



# The Effectiveness of the Psychological Intervention on Alcohol Dependents and Treatment Outcome

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**Abstract:** Alcoholism is a global phenomenon. The consequences of alcoholism remain the same everywhere with little variation in the magnitude. In the present study, an attempt has been made to study the effect of Psychological intervention on alcohol dependents. This is a Pre and post study in which the alcohol dependents were given Psychological intervention after administration of Alcohol Use Disorder Identification Test. In the present research, Psychological intervention was taken as the independent variable and Alcohol Dependents as dependent variable. Initially, 90 participants were screened on the basis of having hazardous, harmful and dependence level of drinking on Alcohol Use Disorder Identification Test. Finally, 42 participants left who gave their consent to participate in the study age range 25-35 years. After that 21 each in the experimental and control group were selected randomly. Finding indicated the significant improvement on the alcohol dependence usage of the participants of the experimental group than the control group after the intervention.

**Keywords:** Psychological intervention, Alcohol Dependents

## INTRODUCTION

Alcohol is an intoxicant affecting a wide range of structures and processes in the central nervous system which, interacting with personality characteristics, associated behaviour and sociocultural expectations, are causal factors for intentional and unintentional injuries and harm to both the drinker and others. These injuries and harm include interpersonal violence, suicide, homicide and drink-driving fatalities. Alcohol consumption is a risk factor for risky sexual behaviour, sexually transmitted diseases and HIV infection. Moreover, it is a potent teratogen with a range of negative outcomes to the fetus, including low birth weight, cognitive deficiencies and fetal alcohol disorders. It is neurotoxic to brain development, leading to structural changes in the hippocampus in adolescence and reduced brain volume in middle age. Alcohol is a dependence producing drug, The process of dependence occurs through its reinforcing properties and neuroadaptation. It is also an immunosuppressant which increases the risk of communicable diseases, including tuberculosis(WHO, 2009).

Psychosocial interventions for treatment of alcohol and drug problems cover a broad array of treatment interventions, which have varied theoretical backgrounds. They are aimed at eliciting changes in the patient's drug use behaviors well as other factors such as cognition and emotion using the interaction between therapist and patient (Jhanjee ,2014).Broadly, psychological interventions can be classified into behavioural, cognitive, psychodynamic, humanistic, systemic, motivational, disease, and social and environmental. The emphasis of each therapy is different, depending on the theoretical underpinning of the approach. Behavioural approaches, for example, are based on the premise that excessive drinking is a learned habit and therefore influenced by principles of behaviour. The latter can hence be used to teach the individual a different behavioural pattern that will reduce the harm emerging from excessive drinking. Cognitive approaches, on the other hand, emphasise the role of thinking and cognition either prior to engaging in drinking behaviour or to prevent or avoid lapse or relapse. Social approaches focus the work on the social environment, for example families or wider social networks. In some instances, a combination of approaches is used and described under the term of 'multimodal' treatment, guided by the rationale that a combination of approaches is more powerful than each individual component(NICE,2011).Miller et al. (1995)observed that a broad range of psychological therapies are used to treat alcoholism and cited 25 approaches, including social skills training, motivational enhancement, behavior contracting, cognitive therapy, marital and family therapy, aversion therapy, and relaxation training. As might be expected, these varied approaches have different levels of scientific support for their ability to produce positive outcomes.

## Objectives

To study the difference between the experimental group and control group of Alcohol Dependents on their post test scores after the intervention on their Alcohol Use Disorder Identification Test (i.e., treatment outcomes).

## Hypotheses

There would be a significant difference between the participants (alcohol dependents) of experimental group and control group on their post test scores of Alcohol Use Disorder Identification Test (i.e., treatment outcomes) after the intervention.

## METHODOLOGY

The present investigation was designed to study the effectiveness of psychological intervention on alcohol dependents. The following methodology was used to test the hypotheses formulated in the preceding chapter.

### Design of the Study

In the present study, Pre -Test and Post -Test Treatment design was used to study the effectiveness of Psychological Intervention on alcohol dependents and Treatment outcome (See Table 1.1)

**Table 1.1**

**Designs to study see the Effect of Psychological intervention on the Treatment Outcomes**

	Pre- Test	Post Test
Experimental Group	21	21
Control Group	21	21

### Tool of the study

In the present study, the following standardized tool was administered.

#### 1.1. Alcohol Use Disorder Identification Test, AUDIT (Babor, et al., 2001)

The Alcohol Use Disorders Identification Test (AUDIT) was developed with the aim to identify hazardous and harmful use of alcohol use in primary health care. This is a five point Likert's Scale having 10 items in total comprising three domains of alcohol usage i.e., Hazardous use, Harmful use and Dependence symptoms ranges from 0 to 40 scores.

