# EFFECTS OF PSYCHOEDUCATIONAL INTERVENTIONS ON PROCRASTINATION AND HARM REDUCTION AMONG STUDENTS WITH PSYCHOACTIVE SUBSTANCE USE DISORDERS

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**Abstract**
This study examined whether psychoeducational interventions would reduce procrastination and harm associated with substance use among students. Quasi-experimental, Pre-test, post-test, control group, research designs were adopted for the study. Participants were 80 undergraduate students from University of Port Harcourt, Rivers State, Nigeria. A purposive sampling method was used to draw 60 males and 20 females between the ages of 20 to 25years. The psychoeducational interventions which lasted for 8 weeks were centered on teaching on procrastination, psychoactive substance mindfulness, emotional regulation and distress tolerance skills. Participants were randomly assigned to four groups A, B, C and D. Group A, B, and C had intervention while group D was the control group with no intervention. Validated Procrastination Assessment Scale (PAS) and Psychoactive Substance Use Inventory (PSU) with correlational coefficients of 0.83 and 0.85 respectively were the source for data collection. Analysis of variance (ANOVA) Statistics was used for data analysis and the results showes that there were significant effects of the independent variables on dependent variables (the mean difference is Significant at $p< 0.05$ level). The implication of the finding is that psychoeducational intervention has some reduction effects on procrastination and harm associated with psychoactive substance abuse although those in group B (emotional regulation) participants had better result. Discussion implores the use of psychoeducational programs in schools as a result of its' effectiveness.

**Keywords:** *Psychoeducation, Procrastination, Harm reduction, Psychoactive, Substance, Disorders.*

## Introduction

Psychoactive substance use among university students in Nigeria is a recognized problem. Its negative consequences including academic failure, risk behaviours including risky sexual behaviour, substance use disorders, and disability, becomes major threats for the youth population including university students (WHO, 2017). Consequently, the abuse of psychoactive substances mostly

by students has degenerated as a significant public health concern for some time now. According to epidemiological surveys in Nigeria, substance abuse is common and one of the most disturbing health related problems among the young people, (Gureje, Degenhardt, Olley, Uwakwe, Udofia, and Wakil, 2007) who usually start with alcohol and cigarettes and progress to further experimentations with illegal drugs (Eneh, and Stanley, 2004). The prevalence of this phenomenon in Nigerian universities has led to a wide range of psychosocial and behavioural issues which constitute harm to individual and the society. There are two aspects of danger associated with drugs; the risk of addiction and adverse health and behavioural consequences **(**Essien, 2010). The addiction becomes more difficult to treat when procrastination is joined with substance abuse and that may result as a more complex procrastination. It has been observed that procrastination is one reason why smart people repeat self-defeating patterns (Knaus, 2010). This really informed the researchers of adopting psychoeducational interventions as it may probably help reduce students' procrastination habit and its complexities in association with psychoactive substance use disorder.

Psychoactive drugs are chemical substances that affect the normal functioning of the brain and cause changes in behaviour, mood, and consciousness **(**Mfrekemfon and Onyekwere, 2016). While substance use disorder is the use of a substance that has caused significant impairment to an individual's life (Substance Abuse and Mental Health Services Administration, 2015). The negative impacts of psychoactive substances on students are far reaching, and diverse. These include disruption of interpersonal relationships especially within the family, criminal behaviour, academic failure, vocational failure and a lack of commensurate achievement (NAFDAC, (2004). Also psychoactive substance use is a leading cause of violence among individuals and a major cause of avoidable mortality and morbidity (Falaye, and Oluwole, 2002). Furthermore, the study carried out by National Parents' Resource Institute for Drug Education (1997) as cited by Yusuf (2010), found a significant association between crimes committed by adolescents and their use of alcohol and other drugs. This shows that many youth can commit crime under the influence of drugs. The harm is very enormous. The National Institute on Drug Abuse characterizes drug use as a brain disease that can lead to compulsive behaviours in which the individual is constantly seeking drugs (Substance Abuse and Mental Health Services Administration, 2015)

There are many parallels between addictions and procrastination. Here is a key linkage. An inner pressure triggers both processes. Because procrastination is normally a habit, when this process coexists with conditions, such as a negative mood, they may frustratingly repeat procrastination patterns despite your heartfelt wishes to change for the better and to avoid the hassles associated with the habits. Popoola (2005) defines procrastination as a dispositional trait which has cognitive, behavioural and emotional components. According to him, this dispositional trait makes an individual

postpone doing things that make him or her anxious and apprehensive. This description of procrastination shows that it is a natural behaviour that can be exhibited by anyone and that such a natural tendency needs to be reduced to the minimal.

Therefore, the task here is to effectively curb dual procrastination-substance abuse habits which will normally involve a comprehensive plan through a psychoeducational approach. Psychoeducational group according to Kottler (2004) involves a planned, structured activities and fairly definite goals that are identified by the leader, who operates as an instructor or facilitator.

