that the students who benefited from emotional regulation and distress control intervention strategies were significantly better in terms of drug abuse addictive relapse prevention than those in the control group. We therefore, recommend the urgent need for relapse prevention interventions strategies in Nigerian Universities to reduce the negative consequences of relapse of drug abuse addictive behaviour among University students.

Keywords: Addiction, Behaviour, Prevention, Relapse, Skills

Introduction

Drug addiction is a complex condition. In most cases, it is often difficult for individuals who have recovered or abstained for some period to resist the temptation of relapse. Relapse among students with drug abuse addictive behaviour has been a big concern. Researchers has also confirmed that a large proportion of individuals who have been treated for addiction tend to re-use drug shortly after treatment (Mohammadpoorasl, Fakhari, Akbari, Karimi, and Arshadi, 2012). It is very surprising to note that a variety of interventions are available for people with substance abuse yet the relapse rates are still high (Tuithof, ten Have and van den Brink, 2014) and addiction on substances and other behaviours is increasing (Rayan, Dadoul and Jabareen, 2016). Therefore, having observed the trend of relapse after treatment of drug addiction among students in Nigerian Universities, it is necessary to develop efficient interventions, such as relapse prevention programs. The truth in drug addiction is that setbacks can set up a vicious cycle, in which individuals see setbacks as confirming their negative view of themselves. This can lead to more use of drugs and a greater sense of failure. They are caused by insufficient life coping skills and inadequate planning, which are issues that can be fixed (Rayan, Dadoul and Jabareen, 2016). Thus, improving life coping skills among students with drug abuse addictive behaviour becomes a motivation for this study.

Addiction has been defined by many academics, health bodies and clinicians from various perspectives. Sussman, and Sussman (2011) see "addiction" as simply "giving over" or being "highly devoted" to a person or activity, or engaging in a behaviour habitually, which could have positive or negative implications. Furthermore, National Institute on Drug Abuse (2003, 2014) defined addiction as a chronic, relapsing brain disease that is characterized by compulsive drug seeking and use, despite harmful consequences. In other word, addictive behaviour is a behaviour, or a stimulus related to a behaviour, that is both rewarding and reinforcing, and is associated with the development of an addiction (Volkow, Koob, and McLellan, 2016). Addictive behaviours are often experienced subjectively as loss of control and the behaviour contrives to occur despite volitional attempts to abstain or moderate use.

Consequently, relapse is challenging to counsellors and their clients. Preventing relapse or minimizing its extent is therefore a prerequisite for any attempt to facilitate successful, long-term changes in addictive behaviours. Hendershot, Witkiewitz, George, and Marlatt (2011) defined relapse as a setback that occurs during the behaviour change process, such that progress toward the initiation or maintenance of a behaviour change goal (abstinence from drug use) is interrupted by a reversion to the target behaviour. A critical implication is that rather than signalling a failure in the behaviour change process, lapses can be considered a temporary setback that present opportunities for new learning to occur. They also defined relapse prevention as a tertiary intervention strategy for reducing the likelihood and severity of relapse following the cessation or reduction of problematic behaviours. Melemis (2015) opined that if individuals do not change their lives, then all the factors that contributed to their addiction will still be there. Therefore, if the individual lacks an effective coping response to deal with the situation the tendency is to give in to temptation.

Emotional regulation and distress tolerance skill training is the life skill trainings adapted for the relapse prevention. Gross (2002) emphasized that emotion enables an individual to deal with the important challenges and opportunities arising from a coordinated behaviour, experience and physiological reaction tendency. Emotion regulation is, therefore, the process of individual management and change of oneself or other people's emotions (Chen, 2016). Furthermore, research reveals that individuals with low distress tolerance (DT) are prone to using maladaptive coping strategies when faced with distress, including rigid efforts to control or avoid discomfort-inducing emotions and situations, which can inadvertently reinforce and maintain their maladaptive behaviour (Leyro, Zvolensky, & Bernstein, 2010; Zvolensky and Hogan, 2013). Distress tolerance is the ability to tolerate and survive crises without making things worse (Linaham, 2015). The ability to tolerate and accept distress is essential for every individual. The reality is that pain and distress are part of life and they cannot be entirely avoided or removed (Linaham, 2015; Leyro, Zvolensky, and Bernstein, 2010). Furthermore, the fact remain that inability to accept this indisputable fact increases pain and suffering, being that distress tolerance aids in any attempt to change yourself (Linaham, 2015). Distress tolerance skills training becomes important since any efforts to escape pain and distress will interfere with ones efforts to establish desired changes in behaviour.