### Reliability and Validity

The Alcohol Use Disorders Identification Test studies have reported to possess adequate internal consistency (Fleming, et al., (1991). A test-retest reliability study indicated high reliability ( $r=.86$ ) in a sample consisting of cocaine abusers, and alcoholics (Sinclair, McRee, and Babor, 1992). According to Allen, et al., (1997) the scale has been found to have good internal reliability across these populations, with Cronbach alphas ranging from .80 to .94. A validation study performed by Pal et al., (2004) in India compared the AUDIT with the Short Michigan Alcoholism Screening Test (SMAST) and reported a very high internal consistency of AUDIT (Cronbach's  $\alpha = 0.92$ ).

### Procedure:

Procedure: **In the first phase of the study**, at the outset, the rapport was established with the Participants of the study and they were briefed about the study tool and nature of the information it would yield. They were also briefed about anonymity and confidentiality of the whole process of the psychological intervention programme. After the proper agreement understanding with the patients, "Alcohol Use Disorder Identification Test" was applied on the alcohol dependents who came for the treatment in de-Addiction clinic/centre of Govt. Hospitals. Initially 90 were selected on the basis of having hazardous, harmful and dependence level of drinking. Finally, 42 participants who gave their consent to participate in the study having age range of 25-35 years were selected for the study. After that 21 each in the experimental and control group were selected randomly.

**In the Second phase of the study**, Psychological Intervention Programme Module was developed following the lines of Group Treatment Approaches for Alcohol and Drug Dependence (Tracey, et al.2005) for the alcohol dependents based on their observation on alcohol Use Disorder Identification test the experimental group in regular three times in a month for 45 minutes. Throughout three months for alcohol dependents.

They were exposed psychological intervention programme through different modes i.e., lecture method ,providing written material, group counseling, role play and group discussion etc. Besides, many topics related to alcohol dependence, harmful, high risk, social issue, relapse prevention were discussed and practiced with the participants. Influences the family emotional climate, family identify, family tasks and relationship among the family member.

The subject of the control group was only interacted simultaneously without giving any Psychological intervention programme.

After the six months of the Intervention, all the subject i.e., 21 alcohol dependents of the experimental group and 21 alcohol dependents of the control group were reassessed on “Alcohol Use Disorder Identification Test” to see the outcome of Psychological intervention Programme. In order to meet the objectives of the study Analysis of covariance was applied on the observations of both experimental and control group.

## RESULT

### Psychological Intervention and Treatment Outcomes of the participants after the intervention

In order to see the treatment outcomes of the study analysis of covariance was applied on the pre test scores and post test scores of both the groups. To analyse the observation with Analysis of Covariance Certain assumptions need to be satisfied first, to apply the analysis of Covariance to the data observed. Firstly, to test the control on the independent variable i.e. whether there exist any difference between the participants of experimental group and control group on their pre test scores analyses was applied and the result was tabulated in Table 1.2.

The F value (F =.024) came out to be non-significant at .05 level of significance indicating no significant difference between experimental and control group on their pre test scores i.e., the independent variables and covariate are not different across the group and satisfied the assumption to apply Analysis of covariance.

**Table 1.2**  
**The F Value Table Showing the Difference between the Experimental and Control Group on their PreTest Scores.**

Source	Sum of Squares	Df	Mean square	F value
Groups(Pre test scores)	.595	1	.595	.024
Error	1009.810	40	25.25	
Total	13943.000	42		

Secondly to test the assumption of homogeneity of regression, the result of the analysis showed the F value (F =.099) non-significant at .05 level of significance (See Table 1.3) indicating no difference between the subject's effects on group time pretest and thus satisfied the assumption of homogeneity of regression to qualify to apply Analysis of covariance to test the significant

difference between experimental group and control group on the dependent variable i.e., Post test scores of the participants with the covariate independent variable i.e., pre test score of the Participants (See Table 1.3).

**Table 1.3**  
**The F Value Table Showing the Difference between the Experimental and Control group to test the Homogeneity of Regression**

Source	Sum of Squares	df	Means square	F value
Groups*(Pre test scores)	.031	1	.031	.099
Error	11.896	38	.313	
Total	8342.000	42		