Furthermore, the concept of psychoeducation was first noted in the medical literature, in an article by John E. Donley "Psychotherapy and re-education" in the Journal of Abnormal Psychology, published in 1911. The popularization and development of the term psychoeducation into its current form is widely attributed to the American researcher C.M. Anderson in 1980 in the context of the treatment of schizophrenia (Anderson, Hogarty, and Reiss, 1980). According to Cummings and Cummings (2008) psychoeducation is health psychology combined with behavioral counseling and even psychotherapy. It is applied in a group setting that is specific to a diagnosis and is both structural and open-ended as may be therapeutically appropriate. They further stated that the behavioural counseling component of psychoeducation deals with emotions, perceptions, coping, relaxation, and self-care, whereas the educational component imparts knowledge about the physical or psychological condition that is shared by the participants in the group. In other words, the term psychoeducation comprises systemic, didactic psychotherapeutic interventions which are adequate for informing clients or patients about the disorder and its treatment, facilitating both an understanding and personally responsible handling of the disorder and supporting those afflicted in coping with the disorder (Bauml and Pitschel-Walz, cited in Srivastava and Panday, 2016). These interventions are typically somewhat more comprehensive and focus on dissemination of knowledge, self-understanding, and attitudinal change as well as skill development (Kaminer, Burleson, and Goldberger, 2002). It is generally known that those who have a thorough understanding of the challenges they are facing as well as knowledge of personal coping ability, internal and external resources, and their own areas of strength are often better able to address difficulties, feel more in control of their condition, and have a greater internal capacity to work toward mental and emotional well-being (Reyes, 2010).

This study is anchored on Social cognitive theory (Bandura, 1986). Social cognitive theory is particularly well-suited to explain the complex relationships of procrastination and psychoactive substance use disorder. One of the main assumptions of social cognitive theory is that learning occurs through observation of others (observational learning). Through observing and modelling behaviours, people form ideas about new behaviours, which are coded and used as a guide for action. Social cognitive theory assumes that self-regulation is dependent on goals. Students are able to manage their thoughts and actions in order to reach specific

outcomes. By simultaneously refusing to capitulate to procrastination and substance abuse urges, student act to shape their life direction by executing rational choices. (Reyes, 2010). Through exercising these choices, they avoid hassles associated with psychoactive substance use. They will gain productive advantages. This learning, experimenting, and progressive mastery approach marks a path with greater promise for positive change than a vague hope, of giving excuses of inaction.

In conclusion, we assume that right intervention will definitely reduce and prevent social vices, moral decadences and crime rate in Nigerian Universities associated with psychoactive substance use. We then uphold to assess the current level of knowledge and equip the students with positive life skills to help reduce procrastination, the prevalence and pattern of psychoactive substance use among undergraduate students in the University. More also, it will result to harm reduction which aims to prevent or reduce negative health or other consequences associated with psychoactive substance use disorder, whether to the drug-using individual or to the society. Therefore, the problem of the study remains, "of what effects will psychoeducational interventions have on procrastination and harm reduction among students with psychoactive substance use disorders? The concern over the handicapping trend of psychoactive substance use disorder in Nigerian schools forms the background of carrying out this study and as its effectiveness will contribute to knowledge.

This study was guided by two research questions and two corresponding hypotheses thus:

1. What is the difference in procrastination reduction among students with psychoactive substance use disorder in the experimental groups and control groups based on their pretest, post-test scores from Procrastination assessment scale (PAS)?
2. What is the difference in harm reduction among students with psychoactive substance use disorder in the experimental groups and control groups based on their pretest, post-test scores from Psychoactive Substance use Inventory (PSSI)

The corresponding hypotheses were as follows:

1. There is no significant difference in procrastination reduction among students with psychoactive substance use disorder in the experimental groups and control groups based on their, post-test scores from Procrastination assessment scale (PAS)
2. There is no significant difference in harm reduction among students with psychoactive substance use disorder in the experimental groups and control groups based on their post-test scores from Psychoactive Substance use Inventory (PSSI)

## Methodology

### Research Design

Quasi-experimental, Pre-test, post-test, control group, research designs was adopted for the study. The four-group quasi-experimental design was most suitable for the study which consists of three independent variables from psychoeducational intervention

(Mindfulness, emotional regulation and distress tolerance skills traing) and two dependent variables (procrastination and harm reduction among students with psychoactive substance use disorder). In notational form, four-group quasi-experimental design is as illustrated in figure1 having three experimental groups and one control group.

| Groups | Types of Treatment(Psychoeducation) | Pre-test | Treatment | Post-test |
|---|---|---|---|---|
| A | Mindfulness skill training | $0_1$ | $X_1$ | $0_2$ |
| B | emotional regulation training | $0_3$ | $X_2$ | $0_4$ |
| C | distress tolerance skill training | $0_5$ | $X_3$ | $0_6$ |
| D | Control – No training | $0_7$ | | $0_8$ |

Pre-test ($0_1$, $0_3$, $0_5$, $0_7$); Treatment ($X_1$, $X_2$, $X_3$); Post-test ($0_2$, $0_4$, $0_6$, $0_8$) Fig. 1: Illustration of four-group quasi-experimental design.