Azizi, Borjali, & Golzari (2010) in a quasi-experimental study investigated the effectiveness of emotional regulation training group therapy, based on Dialectical Behavioral Therapy (DBT) and Cognitive Therapy, on improving emotional regulation and distress tolerance skills and relapse prevention in addicts. In their study 39 patients with the diagnosis of opioid dependence based on DSM-IV criteria were randomly assigned to two experimental and one control groups. The result shows that emotion regulation training were effective increasing distress tolerance, emotion regulation enhancement, and decreasing the amount of drug abuse, health improvement, social functioning, somatic symptoms, anxiety, and social dysfunction. Furthermore, Aazami, Sohrabi, Borjali and Chopan (2014) in a pilot study determined the effectiveness of teaching emotion regulation in reducing impulsivity in drug dependent people, employing pre-test – post-test design with control group comprising of all the addicted drug-quitting clients. A total of 30 drug-dependent persons were selected by simple random sampling and randomly assigned to one of the experimental and control groups. The results showed that emotion regulation training can be effective in reducing symptoms of impulsivity in drug-

dependent individuals. Therefore, they concluded that emotion regulation training to such people can enhance their self-restraining power. Secondly, Muhomba, Chugani, Uliaszek, and Kannan (2017) in their study enrolled students in distress tolerance groups ranging from 7–10 weeks and the result showed that all students (N = 22) demonstrated significantly improved scores on measures of emotion regulation, functional and dysfunctional coping. These results are the first to show that targeted skills training with DBT distress tolerance skills can produce beneficial outcomes in college students in the context of a short-term intervention.

This study is anchored on social learning theories (Bandura, cited in West and Brown, 2013) by focusing on the cognitive processes occurring between stimulus and behaviour. Social learning theory postulate that persons who doubt their ability to control their use of drug, are those with low efficacy expectations, they are likely to overreact or catastrophize the consequences of a single lapse and view the lapse as a global failure. A general model of relapse in a social learning framework according to Bandura has three components: first, the patient encounters a high-risk situation during abstinence; second, the patient has expectations about whether the situation can be handled without use of drugs; and third, the patient or client has a limited repertoire of behaviours and skills to cope with the high-risk situation. The work of social learning theorists contains specific formulations regarding relapse prevention. Treatment derived from social learning theories attempts to prevent relapse by intervening at different points in the chain of behaviours, beginning with antecedents to the high-risk situation and extending through actual relapse. The interventions are tailored to the specific stage in the sequence and to the person.

In conclusion, we assume that right intervention will consequently enhance relapse prevention among students with drug abuse addictive behaviours. Drug abuse addictive behaviour affects all facet of student life especially his or her academic performance and wellbeing. The concern over the handicapping trend of drug use addictive behaviour among University students in Nigerian forms the background of carrying out this study and its effectiveness will contribute to the frontier of knowledge.

Objective of the Study

The main objective of this study was to investigate whether emotional regulation and distress tolerance skills training would produce improvement on drug abuse relapse prevention. In addition, the study was to examine the differential effects of the two independent variables on drug abuse relapse prevention among University students with drug abuse addictive behaviours.

Research Questions

1. What are the effects of Emotional Regulation (ER) and Distress Tolerance (DT) skills training on relapse prevention among students with drug abuse addictive behaviours?
2. What are the differential effects of Emotional Regulation and Distress Tolerance skills training on relapse prevention among students with drug abuse addictive behaviours?

