

## **Self-Control and Aversion Techniques on Alcohol Dependent Behaviour Among University Undergraduates in Abia State**

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### **Abstract**

This study determined the effectiveness of Self-Control Techniques and Aversion Therapy on the reduction of alcohol dependence among university undergraduate students in Abia state universities. Two research questions and two hypotheses guided the study. The design of the study is Quasi-experimental design employing the pre-test, post-test non-randomized control group. Thirty undergraduate students drawn using purposive sampling technique was the sample size of the study. A 25-item questionnaire was the instrument used to collect data for the study. The stability/reliability of the instrument was determined using Pearson Product Moment Correlation Coefficient and Cronbach Alpha Statistical tools, respectively which yielded 0.84 and 0.85 values respectively after computation. The face validity of the instrument was determined by three research experts. Mean and Standard Deviation were used to answer the research questions while Analysis of Covariance (ANCOVA) was used to test the null hypotheses at 0.05 level of significance. The findings revealed that: Self-Control and Aversion techniques significantly reduced the incidence of alcohol dependence behaviour of subjects exposed to the techniques. Conclusion was that Self-control and Aversion techniques reduced the alcohol dependent behaviour of undergraduates exposed to them. Based on findings, discussions, conclusion and recommendations were made. Among the recommendations was that professional counsellors on the Universities' staff should help reduce alcohol dependent behaviour among students using self-control and aversion techniques.

**Keywords:** Alcohol, Undergraduate, Self-Control, Aversion therapy and Counselling.

## Introduction.

Alcohol is one of the most popular addictive substances in the world. It is a socially accepted drink around the globe, consumed legally by adults and illegally by minors to socialize, celebrate and relax. It serves as a gateway to the use of other substances by young persons, (Akindutire & Adegbayega (2012). Some people can control how much they drink but others have the risk factors that prevent them from drinking responsibly. Alcohol is among the commonest psychoactive substances used by young people such as undergraduates who experiment with alcohol and cigarette (Akindutire & Adegbayega 2012). Psychoactive substances are chemical substances that when taken have the ability to change an individual's consciousness, mood or thinking processes (WHO, 2014). There are many reasons why young people engage in psychoactive substance such as alcohol. Examples include: peer pressure, dysfunctional home settings, advertisement and inability to cope with stress.

Alcohol dependence is a behavioural problem that can be found among university undergraduates. According to Centers for Control and Prevention (CDCP) (2022), Alcohol dependence is a behaviour which can also be reported as alcohol use. It is characterized by craving, tolerance, a preoccupation with alcohol and continued drinking in spite of harmful consequences and prioritizing drinking over anything else. Alcohol dependence as a problem behaviour is chronic, relapsing, remitting disorders associated with impaired control over alcohol use in which individuals find it difficult to cut down or stop drinking despite persistent, physical, psychological or social harm. It seems to be a major social problem throughout the world. One particularly alarming aspect over several decades has been that of alcohol use behaviour by university undergraduates.

A university undergraduate is a student who is pursuing a degree at the first, second, third or fourth level of higher education, meaning the level after high school (Dictionary.com, 2021). Here, undergraduate students are typically those studying to earn a bachelors degree. They are students in universities. The university undergraduates are in their late teens and early twenties.

Alcohol intake as a problem behaviour among Nigerian university students refer to unhealthy alcohol drinking behaviours by university students. Adekeye et al. (2015) asserted that more than 90% of university undergraduate students consume alcohol; with the alcohol abuses being more severe in male students though females are also affected. The social concern about university students' alcohol use (behaviour) is associated with an increased risk of problem

behaviour such as legal problems. More specifically, alcohol is the main cause of death for people less or more than 21 years (National Institute on Alcohol Abuse and Alcoholism (NIAAA, 2017). Literature indicates an increasing prevalence of undergraduates' alcohol use disorders. Approximately 40% of people with alcohol use disorders show their first symptoms between the ages of 19 and 21 (Hingson et al., 2017). Students with an earlier age of start of alcohol use tend to experience more severe alcohol problems and are more likely to have other psychiatric disorders, (Hale, 2021). Among adults of 21 years or more are those reported with alcohol dependence or abuse; 95% started drinking alcohol during adolescents, specifically, before the age of 20 (National Survey of Drug Use and Health (NSDUH, 2015).