**Population of the Study**

The population comprised 100 male and female students between the ages of 20 to 25years with psychoactive substance use disorders from four departments in faculty of Education University of Port Harcourt, Rivers State, Nigeria.

***Sample and Sampling techniques***

Participants were 80 undergraduate students from University of Port Harcourt, Rivers State, Nigeria. A purposive sampling method was used to draw 60 males and 20 female between the ages of 20 to 25years from four departments out of 8 departments in the faculty of education. Balloting was applied to put them into the four groups of 20 students in each, making up three experimental groups and one control group.

**Instrument for the data collection**

The research instruments Procrastination assessment scale (PAS) and Psychoactive Substance use Inventory (PSSI) were researchers designed instruments for data collection. Procrastination assessment scale (PAS) used for this study contains 20 item which elicited the participants' procrastination in relation to substance abuse on a 5 point Likert scale (5 = Strongly disagree to 1 = Strongly agree; example item: I am always postponing to reduce my smoking habit). Each item on the scale describes a symptom of procrastination in relation to drug abuse. Psychoactive Substance use Inventory (PSSI) was 24 item divided into three sections, and the first section contained 4 information on demographic characteristics of the respondents, the second section contained 10 information on psychoactive substance abuse disorder, and the third section contained 10 information on the harm experienced as a result of the use of psychoactive substances. PSSI is a self-report scale that consists of items that parallel to screen the use and harms associated with substance use disorder. A score of "1" is given for each YES response, Cutoff scores of 10 and above is considered significant for screening for psychoactive substance use disorder. The names of the students were not needed in each of the instruments, rather numbers were used for identification

so that the pre-test scores will be matched with post-test scores. The reason were to avoid students being biased in giving correct assessment of their situation and also to assure them of ultimate confidentiality.

**Validity and Reliability**

The research instrument Procrastination assessment scale (PAS) and Psychoactive Substance Use Inventory (PSU) were researchers designed instruments were validated by experts in the field of psychology. The test-retest reliability of the instruments using Product Moment correlational coefficient were high scoring 0.83 and 0.85 respectively. Data were analysed using IBM SPSS Statistics 21 at 0.05 level of significant.

Psychoeducational treatment program

**Treatment programs**

**Treatment Stages**

**Stage1:-** Introduction:. Meeting with the would-be participants from each of the four departments of the faculty of education. This was to familiarize them with the mission and the objective of the researchers, and the benefits for the individual participants. Pretests was administered using Procrastination assessment scale (PAS) and Psychoactive Substance Use Inventory (PSU). The scores obtained from PAS served as pre-treatment/post-test scores while scores obtained from PSU served as pretest/post-test and pretreatment diagnostic score used to identify students with psychoactive substance use disorder. Participants were randomly assigned into four groups. Time and days of meeting sessions were agreed on.

**Stage 2:** Intervention: Psychoeducational Intervention program with the experimental groups, where the researchers taught the participants what the need to know about psychoactive substance abuse disorder and procrastinating behaviour. After the teaching session it was then followed by life skill training which consisted of Mindfulness skill training for group "A", emotional regulation for group "B", distress tolerance for group "C" and all lasted for 8 weeks of 8 sessions for an hour, while group "D" had nothing. The three treatment packages were well administered to the participants differently. The training packages was 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. PAS and PSU were re-administered to the four groups to determine the effectiveness of the treatment interventions.

**Treatment Sessions**

**Group A:** Mindfulness training skill sessions

**Session 1:** Orientation and introductions. Elicit discussion around what is expected of them to learn in the program and how it will be structured. Discussed how the psychoeducation/ mindfulness training skill will relate to substance use goals. Brain stormed rules for the group therapy program and write them on the white board. Taught the concept of psychoactive substance. Introduce the Diary Card and take the time to demonstrate how it is

used. This diary card has a list of all the specific skills you will learn and provides space to record when you practice specific skills. Summary and questions

**Session 2**: Practice review of the previous session. Introduced Mindfulness. Mindfulness is about learning to be fully present in the here and now. "Mindfulness" refers to maintaining a moment-by-moment awareness of one's thoughts, feelings, bodily sensations, and surrounding environment (Wen, Howard, Garlandc, McGovern, and Lazar, 2017). List on the board how mindfulness can be helpful eg how mindfulness can help them experience unpleasant thoughts and feelings safely, to become aware of what they have been avoiding etc. Mindfulness activity. Summary and question.

**Session 3:** Practice review of the previous session. Discuss 'What' and 'How' skills. To practice mindfulness, we need to know about 'What' and 'How' skills. 1. What skill - observe or check out what is going on, describe what it is you are observing, to participate or get into it focusing on your experience. 2. How skill - beware of judgements, be a neutral observer in the situation - For example, acknowledging always procrastinating but not labelling yourself as 'hopeless', to stay focused on the experience - let go of any other distractions that might be dividing your attention. Do what works - making sure that you're doing those things that work effectively to achieve your goals; and letting go of the things that hold you back or let you down. Practiced what and how skill from individual participant life experience. Summary and questions.