Hypotheses

Two corresponding hypotheses were formulated to guide the study:

1. There is no effect of Emotional Regulation and Distress Tolerance skills training on relapse prevention among students with drug abuse addictive behaviours.
2. There is no differential effect of emotional regulation and distress Tolerance skills training on relapse prevention among students with drug abuse addictive behaviours.

Methodology

Participants

The target population for the study was all the 40 male and female students between the ages of 18 and 28 years who participated in the group counselling against drug abuse from four departments in faculty of Education University of Port Harcourt, Rivers State, Nigeria. The participants consisted of a sample of 30 undergraduate

(25 males and 5 females) students with drug addictive behaviour from four departments, drawn through purposive sampling method.

Instruments

Drug Abuse Relapse Prevention Assessment Scale (DARPAS) and Emotional Regulation and Distress Tolerance Inventory (ERDTI) were used for data collection. DARPAS was adapted by the researchers as a diagnostic tool to identify students with drug abuse addictive behaviour and as an outcome measure used for pre-test and post-test. Drug Abuse Relapse Prevention Assessment Scale (DARPAS) was adapted from AWARE Questionnaire (Advance WArning of RElapse) designed as a measure of the warning signs of relapse for alcohol abuse or dependence, as described by Gorski (Gorski & Miller, 1982) developed through research funded by the National Institute on Alcohol Abuse and Alcoholism (NIAAA, contract ADM 281-91-0006).. The instrument was redesigned from its 37-item original version to the current 28-item scale (version 3.0) (Miller & Harris, 2000). The current 28-item with1-7 rating scale (Never = 1, Rarely = 2, Sometimes = 3, Fairly often = 4, Often = 5, Almost always = 6, Always = 7 with a reverse scoring for the following five items: 8, 14, 20, 24, 26.) was adapted and modified for the study. The higher the score, the more warning signs of relapse are being reported by the client. The range of scores is from 28 (lowest possible score) to 196 (highest possible score). Emotional Regulation and Distress Tolerance Inventory (ERDTI) is a self-report inventory that consists of 36 items to screen their level of emotional regulation and distress tolerance in relation to their drug abuse addictive behaviour. Score "1" is given for each NO response, while score "2" is for YES responses. The names of the students were not needed in each of the instruments used, rather numbers were used for participants' identification so that the pre-test scores will be matched with post-test scores. The reason was to avoid students being biased in giving correct assessment of their situation and to assure them of ultimate confidentiality. The face and content validity of the instruments was determined by test experts. The reliability of the instrument was ensured through the test-retest method using Pearson Product Moment correlational coefficient statistic which yielded coefficient scores of 0.85 and 0.79 respectively which was considered high for use by experts

Procedure

Treatment Stages

Stage 1: Introduction: Meeting with the would-be participants that participated. This was to familiarize them with the mission and the objective of the researchers, and the benefits for the individual participants. Pretests were administered using Drug Abuse Relapse Prevention Assessment Scale (DARPAS); and Emotional Regulation and Distress Tolerance Inventory (ERDTI) served as a diagnostic tool and as an insight for the training. The scores obtained from DARPAS served as both pre-test/post-test scores. It also served as pretreatment diagnostic instrument to identify students with drug abuse addictive behaviours. Participants were randomly assigned into three groups. Time and days of meeting sessions were agreed on.

Stage 2: Intervention: emotional regulation and distress control life skill training program with the experimental groups commenced, where the researchers taught the participants what they need to know about drug abuse relapse. After the teaching session it was then followed by life skill training which consisted emotional regulation for group "A", and distress tolerance for group "B" and all lasted for 8 weeks of 8 sessions for an hour, while group "C" had nothing.