Efforts to reduce the alcohol dependence showed that dependence behaviour generally requires more intensive treatment than brief interventions and may require a withdrawal programme (detoxification) to enable alcoholics to stop drinking. Ongoing interventions to stop could include counselling using self-control and aversion techniques. Awoyinfa (2012); Kypric et al. (2019), studies have shown very high rates of alcohol use and abuse among students in the universities in Nigeria. The studies proved that alcohol use by undergraduates when excessive and uncontrollable becomes a major threat to their academic performance and their future. Research evidence from Western Europe (Mastellone, 2017, Broten–Books, 2022) tend to suggest that behavioural modification techniques such as self-control and aversion techniques have the potential of reducing compulsive behaviours among young people. The present study intended to find out the extent self-control and aversion techniques could help reduce alcohol dependence among undergraduate students in public universities in Abia State.

Aversion techniques could be used to help give up a behaviour or habit by having it associated with something unpleasant, (Taylor, 2022). Aversion therapy is based on the theory of classical conditioning which occurs when one has unconsciously or automatically learnt a behaviour due to a specific stimulus. That means that one learns to respond to something based on repeated interactions with it. Aversion therapy uses conditioning but focuses on creating a negative response to an undesirable stimulus such as drinking alcohol. This is done by exposing a client to the object of this obsession and at the same time presented with an uncomfortable and painful stimulus. The purpose is to utilize the principle of conditioning to cause the client to associate his addiction or compulsive behaviour with an unpleasant sensation. The belief underlying this method is that it will cause the clients to abandon the target behaviour because they would have been conditioned to associate it with pain, discomfort or stress (Elmer et al., 2019).

Aversion therapy has been used to treat a variety of conditions, in which the therapist intentionally forms a paired association between an unwanted behaviour and an unpleasant experience and administering a stimulus that causes victim to become horribly nauseous. The client vomits if he or she takes in even the slightest bit of unwanted behaviour such as alcohol. This intentionally forms a paired association between alcohol and vomiting. Prior to the aversion therapy, a person would ordinarily associate alcohol with positive feelings. After aversion therapy, alcohol is associated with nausea and vomiting (Nau & McKay, 2021). It could make the clients to elicit feelings of nausea even with the thought of drinking alcohol. The effects of aversion therapy can wear off over several months. During the period it is effective, a person can learn to develop a new manner of healthy living. They can practice coping skills that strengthen their ability to enjoy life without alcohol. Treatment from aversion therapy diminishes craving and the client's desire for alcohol by diminishing its appeal. In a study by Brooten-Brooks et al. (2020), participants reported they experienced a strong aversion to alcohol after only four aversions continued post-treatment and by 12 months after the programme, 69% of participants remained abstinent from alcohol.

In another study by Mastellone (2017), on maintenance of non-smoking behaviour through self-administered wrist-bond aversion therapy, participants in the aversion treatment were instructed to focus vividly on the triggering thoughts leading to smoking each time the urge to smoke occurred. Subjects then were to self-administer a painful snap immediately using the rubber band which they were wearing around their wrist and to engage in alternate behaviours such as chewing gum. Participants in the place of treatment were instructed to wear the wrist band either as an aversion stimulus dispenser or as a "reminder". These people were assigned to a non-user group in the statistical analysis. At a 1-year follow-up, a treatment effect was shown for males but not for females. One year after treatment, five of the seven males in the aversion group were still abstinent, as compared to one out of seven abstinent in the placebo group and none in the non-user group.

Self-control is an aspect of inhibitory control. It is the ability to regulate one's emotions, thoughts and behaviours in the face of temptations and impulses. Self-control is one such characteristic that could be particularly useful in understanding differences in intervention outcomes. It is a trait of individual difference reflecting the capacity to exert control over one's thoughts, actions, emotions, impulse and to prioritize distal motives over proximal motives (Fujital, 2011; Baumeister & Tierley (2011). It involves the ability to alter habitual or dominant

responses to adhere to longer term goals, rewards or standards. In other words, it is the capacity for voluntary self-governance. Self-control is a coherent but a multi-dimensional construct. As a process, it is through it that an individual becomes a principal agent in guiding, directing or regulating those features of his or her positive consequences. It is also a systematic procedural approach involving mastering of specific techniques (Obi, 2015). It could also be that exercise of self-control is a conscious effort acquired through learning and practice which an individual uses unconsciously to unlearn an abnormal behaviour. The resilience according to Obi (2015) enables the clients to utilize their strengths and to manage their life events proactively without relying on external help.