**Session 4:** Review diary card Key questions for generating discussion. Introduced new Skill - The 3 mind states. To helps us to understand what state of mind we are in, or what viewpoint is influencing our attitude in a situation. 1. Factual mind: Being in factual mind is when we are thinking logically, considering all the facts of a situation. Making decision to stop smoking after considering a checklist of facts, without actually considering any other person's feeling. 2, Emotional mind: Being in emotional mind is when we are influenced by how we are feeling about others. 3. Wise mind: Being in wise mind, or observer mind - listening to both our factual and emotional mind. Wise mind is where we aim to be when we make right decisions. Listed and discussed extensively 3 mind state and when we use them. Summery and questions.

**Session 5:** Practice review of the previous session. Discussion questions include: What did you notice about the characters and their mind states? What are the benefits of each mind state? Did we see any of the characters experience more than one mind state? Also ask yourself such general questions as: What character reminds you of you? What mind state do you think you are in when you use psychoactive substances? Briefly reviewed and discussed the tips for getting into Wise Mind. Ask group members to practice noticing what mind state they are in. At times when they notice they are in emotional or factual mind, ask group members to try to move themselves into wise mind.

**Session 6:** Reviewed the previous sessions. Who can remember what we did in the last group?" "What have you learnt about mindfulness and how are you applying it in your life now. Prompted discussion around wise mind, emotional mind and factual mind relating it to psychoactive substance use disorder. Introduced meditation -

**Session 7:** Revision of previous sessions. The aim of the group is for the participants to develop a deeper understanding of mindfulness practice applying it in their life by studying and removing assignment obstacles.

**Session 8:** Evaluated amount of achievement to personal and collective goals. Application of learned skills in natural environments external to the session to prevent relapse.

**Group B: Emotional regulation skill training sessions**

**Session 1:** Orientation and introductions. Elicit discussion around what is expected of them to learn in the program and how it will be structured. It will be important to discuss how the psychoeducation/ mindfulness training skill will relate to substance use goals. Brain storm rules for the group therapy program and write them on the white board. Teach them what it means by psychoactive substance. Introduce the Diary Card and take the time to demonstrate how it is used.

**Session 2:** Practice review of the previous session. Introduce Emotional regulation. Learn about emotion regulation skills. Here we will talk about how to identify our emotions as well as how to manage emotions that are unhelpful or unjustified. Relate emotional regulation to substance use goals. Home work was to apply the skill in their daily life.

**Session 3:** Practice review of the previous session. Introduced how to prevent social isolation and avoidance. Teach problem-solving strategies and interpersonal skills (conversation, self-expression). Summary and questions. Home work on daily practice of the skills.

**Session 4:** Practice review of the previous session. Attention expansion Aim: Attention shift Agenda: Stopping obsessive rumination and anxiety Attention learning.

**Session 5:** Reviewed the previous session. Introduced Cognitive evaluation. Cognitive evaluation change. Identification of wrong evaluations and their impact on emotional states teaching reappraisal strategy.

**Session 6:** Reviewed previous session. Teach Response adjustment. Change of behavioural and physiological consequences of emotion. Discuss any barriers to building positive emotional experiences.

**Session 7:** Reviewed previous session. Teach inhibition strategy and its emotional consequences. Confrontation Emotion expression learning. Behaviour correction through changing environmental boosters. Emotional discharge learning, relaxation, and reverse action.

**Session 8:** Evaluation and application - Reappraisal and removal of application obstacles. Evaluating amount of

achievement to personal and collective goals Application of learned skills in natural environments external to the session Studying and removing assignment obstacles.

**Group C: Distress control skill training sessions**

**Session 1:** Orientation and introductions. Elicit discussion around what is expected of them to learn in the program and how it will be structured. It will be important to discuss how the psychoeducation/Distress tolerance training skill will relate to substance use goals. Brain storm rules for the group therapy program and write them on the white board. Teach them what it means by psychoactive substance. Introduce the Diary Card and take the time to demonstrate how it is used.

**Session 2:** Practice review of the previous session. Discuss tolerance distress tolerance is about learning to get through tough times without making the situation any worse. After setting expectations, generate discussion about what distress tolerance might mean and write group definitions on the board. Examples for distress: pain, suffering, ache, discomfort, anxiety, woe, misery, trouble, unhappiness, despair, trouble, sorrow, worry, angst. Generate a discussion about the inevitability of pain in life. Ask group members, "Do you think it is possible for a person to go through their life without ever experiencing pain?" After facilitating initial discussion around pain and gaining group consensus that pain is an unavoidable and inevitable part of life, guide the conversation to the importance of being able to effectively cope with pain. If we are using the definitions that we've just come up with to explain what Distress Tolerance is, what we learn is that distress tolerance is all about being able to put up with and accept painful and uncomfortable situations.