The emotional regulation training include skills in Understanding and naming emotions, Changing emotional responses, Reducing vulnerability to emotion mind and Managing really difficult emotions. They learnt about the connection between their thoughts, feelings, and behaviours, and that by changing one of these they can have an impact on the others. Self-validation is emphasized, along with other skills to help clients manage their emotions more effectively. The distress tolerance training include Crisis survival skills, Reality acceptance skills, and Supplemental Skills when the crisis is addiction. The goal was simply to help clients survive crises without making things worse by engaging in problem behaviours such as self-harm, substance abuse, and so on. These skills help clients soothe and distract themselves from the problem, rather than dwelling on it and

eventually acting on the urges that accompany the painful emotions. The two treatment packages were well administered to the participants differently. The training packages were adapted from relevant literature to the study.

Stage 3: Evaluation: Evaluation of the treatment intervention to examine the outcome of the study. After the treatment program of 8 weeks, DARPAS was re-administered to the three groups to determine the effectiveness of the treatment interventions.

Design of the Study

A Pre-test, post-test, control group quasi-experimental research design was adopted for the study. Balloting was applied to put participants in three groups of 10 students each in group A, B, and C that is two experimental and one control group. Data were analysed using mean and standard deviation for the research questions and T-test and Analysis of covariance (ANCOVA) to test the hypotheses with the aid of IBM SPSS Statistics 21 at 0.05 level of significant.

Result

Research Question 1: What are the effects of emotional regulation and distress control on relapse prevention among students with drug abuse addictive behaviours?

Table 1: Mean and Standard Deviation of the independent variables on dependent variables

Group	N	Mean $\bar{X}$	Std Deviation
Pretest for Exp. Group A	10	121.50	12.921
Pretest for Exp. Group B	10	130.50	14.142
Pretest for Contr. Group	10	131.00	8.34
Posttest for Exp. Group A	10	53.00	14.181
Posttest for Exp. Group B	10	47.20	13.669
Posttest for Contr. Group	10	129.50	6.852

The result on the table 1 shows that students in emotional regulation treatment group pre-test mean ($\bar{X}$) scores ($\bar{X}$ =121.50) and Standard deviation value 12.921. Students in distress control treatment group had pre-test mean ($\bar{X}$) scores ($\bar{X}$ =130.50) and Standard deviation value of 14.142. Students in Control group had pre-test mean ($\bar{X}$) scores ($\bar{X}$ =131.00) and Standard deviation value of 8.34. The individual responses on relapse prevention of participants in emotional regulation treatment group and responses on relapse prevention of participants in distress control are not widely deviated from the mean more than those in Control group. The post-test showed the difference. From the table 1 also it shows that students in emotional regulation treatment group post-test mean ($\bar{X}$) scores ($\bar{X}$ =53.00) and Standard deviation value 14.181. Students in distress control treatment group had post-test mean ($\bar{X}$) scores ($\bar{X}$ =47.20) and Standard deviation value of 13.669. Students in Control group had post-test mean ($\bar{X}$) scores ($\bar{X}$ =129.50) and Standard deviation value of 6.852. The individual responses on relapse prevention of participants in emotional regulation treatment group and responses on relapse prevention of participants in distress control treatment group are widely deviated from the mean more than those in Control group.

Research Question 2: What are the effects of emotional regulation and distress control on relapse prevention among students with drug abuse addictive behaviours?

Research question 2 is answered from table 1 above. From the table 1 also it shows that students in emotional regulation treatment group post-test mean ($\bar{X}$) scores ($\bar{X}$ =53.00) and Standard deviation value 14.181.

Students in distress control treatment group had post-test mean ($\bar{X}$ **)** scores ($\bar{X}$ =47.20) and Standard deviation value of 13.669. The individual responses on relapse prevention of participants in emotional regulation treatment group and responses on relapse prevention of participants in distress control treatment group had a little deviation.

Hypothesis 1: There is no effect of emotional regulation and distress control on relapse prevention among students with drug abuse addictive behaviours.

Table 2: Presents Analysis of covariance (ANCOVA) showing relapse prevention of the two independent variables emotional regulation and distress control on experimental group A, B and control group.