Many scholars believed that self-control is partly determined by genetics, psychological and social uses, while some believed that self-control can be both learned and strengthened. according to Duckworth and Seligman (2017) in Cherry (2021), students who exhibited greater self-control had higher test scores and were likely to be admitted to a competitive academic programme. The study showed that when it came to academic success, self-control was a more important factor than Intelligent Quotient (I.Q) scores. Thus, self-control is viewed as effective in curbing abnormal behaviours which could include alcohol dependence (behaviour) that leads to poor students' academic performance. Self-Control has many techniques such as Orientation for change, Goal setting, Antecedent manipulations, Behavioural contract, social support, Self-monitoring and Self-evaluation, some of which were applied in the present study. The present study sought to determine the effect of self-control with aversion techniques in the reduction of alcohol dependence among university undergraduate students of Abia State.

### **Statement of the problem**

Excessive alcohol intake is not supposed to be the major characteristics of many Universities undergraduate students. The rate at which the young university undergraduates in Abia State universities depend on alcohol drinking these days is increasingly alarming. Some of them seem to have gone through the 3 stages of alcohol dependence levels – (Mild, Moderate and Severe levels), with majority stabilizing at the severe level.

But how self-control and aversion techniques could minimize alcohol dependent behaviour among public University undergraduates in Abia State is yet to be determined. Hence, the problem of this study put in a question form is: To what extent could self-control and aversion techniques reduce alcohol dependent behaviour among undergraduate students of Abia state?

## Purpose of the study

The purpose of the study was to determine the effectiveness of self-control and aversion techniques on reduction of alcohol dependence among university undergraduate students in Abia State Universities. The specific objectives were to:

1. Find out the mean score difference in the reduction of alcohol dependent behaviour among undergraduate students exposed to self-control techniques and the control at post-test.
2. Find out the mean score difference in the reduction of alcohol dependent behaviour among undergraduate students exposed to aversion techniques and the control at post-test.

## Research Questions

1. What is the mean score difference in the reduction of alcohol dependent behaviour between students exposed to self-control techniques and the control group at post text?
2. What is the mean score difference in the reduction of alcohol dependent behaviour between students exposed to aversion techniques and the control group at post-test?

## Hypotheses

**Ho1:** There is no significance difference between the reduction mean scores of students with alcohol dependent behaviour exposed to self-control techniques and the control at post-test ( $P < 0.05$ ).

**Ho2:** There is no significance difference between the reduction mean scores of students exposed to aversion techniques and the control at post-test ( $P < 0.05$ ).

## Methods

The study adopted a pre-test, post-test, control group quasi-experimental design. A quasi-experimental design is an empirical intervention where assignment of subjects to the given treatment condition is not based on random sampling, (Nwankwo, 2016). The study took place in the 2 universities in Abia state. The sample size was 30 undergraduate students who were in their 200 and 300 levels, drawn using purposive sampling technique. A 25- item questionnaire developed by the researcher was the instrument used to collect data for the study. It has 2 sections – A and B. Section A is about the Bio-data of the respondents such as age, gender, level, while section B contains items on alcohol dependent behaviour. The items were designed on a 4 - point rating scales of Always (A), Sometimes(S), Often (O) and Never (N), their

weights are 4, 3, 2 and 1 respectively. The items have no right or wrong answers. The cut-off mean for the items is 2.50. Negative items were reverse-scored. Respondents who scored 2.50 and above were considered as having alcohol dependent behaviour while those who scored below 2.50 were considered as having no alcohol dependent behaviour. The face validity of the instrument was obtained by giving the initial draft of the instrument to 3 research experts in Guidance and Counselling, Educational Psychology and Measurement and Evaluation, all in Michael Okpara University of Agriculture, Umudike, Abia state. The stability/internal consistency reliability of the instrument was determined using Pearson Product Moment Correlation Coefficient and Cronbach Alpha Statistical tools respectively which yielded 0.84 and 0.85 values respectively after computation. In the study, 10 subjects were exposed to self-control techniques, 10 to Aversion techniques while another 10 were not exposed to any technique as control group. All the groups were pretested and post tested. Subjects were treated for 4 weeks of 7 sessions with the following techniques of self-control and aversion therapy as in the table 1 below:

Table 1 : Treatment Plan for Self-control and Aversion Techniques

S/No	Sessions	Groups	Techniques	Durations
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1.	1 <sup>st</sup> & 2 <sup>nd</sup>	Self-Control	Counseling establishment issues, (confidentiality, roles of participants, rules), Orientation for Change, Setting Counselling goals and Self-Monitoring skills.	2 hours
2.	3 <sup>rd</sup> & 4 <sup>th</sup>		Behavioural Contract Technique and Self-Evaluation.	2 hours
3.	5 <sup>th</sup> & 6 <sup>th</sup>	Self-Control	Self-Reinforcement Technique, Verification of Subjects' Progress and Termination.	
4.	7 <sup>th</sup>	Self-Control	Post-Test and Follow-up (Administration of Question-naire).	2 hours
5.	1 <sup>st</sup> & 2 <sup>nd</sup>	Self-Control	Counseling establishment issues: Rapport building, confidentiality, ground rules, roles, expectations, fears, hopes, Introduction of Aversion techniques and Setting of Counselling Goals.	25 minutes
6.	3 <sup>rd</sup> & 4 <sup>th</sup>	Aversion Therapy	Aversion Technique: Repeat pairing of unwanted behaviour (Alcohol use) with discomfort (from foul smell odour) and Coping skills.	
7.	5 <sup>th</sup> & 6 <sup>th</sup>	Aversion Therapy	Aversion Technique and Life style and Overview of the vital sessions' Activities.	2 hours
		Aversion Therapy	Summary of sessions' activities	
		Aversion Therapy	Post-Test (Administration of Questionnaire).	

Data collected through pre-test and post-test assessment were statistically analyzed. Mean and Standard Deviation were used to answer the research questions while Analysis of Covariance (ANCOVA) was used to test the null hypotheses at 0.05 level of significance.

### Results:

#### Research Question 1:

What is the mean score difference in the reduction of alcohol dependent behaviour between students exposed to self-control techniques and the control group at post test?

**Table 2:** Mean and Standard deviation Reduction scores of Students with Alcoholic dependence exposed to Self-control technique and the Control group at Posttest period.

Groups	N	Pre-test		Post-test		Mean Reduction	Mean Diff.
		X	SD	X	SD		
SCT	10	73.14	3.19	61.34	3.23	11.08	10.04
Control	10	72.92	3.22	71.16	3.26	1.76	

Results in Table 2 show that the alcoholic dependence reduction mean scores of Students exposed to Self-control technique in the pretest was 73.14 with standard deviation of 3.19 and recorded a posttest alcoholic dependence reduction mean score of 61.34 with standard deviation of 3.23. On the other hand, those exposed to the control group recorded a pre-test alcohol dependence reduction mean score of 72.92 with standard deviation of 3.22 and a posttest alcohol dependence reduction mean score of 71.16 with standard deviation of 3.26. While the students exposed to self-control technique recorded alcohol dependence reduction mean score of 11.08, those in the control group recorded a mean reduction of 1.76. In other words, the alcohol dependence reduction mean difference of 10.04 was recorded for the two groups in favour of the treatment group that was exposed to self-control technique. The standard deviation of each group ranged from 3.19 to 3.26; indicating that respondents were not too far from the mean and from one another in their responses which added further validity to the mean. The results therefore, revealed that the use of self-control technique reduced the alcohol dependence of the students.

### Hypothesis 1

There is no significant difference in the reduction mean scores of alcoholic dependent students exposed to Self-control technique and the control group at posttest period.