**Session 3:** Practice review of the previous session. Discuss unhelpful ways of managing pain. Distress tolerance is NOT about trying to solve the problem and it's also NOT about liking or agreeing with the pain or the situation you're in. It is simply about getting through the painful situation and not making it worse. The problem with this is that many of the strategies we use when we're feeling overwhelmed can actually make the problem worse in the long-term and take us further away from where we actually want to be. Examples may include: AOD use; isolating self from other people to avoid the situation; ruminating on past problems, pain and mistakes; becoming aggressive towards others; self-harming behaviours; engaging in dangerous or risky behaviours; avoiding pleasant activities as a form of self-punishment; resigning oneself to living with ongoing pain.

**Session 4:** Practice review of the previous session. The distress tolerance strategies can broadly be divided into two groups: 1. Skills for tolerating and surviving crises. 2. Skills for accepting life as it is in the moment. Both of these skill sets are important for being able to manage pain and distress in a variety of different circumstances. Move to describing crisis survival skills. Write the skills into the column on the board. Crisis survival skills, the way they work is that they temporarily

short-circuit the emotional distress we experience in crisis situations. So essentially, they stop the growing momentum of the distress we are experiencing. While a use of the Crisis Survival skills may sometimes provide us with a feeling of relief, this is not their aim or purpose. The four Crisis Survival skills are (1) Distraction, (2) Self-Soothing, (3) Improving the Moment, (4) Pros and Cons. Summery, feedback, assignment to practice the skills in their daily life. Record their experience in their daily diary.

**Session 5:** Practice review of the previous session. Do the same for acceptance skills. "The second set of distress tolerance skills falls under the category of acceptance skills. This set of skills is designed to help us to accept reality exactly the way that it is in the moment; regardless of whether that reality is uncomfortable. Unfortunately, no matter who is blamed, or how many alternate scenarios you imagine, the past cannot be changed: the pain continues to exist and you suffer. The three Acceptance skills are (1) Radical acceptance, (2) Turning the mind, and (3) Willingness versus wilfulness. The important thing to remember in each of the acceptance skills is, that an acceptance of reality as it is does not automatically equal your approval. You can accept reality without necessarily liking reality.

**Session 6:** Practice review of the previous session. Illustrate ACCEPTS skills = A- Activities, C- contributing, C- comparisons, E - Emotions, P - pushing away, T - Thoughts, S - Sensations: Activities as a distraction work in a number of different and effective ways. Firstly, they work by distracting our attention and filling our short-term memory with thoughts, images and sensations that counteract the initial distress. Contributing is a really helpful skill as it allows us to refocus our attention from our own painful situation to what we can do for others Comparisons', which also aims to refocus our attention away from ourselves and onto another. Emotions' this distracting skill encourages us to act in a way that is opposite to the current negative emotion we are experiencing. 'Push away' by leaving the situation. 'Thoughts' can be absolutely anything that keeps their mind occupied and replaces the thoughts that are triggering their distress. Intense sensations' refers to things that have a strong impact on one or more of the five senses: sight, hearing, smell, taste, touch

**Session 7:** Briefly explain to group members that we are going to look at the signs and consequences of avoiding feelings and emotions. Ask, "What does 'avoidance' mean? What would you be doing if you were avoiding something?" Examples: use of psychoactive substance; withdrawing from people or situations that may trigger uncomfortable feelings; staying in bed; sleeping a lot; overuse of distraction (e.g., keeping really busy all of the time), etc. Ask, "Why might we choose to avoid our feelings?" Finally ask, "Do these avoidance behaviours make the initial problem or feeling go away in the long-term?" Gather a consensus that sometimes the consequences of our avoidance behaviours can actually increase our distress or the problem.

**Session 8:** Evaluating amount of achievement to personal and collective goals Application of learned skills in natural environments external to the session Studying and removing assignment obstacles

**Results**

**Research Question 1**: What is the difference effects of psychoeducational intervention on procrastination reduction among students with psychoactive substance use disorder based on their pretest post-test scores of the experimental and control groups from PAS?

**Table 1: Mean and Standard Deviation of psychoeducational interventions on procrastination reduction based on respondents' pre-test post-test scores on PAS.**

| Groups | Tests | Mean | N | StD. Deviation | StD. Error |
|---|---|---|---|---|---|
| | Pre-test | 53.25 | | 2.789 | 0.624 |
| Exp. "A" | | | 20 | | |
| | Post-test | 39.10 | | 4.833 | 1.080 |
| | Pre-test | 52.90 | | 2.447 | 0.547 |
| Exp. "B" | | | 20 | | |
| | Post-test | 32.90 | | 3.698 | 0.827 |
| | Pre-test | 53.10 | | 2.447 | 0.547 |
| Exp. "C" | | | 20 | | |
| | Post-test | 34.80 | | 3.861 | 0.863 |
| | Pre-test | 53.15 | | 2.300 | 0.514 |
| Cont. "D" | | | 20 | | |
| | Post-test | 53.25 | | 2.023 | 0.452 |

