



Original Research Article

## Efficiency of Water on Alcohol Dependence among Adults - A Quasi Experimental Times Series Design With Multiple Institutions of Treatment

Dileep P<sup>1</sup>, Sampooram W<sup>2</sup>

<sup>1</sup>Research Ward, <sup>2</sup>Lecturer,  
Mental Health Nursing Department, Dhanvantri College of Nursing Pallakkapalayam, Namakkal, India.

Corresponding Author: Dileep P

Received: 18/07/2014

Revised: 06/08/2014

Accepted: 21/08/2014

### ABSTRACT

**Context:** Alcohol dependence is a substance related disorder in which an individual is addicted to alcohol either physically or mentally with evidence of physical dependence and related hardship.

**Objectives:** The present study aimed to find out the efficiency of water on alcohol dependence among adults. Quasi experimental Times series design with multiple institutions of treatment was used in this study. Total sample size was 30. Snowball sampling technique was used. The tools used were demographic variables and alcohol dependence scale.

**Result:** Result shows that in pretest the mean score was 20.75 and the standard deviation score was  $\pm = 14.65$ . In posttest I the mean and standard deviation score was 19.44 and  $\pm = 13.61$  respectively. In posttest II the mean and standard deviation score was 18.21 and  $\pm = 11.82$  respectively and in posttest III the mean and standard deviation score was 16.93 and  $\pm = 10.56$  respectively. The 't' value for normal water was 5.97, the 't' value for warm water was 5.14 and the 't' value for cumin seed water was 4.93. The 't' value calculated was greater than the table value which indicates significance at 0.05 level for all the 3 modes of water. Association was found between pretest alcohol dependence scores and occupation, family monthly income and family history of alcohol use.

**Conclusion:** When comparing the 3 different modes of water it seems that warm water was effective than normal water and cumin seed water was more effective than warm water on alcohol dependence.

**Key words:** Water, Alcohol dependence, Adults

### INTRODUCTION

In India, the estimated numbers of alcohol users in 2005 were 62.5 million, with 17.4% of them (10.6 million) being dependant users and 20-30% of hospital admissions are due to alcohol-related problems. [1] Consumption of alcohol has increased in India in the recent decades. It is imperative to know the patterns of alcohol consumption among different types of

consumers to launch a well-planned nationwide programme for the prevention and control of this devastating social pathology. Abuse of alcohol is one of the main killers of young men in India today. [2] Drinking water could help out to overcome alcohol poisoning, hangover and withdrawal symptoms. Drinking warm water will help speed up removal of toxins. Cumin seed

water also boost the power of the liver to flush out toxins from the body. [3]

## **MATERIALS AND METHODS**

This study on efficiency of water on alcohol dependence among adults residing at Pallakkapalayam, Namakkal district was approved by Institutional review board. The design used in this study was Quasi experimental Times series design with multiple institutions of treatment. [4] Total 30 adults were recruited by using snowball sampling technique. The subjects were enrolled during the month of March 2014. The participants were interviewed by using tools such as demographic variables which comprises of age, education, occupation, family monthly income, marital status, type of family, religion, family history of alcohol use and duration of alcohol use and Alcohol Dependence Scale which consists of 25 items. Scoring manual for Alcohol Dependence Scale comprises of dichotomous items which are scored 0 and 1, three choice items are scored 0, 1, 2 and four choice items are scored 0, 1, 2 and 3. In each case the higher the value the greater the dependence. Total scores can range from 0 to 47. After obtaining informed consent from the participants pretest was conducted on the first day by using the tools.

Immediately after the pretest water was given in 3 different modes with 2 liters per day once in every 2 hours interval for 10 – 15 min within 8 hours during the day time for 30 days. 3 different modes of water includes Mode -1 Normal water for the first 10 days, Mode -2 Warm water for the next 10 days and Mode -3 Cumin seed water for the last 10 days. Posttest was conducted after each mode of water as treatment plan with the help of Alcohol Dependence Scale.

## **RESULTS**

Demographic distribution of adults according to their age depicts that the

majority (60%) were between the age group of 20 and 30, (40%) of the adults were between the age group of 31 and 40.

Their education showed that the highest (53%) were educated, however least (47%) of the adults were uneducated. Occupation depicts that the highest (57%) were employed, however (43%) of the adults were unemployed. Their family monthly income depicts that the highest (70 %) belongs to the income group of less than Rs 5000, whereas (30%) of the adults belongs to the income group of more than Rs 5000. Distribution of adults according to their type of family showed that the highest (77%) were from nuclear family, whereas (33%) of the adults were from joint family. Religion showed that the majority of (67%) were Hindu, whereas (23%) of the adults were Christian and only 10 % of the adults were Muslim. Their family history of alcohol use showed that the majority (73%) had family history of alcohol use and only (27%) of adults had no family history of alcohol use. According to their duration of alcohol use showed that the majority (73%) had alcohol use for more than 1 year and only (27%) of adults had alcohol use for the last 1 year.

The displayed figure-1 revealed that in pretest majority (60%) of adults were with moderate level of alcohol dependence, (40%) of adults were with mild level of alcohol dependence and none one of the adults were with severe level of alcohol dependence. The projected figure-2 revealed that in posttest I with normal water majority (57%) of adults had moderate level of alcohol dependence and (43%) of adults had mild level of alcohol dependence. In posttest II with warm water (50%) of adults had mild and moderate level of alcohol dependence respectively. In posttest III with cumin seed water majority (60%) of adults had mild level of alcohol dependence and (40%) of adults had moderate level of alcohol

dependence and none of the adults had severe level of alcohol dependence.