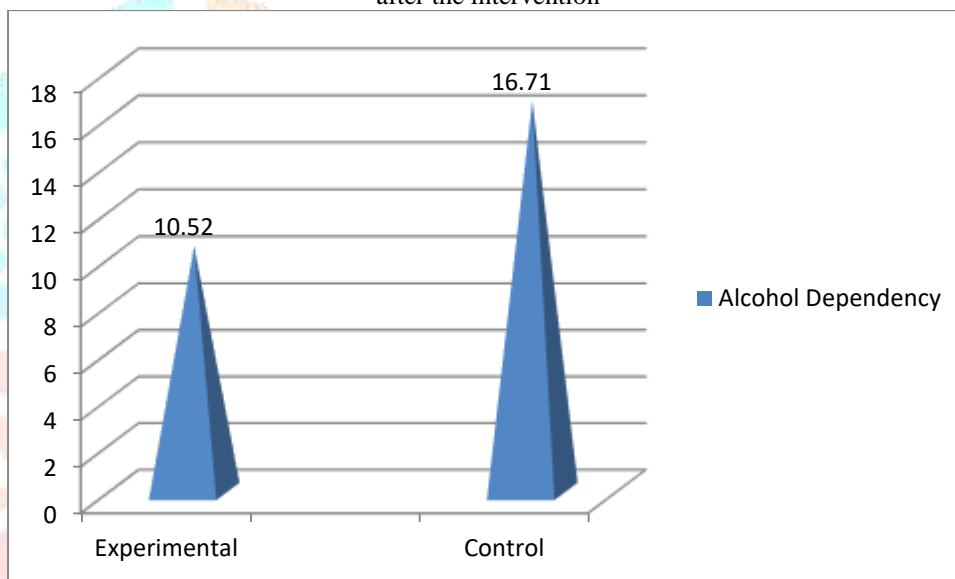
Further, to see the difference between the experimental group and control group on the post test score of the participants on their treatment outcomes ,the F value came out (F =188.89\*\* p<.01) to be significant at 0.01 level of significance (See table 1.4). The mean values of the post test score of the experimental group turn out to be 10.52 whereas for the control group, it is 16.71(See table 1.5)

revealing the significant difference between the experimental and control group on their treatment outcomes i.e., the participants of experimental group showed significant improvement on their alcohol dependency than the control group.

**Table 1.4**  
**The F Value Table Showing the Difference between Experimental and Control Group on the Participants Scores in the Post Test**

Source	Sum of Square	df	Means Square	F value
Groups (Post test scores)	373.590	1	37.59	188.89**
Error	77.134	39	1.98	
Total	9162.000	42		

**Fig. 1**  
 Graph Showing the Treatment Outcomes of the groups after the intervention



**Table 1.5**  
**Mean Value table of the Participants of the Experimental and Control Group on their Alcohol Dependency after the Intervention in their Post test Scores**

Variable	Mean Values (Post Test)	
	Experimental Group	Control Group
Alcohol Dependency	10.52	16,71

Hence, the result of the present study accept the **Hypothesis No.1** i.e., “There would be a significant difference between the participants (alcohol dependents) of experimental group and control group on their post test scores of Alcohol Use Disorder Identification Test (i.e., treatment outcomes) after the intervention” and stands confirmed.

**DISCUSSION**

The present study was designed to see the Effectiveness of Psychological Intervention on the Alcohol Dependents and Treatment Outcome. Analysis of covariance (ANCOVA) was applied on the pre-test scores and post-test scores obtained by the participants in experimental and control group before and after the Psychological intervention. The discussion will highlight the finding of the study with respect to its objective in the light of relevant research evidence available and is followed as:

**The Effectiveness of the Psychological Intervention on the Participants of the study i.e., alcohol dependents.**

In order to see the effectiveness of Psychological Intervention Programme on the Participants of the study, Analysis of Covariance (ANCOVA) was applied on the pre test and post test scores of the experimental group and control group. The F value came out (188.89\*\*) significant at 0.01 level of significance showing significant difference between the groups on their post test scores (See Table 1.4). Further, the mean value scores (See Table 1.5) on the post-test score of the participants of the experimental group (10.52) were lower than the participants of control group (16.71). Thus, indicated the significant improvement on the alcohol dependence usage of the participants of experimental group than the control group after the intervention. Hence, the Hypothesis No.1 is accepted and stand confirmed i.e., “There would be a significant difference between the experimental group and control group of Alcohol Dependents on their post-test scores after the intervention on Alcohol Use Disorder Identification Test”.

The result of the present study does find support in the light of earlier work done in the field of alcohol abuse. Paras et al., (2018) conducted a study on 294 alcohol and marijuana use adolescents in four primary care clinic. A brief motivational intervention was delivered for 3 months. Findings suggested adolescents reported a significant reduction in alcohol and marijuana use. Further, Kushner (2013) found in a metaanalysis study that both Cognitive behaviour therapy and antidepressant medications modestly improved both alcohol use and internalizing disorders among 60 alcoholics. Smedslund et al., (2011) reviewed the 59 studies involving 13,342 participants, concluded that psychological intervention can reduce the extent of alcohol abuse compared to no intervention. EMCDDA, (2016) conducted a systematic review on the studies of contingency management which highlighted that contingency management play important role in retaining patients in treatment and that helps patients to abstain from cocaine and alcohol use during treatment and helps patients to maintain abstinence

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