The result on the table 1 shows the difference effects of psychoeducational intervention on procrastination reduction among students with psychoactive substance use disorder based on their pre-test post-test scores . The mean ( $\bar{X}$ **)** pre-test scores on procrastination reduction of group "A" is ( $\bar{X}$ = 53.25), group "B" is ( $\bar{X}$ = 52.90), group "C" is ( $\bar{X}$ = 53.10) and the control group ( $\bar{X}$ = 53.15). The post-test mean scores of the four groups showed group "A" is ( $\bar{X}$ = 39.10), group "B" is ( $\bar{X}$ = 32.90), group "C" is ( $\bar{X}$ = 34.80) and the control group ( $\bar{X}$ = 53.25. This result shows that in the pre-test scores of the three experimental group and that of the control group were almost equivalent which was much more difference in their post-test scores from table 1. Furthermore the SD values on procrastination reduction from the post-test of the four groups showed group "A" 4.833, group "B" 3.698, group "C" 3.869 and the control group 2.023. The SD of the three experimental group showed procrastination reduction when compared with the SD scores of control group. There

is a wide spread between the experimental groups and that of the control group.

Table 1 above revealed differences in mean and Standard deviation between group A, B, C, and D. The post-test mean shows group A = 39.10, group B = 32.90, group C = 34.80 and group D = 53.25. The pre-test was relatively the same. The higher the number, the higher the magnitude of procrastination.

**Research Question 2**: What is the difference effects of psychoeducational intervention on harm reduction among students with psychoactive substance use disorder based on their pretest post-test scores of the experimental and control group from PSSI?

**Table 2: Mean and Standard Deviation of psychoeducational interventions on harm reduction based on respondents' pre-test post-test scores on PSSI.**

| Groups | Tests | Mean | N | StD. Deviation | StD. Error |
|---|---|---|---|---|---|
| | Pre-test | 12.8 | | 1.399 | 0.313 |
| Exp. "A" | | | 20 | | |
| | Post-test | 6.00 | | 1.124 | 0.251 |
| | Pre-test | 12.75 | | 1.803 | 0.403 |
| Exp. "B" | | | 20 | | |
| | Post-test | 5.65 | | 1.497 | 0.335 |
| | Pre-test | 12.30 | | 1.750 | 0.391 |
| Exp. "C" | | | 20 | | |
| | Post-test | 6.50 | | 1.433 | 0.320 |
| | Pre-test | 12.50 | | 1.732 | 0.387 |
| Cont. "D" | | | 20 | | |
| | Post-test | 12.60 | | 1.273 | 0.285 |

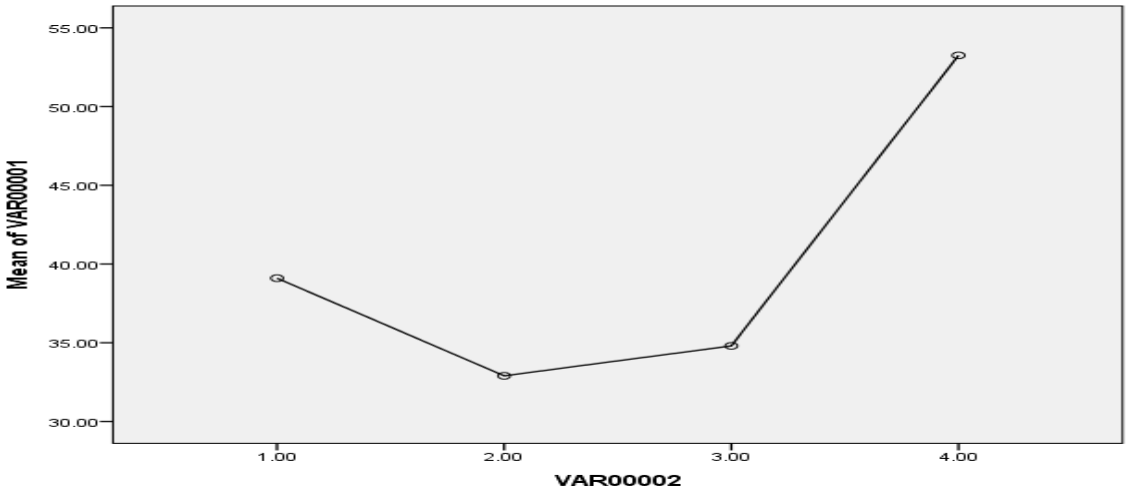
The result on the table 2 above shows the difference effects of psychoeducational intervention on harm reduction among students with psychoactive substance use disorder based on their pre-test post-test scores . The mean ( $\bar{X}$ ) pre-test scores on procrastination reduction of group "A" is ( $\bar{X}$ = 12.80), group "B" is ( $\bar{X}$ = 12.75), group "C" is ( $\bar{X}$ = 12.30) and the control group ( $\bar{X}$ = 12.60). The post-test mean scores of the four groups showed group "A" is ( $\bar{X}$ = 6.00), group "B" is ( $\bar{X}$ = 6.65), group "C" is ( $\bar{X}$ = 6.50) and the control group ( $\bar{X}$ = 12.60. This result shows that in the pre-test scores of the three experimental group and that of the control group were almost equivalent which showed a lot of difference in their post-test scores from table 2. Furthermore the SD values on harm reduction from the post-test of the four groups showed group "A" 1.124, group "B" 1.497, group "C" 1.732 and the control group 1.285. The SD of the three experimental group showed harm reduction when compared with the SD scores of control group with no difference in their scores. There is a wide spread between the experimental groups and that of the control group.