**Table 3: Analysis of Covariance (ANCOVA) of the alcoholic dependence reduction mean scores of students exposed to Self-control technique and the control group at posttest period ( $P < 0.05$ ).**

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	6767.330 <sup>a</sup>	2	3383.665	20.101	.000
Intercept	354.613	1	354.613	2.107	.000
Pretest	4344.302	1	4344.302	25.808	.000
Group	287.352	1	287.352	1.707	.011
Error	2861.653	17	168.333		
Total	86317.000	20			

Corrected Total	44516.388	19
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$P < 0.05$

Result in Table 3 showed that a probability value (P-value) of .011 was obtained. Since the P-value obtained is less than the alpha value of 0.05, the hypothesis of no significant difference was rejected and the alternate hypothesis accepted. Therefore, there is a significant difference in the reduction mean scores of alcoholic dependent students exposed to Self-control technique and those in the control group at post-test period.

### Research Question 2:

What is the mean score difference in the reduction of alcohol dependent behaviour between students exposed to aversion techniques and the control group at post-test?

**Table 4: Mean and Standard deviation Reduction scores of Students with Alcoholic dependence exposed to Aversion technique (AT) and the Control group at Posttest period**

Difference Groups	Pre-test			Post-test		Mean Reduction	Mean Reduction
	N	X	SD	X	SD		
AT	10	73.19	3.28	66.52	3.41	6.67	4.91
Control	10	72.92	3.22	71.16	3.26	1.76	

Results in Table 4 show that the alcoholic dependence reduction means scores of Students exposed to Aversion technique in the pretest was 73.19 with standard deviation of 3.28 and recorded a posttest alcoholic dependence reduction mean score of 66.52 with standard deviation of 3.41. On the other hand, those in the control group recorded a pre-test alcohol dependence reduction mean score of 72.92 with standard deviation of 3.22 and a posttest alcohol dependence reduction mean score of 71.16 with standard deviation of 3.26. While the students exposed to Aversion technique recorded alcohol dependence reduction mean score difference of 6.67, those in the control group recorded a mean reduction of 1.76. In other words, the alcohol dependence reduction mean difference of 4.91 was recorded for the two groups in favour of the treatment group that was exposed to Aversion technique. The standard deviation of each group ranged from 3.22 to 3.41 indicating that respondents were not too far from the mean and from one another in their responses which added further validity to the mean. The results therefore, revealed that the use of Aversion technique slightly reduced the alcohol dependence of Students.

## Hypothesis 2

There is no significant difference in the reduction mean scores of alcoholic dependent students exposed to Aversion technique and the control group at posttest period ( $P < 0.05$ ).

**Table 5: Analysis of Covariance (ANCOVA) of the alcoholic dependence reduction mean scores of students exposed to Aversion technique and the control group at posttest period**

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	5567.313	2	2783.657	17.123	.000
Intercept	344.6211	1	344.621	2.120	.000
Pretest	4300.387	1	4300.387	26.453	.000
Group	253.312	1	253.312	1.558	.020
Error	2763.648	17	162.567		
Total	13001.281	20			
Corrected Total	44516.388	19			

$P < 0.05$

Result in the Table 5 shows that a probability value (P-value) of .020 was obtained. Since the P-value obtained is less than the alpha value of 0.05, the hypothesis of no significant difference was rejected and the alternate accepted. Therefore, there is a significant difference in the reduction mean scores of alcoholic dependent students exposed to Aversion technique and those in the control group at posttest period.

## Discussions

The results in Table 4 revealed that Self-control technique significantly reduced the incidence of alcohol dependence of Students. The result agreed with the findings from the earlier study by Walters, Sinions and Sinions (2018) on the use of self-control demands and alcohol related problems at University of South Dakota which revealed among others that Self-control was very effective in diminishing and regulating the drinking of alcohol and other related problems among the University students.

The results in Table 5 showed that Aversion technique significantly reduced the incidence of alcohol dependence of Students. The results agreed with the results of the earlier studies by

Mastellone (2017) and Nau and McKay (2021) which showed that Aversion technique was effective in reducing the incidence of dependence on smoking and alcohol.

## Conclusion

Self-control and Aversion techniques significantly reduced the incidence of alcohol dependence of Students respectively in Universities in Abia state.

## Recommendations

- University counsellors should use the techniques (self-control and aversive techniques) in handling undergraduates with high dependence on alcohol in their respective universities.
- Counsellors should use the combined therapies to handle or treat cases of alcohol dependence of students especially where other measures and therapies have failed.

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