Source of Variance	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig**
Variable Controlled					
(pre-test scores)	668.041	1	66.041	5.351	0.029
Intercept	137.962	1	137.962	1.105	0.303
Main effect	39010.774	2	19505.387	156.233	0.001
Error	3246.059	26	124.848		
Total	**221985.000**	**30**			

The result in table 2 shows that F (2, 26) = 156.233, p = 001. Between groups are presented in main effect (VAR00003) rows and while within groups presented in Error rows. In main effect rows, Type III Sum of Squares 39010.774 degree of freedom, Mean Square 19505.387, 2 F ratio and p = .001 significance. The Error has type sum of square of 3246.059, degree of freedom of 26 and mean square of 124.848 The computed ANCOVA coefficient (F) is 5.351, p < .029 and is statistically significant at possible chosen alpha level of .05 with its actual probability in the population is as low as .001. Therefore, with the effect of the Pre-test covaried out, adjusted for, removed or partialled out, the hypothesis of "there is no differential effect of the two independent variables, of emotional regulation and distress control on relapse prevention among students with drug abuse addictive behaviours in the experimental groups and control group based on their Pre-test, Post-test scores from DARPAS" pre-test and post test scores, is rejected both at .05 and .01 levels of significance. There is statistically significant means difference among the experimental groups and control group because F (2,26) =, p < .05.

Hypothesis 2: There is no differential effect of emotional regulation and distress control on relapse prevention among students with drug abuse addictive behaviours.

Table 3: Independent t-test showing the difference effects in relapse prevention among participants in the two experimental groups

Variable	**N**	**Mean**	**Std. Dev.**	**df**	**t**	**P-Value**	**Remark**
Exp. Group A	10	53.00	14.181	18	0.93	0.85	Not Sig.
Exp. Group B	10	47.20	13.669				

Table 3 Shows that among the 10 students (Exp. group A) who received emotional regulation their mean score was 53.00 and the 10 students (Exp. group B) who had distress control their mean score was 47.20. The standard deviation of group "A" was 14.181 and 13.669 respectively. From the table t (18) = 0.93 p> 0.85. When the p value is equal to or less than the chosen alpha, reject the hypotheses but when the p value is greater than the chosen alpha, retain or do not reject the hypotheses. In this case the p value is greater than the chosen alpha so

we retain or accept the hypotheses which say that "There is no differential effect of the two independent variables, of emotional regulation and distress control on relapse prevention among students with drug abuse addictive behaviours in the experimental groups based on their Post-test scores from DARPAS"

Discussion of results

The main purpose of this study was to investigate the effects of emotional regulation and distress control on relapse prevention among students with drug abuse addictive behaviours. The study was also to determine the differential effectiveness of the two independent variables on drug abuse relapse prevention. The results, among others, reveal that there are significant effects of (independent variables on dependent variable) emotional regulation and distress control skills training on relapse prevention among students with drug abuse addictive behaviours. This result is in line with Hendershot, Witkiewitz, George, and Marlatt (2011) in their own study found a positive result by emphasizing that Relapse Prevention is a cognitive-behavioural approach designed to help individuals anticipate and cope with setbacks during the behaviour change process. Also in line with this study is the broad aim of Relapse Prevention which according to them is to reduce the incidence and severity of relapse, to minimize the impact of high-risk situations by increasing awareness and building coping skills, and limit relapse proneness by promoting a healthy and balanced lifestyle.