**Hypothesis 1:** There is no significant difference in procrastination reduction among students with psychoactive substance use disorder in the experimental groups and control groups based on their post-test scores from Procrastination assessment scale (PAS)

**Table 3: ANOVA showing the differential effect of psychoeducational intervention on procrastination reduction among the groups.**

| Source | df | SS | MS | F | P |
|---|---|---|---|---|---|
| Between Group | 3 | 5076.438 | 1692.146 | 120.805 | .000 |
| Within Group | 76 | 1064.55 | 14.007 | | |
| Total | 79 | 6140.988 | | | |

Table 3 above reveals that in between groups, the sum of square is 5076.438 with 3 degree of freedom and a means square 1692.146 for within groups, the sum of square is 1064.55 and 76 degree of freedom as well as a mean square of 14.007. The total has 6140.988 sum of square and 79 degree of freedom. The computed F is 120.805 which is statistically significant even as at low as .001 alpha. Therefore, the hypotheses that says that "there is no significant difference in procrastination reduction among students with psychoactive substance use disorder in the experimental groups and control groups based on their post-test scores from Procrastination assessment scale (PAS)" is rejected, $F(3, 76) = 120.805$, $p < .001$.



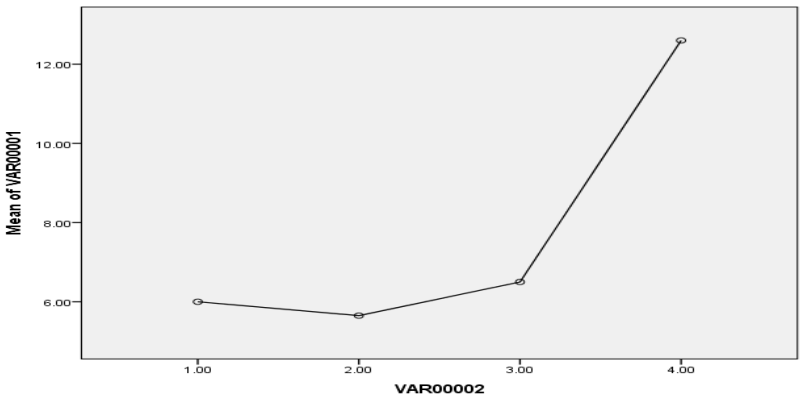

The output has also been presented in a mean plot above that graphically indicated the relative position of each group mean. The plot is used to visually aid understanding of the means differences. There are significant mean difference between 1, 2, 3, and 4. Group 4 had no treatment.

**Hypothesis 2:** There is no significant difference effects of psychoeducational intervention on harm reduction among students with psychoactive substance use disorder based on their pre-test post-test scores of the three experimental groups from PSSI.

**Table 4: ANOVA showing the differential effect of psychoeducational intervention on harm reduction among the groups.**

| Source | df | SS | MS | F | P |
|---|---|---|---|---|---|
| Between Group | 3 | 650.838 | 216.946 | 120.923 | .000 |
| Within Group | 76 | 136.350 | 1.794 | | |
| Total | 79 | 787.188 | | | |

Table 4 above reveals that in between groups, the sum of square is 650.838 with 3 degree of freedom and a means square 216.946 for within groups, the sum of square is 136.350 and 76 degree of freedom as well as a mean square of 1.794. The total has 787.188 sum of square and 79 degree of freedom. The computed F is 120.923 which is statistically significant even as at low as .001 alpha. Therefore, the hypotheses that says that "there is no significant difference effects of psychoeducational intervention on harm reduction among students with psychoactive substance use disorder based on their post-test scores of the three experimental and control group from PSSI is rejected, $F(3, 76) = 120.923$, $p < .000$.




The output has also been presented in a mean plot above that graphically indicated the relative position of each group mean. The plot is used to visually aid understanding of the means differences. There are significant mean difference between 1, 2, 3, and 4. Group 4 had no treatment.