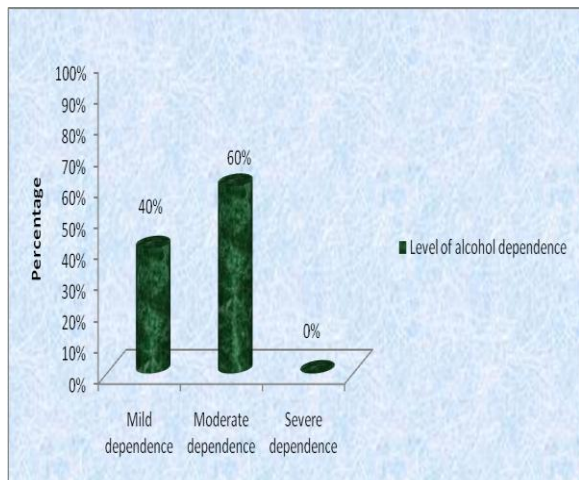


Fig-1 Percentage distribution of adults according to the Level of Alcohol Dependence before water

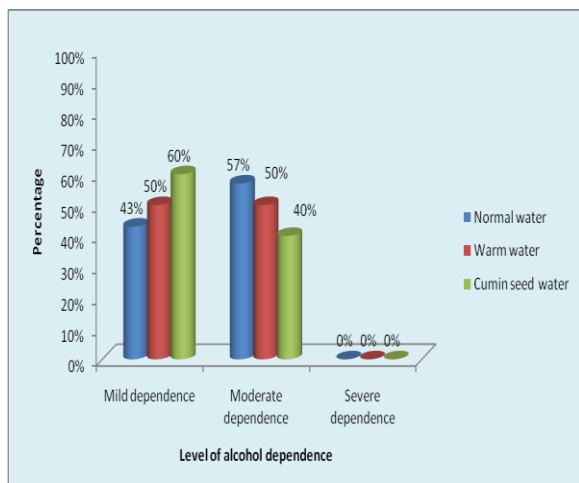


Fig-2 Percentage distribution of adults according to the Level of Alcohol Dependence after water

In pretest the mean score was 20.75 and the standard deviation score was  $\pm = 14.65$ . In posttest I the mean and standard deviation score was 19.44 and  $\pm = 13.61$  respectively. In posttest II the mean and standard deviation score was 18.21 and  $\pm = 11.82$  respectively and in posttest III the mean and standard deviation score was 16.93 and  $\pm = 10.56$  respectively.

The posttest I, II and III mean scores were lesser than the pretest mean scores which indicate the efficiency of water with 3

different modes as the intervention plan on alcohol dependence.

When compared with posttest I (Normal water) mean scores, posttest II (Warm water) mean scores were lesser and posttest III (Cumin seed water) scores were lesser than the posttest II scores. While comparing the 3 posttest mean scores it seems that warm water was effective than normal water and cumin seed water was more effective than warm water on alcohol dependence.

The calculated 't' value for normal water was 5.97. The 't' value for warm water was 5.14 and the 't' value for cumin seed water was 4.93. The 't' value calculated was greater than the table value which indicates significance at 0.05 level for all the 3 modes of water as treatment plan.

It was found that there was association between pretest alcohol dependence scores with occupation, family monthly income and family history of alcohol use. Whereas no association was found with pretest alcohol dependence scores and other variables such as age, education, family monthly income, type of family, religion and duration of alcohol use.

## DISCUSSION

The 't' value for normal water was 5.97, the 't' value for warm water was 5.14 and the 't' value for cumin seed water was 4.93. The 't' value calculated was greater than the table value which indicates significance at 0.05 level for all the 3 modes of water as treatment plan. This study is also consistent with the study findings of Nick Johnson, (2000) stated that alcohol and tobacco which add toxins to the body in mass amounts and continuing to use them will be counterproductive to any detox effort. Drinking the recommended amount of water reduces the risk of colon and bladder cancer by nearly 50% because water

is a major part of getting toxins out of the body. [5]

Findings show that there was association between pretest alcohol dependence scores with occupation, family monthly income and family history of alcohol use, whereas no association was found with pretest alcohol dependence scores and other variables such as age, education, family monthly income, type of family, religion and duration of alcohol use. These findings are consistent with the findings of Kathryn Rosemary Cobain, (2010) stated there were no significant differences at baseline between groups for age, sex, alcohol consumption, severity of dependence or medical co-morbidity. [6]

The findings of this study strongly recommends for the longer duration of water as treatment plan in order to prove the reduction level of alcohol dependence. Similar study can be conducted further with other psychoactive substance use disorder patients. A study can be undertaken to find out the efficiency of water on alcohol dependence through counterfactual dose response effect and wait list control arm. This study can be replicated on large sample

size and there by findings can be generalized with target population.

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How to cite this article: Dileep P, Sampooram W. Efficiency of water on alcohol dependence among adults - a quasi experimental times series design with multiple institutions of treatment. *Int J Health Sci Res*. 2014;4(9):212-215.

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