From hypothesis one, the results obtained as presented in Tables 2, indicate a significant difference in the result. This study is in line with that of Azizi, Borjali, & Golzari (2010) who investigated in a quasi-experimental study the effectiveness of emotional regulation training group therapy, based on Dialectical Behavioral Therapy (DBT) on improving emotional regulation and distress tolerance skills and relapse prevention in addicts. It showed that emotional regulation was effective to an extent of increasing distress tolerance, enhancing emotion regulation, and decreasing the amount of drug abuse, enhanced health improvement, social functioning, somatic symptoms, decreased anxiety, and social dysfunction. A study by Renna, Quintero, Fresco, and Mennin (2017) also found that the ability to manage emotions causes an individual to adopt appropriate coping strategies in situations where the risk of substance abuse is high. People with high emotion regulation are more capable of predicting others' demands. These individuals understand unwanted peer pressures and control their emotions more efficiently, consequently showing more resistance against substance abuse. Furthermore, distress tolerance skills training showed a positive behaviour change on relapse prevention which was in line with the study of Muhomba, Chugani, Uliaszek, and Kannan (2017) who enrolled students in distress tolerance training groups ranging from 7–10 weeks and the result showed that all students (N = 22) demonstrated significantly improved scores on measures of emotion regulation, functional and dysfunctional coping. The results of the study was recorded as the first to show that targeted skills training with DBT distress tolerance skills can produce beneficial outcomes in college students in the context of a short-term intervention.

Also, from the result in table 3, it shows that both emotional regulation and distress tolerance skill training have significant effects on relapse prevention although distress tolerance skill training showed a slight difference. The results were consistent with findings by numerous investigators like Aldao, Nolen-Hoeksema and Schweizer (2010); Skinner, and Aubin, (2010); Choopan, Kalantarkousheh, Aazami, Doostian, Farhoudian, and Massah (2016). According to this model the experience of negative emotions such as anxiety, depression, and stress led to activation of substance-abuse temptation, but an individual's ability to use emotion regulation strategies could influence the effect of temptation on substance relapse.

Furthermore, the framework of Social learning theory explains the effectiveness of the study. The treatment program derived from social learning theories attempts to prevent relapse by intervening at different points in the chain of behaviours, beginning with antecedents to the high-risk situation and extending through actual relapse. The study increased the awareness of relapse prevention and tried to change their habits in an effort to rebalance lifestyle and improve ability to cope with stressors. Principles of relapse prevention include identifying high-risk situations for relapse and developing appropriate solutions. The first is related to a person's belief that they can maintain control over the facts that influence their life and it comprises a general cognitive mechanism which intervenes in the person's behavioural response to the received emotional regulation and

distress tolerance skills training. The interventions are tailored to the specific stage in the sequence and to the person. Treatment within the parameters of the model requires individuals to actively participate and assume responsibility for their recovery. Through the development of new skills and cognitive strategies, individuals transform maladaptive habits into adaptive behaviours, controlled by positive mental processes and responsive decision-making.

Conclusion

From the findings of this study titled: effects of emotional regulation and distress control on relapse prevention among students with drug abuse addictive behaviours the researchers concluded that:

- Enhancement of Emotional regulation skills and distress control skills can help in relapse prevention in drug abuse addictive behaviours. There is a significant effect of the two independent variables, emotional regulation and distress tolerance on relapse prevention among students with drug abuse addictive behaviours.
- The control group members who received no treatment had no significant different on relapse prevention when compared to the experimental groups.

Implication of the Study

The implication from the study shows that the students who benefited from emotional regulation and distress control intervention strategies were significantly better in terms of drug-abuse addictive relapse prevention than those in the control group. From the results of the findings of the study emotional regulation and distress tolerance stands as effective interventions on relapse prevention of drug abuse addictive behaviours. Also, the study provides the fact that learning or developing positive life skill and building on it every day leads students to form good habits that will prevent their relapse of indulging in substance abuse which is life threatening.

Recommendation

Based on the findings we therefore recommend that:

- Nigerian University counsellors who have students with drug addictive behaviour should develop positive life skill like emotional regulation and distress tolerance as a therapeutic focus in which clients learn practical and positive emotional and behavioural skills.
- Secondly, emotional regulation and distress tolerance training is highly recommended to equip students to resist the challenges of psychosocial problems especially psychoactive substance abuse and its associated harm to the individual and to the society at large

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