**Discussion of results**

The main purpose of this study was to examine whether psychoeducational interventions would reduce procrastination and harm associated with substance use disorder among students with psychoactive substance use disorder. The results, among others, reveal that there is significant effects of (independent variable on dependent variable) psychoeducational

interventions comprising of mindfulness, emotional regulation and distress tolerance on procrastination and harm reduction. This study is in line with Chandiramani, and Tripathi, (1993) who carried out a study using psycho-educational group therapy with alcohol and drug dependence comprising of eight sessions conducted thrice a week over a period of about three weeks. It aims to equip the patients with information and knowledge relevant to the needs of recovery. Apart from achieving abstinence, the objectives of the program include enhancing functioning in personal, social and professional spheres by developing healthy and intimate relationships and promoting alternate activities was achieved. Also, Cummings and Cummings (2008) found that Psychoeducation intervention improves health outcomes and reduces healthcare costs with patients with chronic physical diseases, psychological conditions, high utilizers (somatizers) of medical services, and substance abusers. Furthermore, this study by implication revealed that people who are more conscientious are less likely to procrastinate. The participants became more conscientious after going through the psychoeducational intervention. This was in line with that of Ozer and Benet-Martínez, (2006) in their study on Personality and the prediction of consequential outcomes found that persons who are conscientious are careful, thorough, and tenacious, which limited their tendency to procrastinate.

From hypothesis one, the results obtained as presented in Tables 3, indicate a significant difference in the result. The results from the findings reveal that null hypothesis 1 is rejected. Table 3 above reveals that in between groups, the sum of square is 5076.438 with 3 degree of freedom and a means square 1692.146 for within groups, the sum of square is 1064.55 and 76 degree of freedom as well as a mean square of 14.007. The total has 6140.988 sum of square and 79 degree of freedom. The computed F is 120.805 which is statistically significant even as at low as .001 alpha. Therefore, the hypotheses that says that "there is no significant difference in procrastination reduction among students with psychoactive substance use disorder in the experimental groups and control groups based on their post-test scores from Procrastination assessment scale (PAS)" is rejected, $F(3, 76) = 120.805$, $p < .001$. The output has also been presented in a mean plot that graphically indicated the relative position of each group mean. The plot is used to visually aid understanding of the means differences. There are significant mean difference for the effects of the independent variable 1, 2, and 3. Group 4 had no treatment. This finding really showed that the participant became mindful of their situation reduced their procrastinating habit. This in line with Marlatt (1994) assertion that mindfulness involves accepting of the constantly changing experiences of the present moment, whereas addiction is an inability to accept the present moment but mindfulness with its emphasis on acceptance of experience, provides a supplemental skill set for dealing with triggers, especially emotional trigger.

Furthermore, Wen, Howard, Garlandc, McGovern, and Lazar, 2017) found in their a neurobiological evidence suggests that mindfulness practice may

change brain function and cognitions associated with rumination and reactivity to substance-related cues, and thereby reduce risk for craving and relapse. Also, Renna, Quintero, Fresco, and Mennin (2017) found that the ability to manage emotions causes that 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 and procrastination.

From hypothesis 2 there was a significant difference effects of psychoeducational intervention on harm reduction among students with psychoactive substance use disorder.

Table 4 reveals that in between groups, the sum of square is 650.838 with 3 degree of freedom and a means square 216.946 for within groups, the sum of square is 136.350 and 76 degree of freedom as well as a mean square of 1.794. The total has 787.188 sum of square and 79 degree of freedom. The computed F is 120.923 which is statistically significant even as at low as .001 alpha. Therefore, the hypotheses that says that "there is no significant difference effects of psychoeducational intervention on harm reduction among students with psychoactive substance use disorder based on their post-test scores of the three experimental and control group from PSSI is rejected, $F(3, 76) = 120.923$, $p < .000$. All the experimental groups showed significant difference to the independent variables which is line with Garland, Froeliger, and Howard (2014a) mindfulness practice (e.g., mindful breathing and body scan exercises) could help individuals become desensitized to distressing experiences that trigger substance misuse and reorient their attention to the sensation of breathing or other health-promoting stimuli. Furthermore, three systematic reviews that was conducted by Chiesa and Serretti, 2014; Katz & Toner, 2013 publication supported the positive effects of mindfulness treatment on substance misuse problems.

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.

**Conclusion**

From the findings of this study titled: Effects of psychoeducational interventions on procrastination and harm reduction among students with psychoactive substance use disorders the researchers' then concluded that:

- Psychoeducational interventions of this nature can reduce procrastination and harm associated with substance use among students. There is a significant effect of the three independent variables, psychoeducation with mindfulness, emotional regulation and

distress tolerance on procrastination and harm reduction among students with psychoactive substance use disorder. although there were differential effects

- The control group had no significant different on their procrastination and harm reduction as they received no treatment.

From the results of the findings of the study psychoeducation with mindfulness, emotional regulation and distress tolerance stands as effective interventions on procrastination and harm reduction among students with psychoactive substance use disorders. Also, the study provides the fact that learning something new or developing positive life skill and building on it every day will lead students to form good habits instead of indulging in substance abuse which is a big threat to them and the society.

**Recommendations**

1. University counsellors in Nigerian who work with students to use Psychoeducation as a therapeutic focus in which clients learn practical and positive emotional and behavioral skills to improve life adjustment, management of emotions and self-awareness as a way of changing unhealthy or negative emotional and behavioral patterns.
2. Mindfulness, emotional regulation and distress tolerance training are highly recommended to equip students to resist the challenges of psychosocial problems especially psychoactive substance abuse.

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