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### RESEARCH ARTICLE

## PROGRESSIVE MUSCLE RELAXATION (JACOBSON'S) ON STRESS OF PERSONS WITH ALCOHOL DEPENDENCE SYNDROME.

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 Dependence Syndrome.

### Abstract

A study was done to see the effect of progressive muscle relaxation (Jacobson's) on stress of persons with alcohol dependence syndrome at selected de-addiction centre. The objectives were 1) identify the effect of progressive muscle relaxation (Jacobson's) on stress of persons with alcohol dependence syndrome 2) explore the correlation between stress and advanced warning signs of relapse of persons with alcohol dependence syndrome. True experiential pre test post test control group design was used for 100 samples, control and experimental groups (50 each) were selected by simple random method. Structured questionnaire for personal data, perceived stress scale and Advanced Warning Signs of Relapse scale were used as tools in the study. The control and experimental groups were statistically evaluated by Friedman's Repeated Measures of ANOVA on ranks with Dunn's method and Mann Whitney Rank sum test. Karl Pearson's correlation was used to correlate the parameters. The study concluded that the progressive muscle relaxation was effective for reducing stress and Advanced Warning Signs of Relapse were decreased with experimental group when stress was less and when compared to control group.

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### Introduction:-

Alcohol is a psychoactive substance which produces alcohol dependence properties. Physical dependence causes toxic effects to organs and tissues, intoxication leading to problems with physical coordination, consciousness, cognition, perception, affect and behavior. Dependence causes impairment in drinkers self control over drinking behavior (WHO, 2014). Stress will increase problem drinking. Exposure to stress is a cause for psychological distress. Many stressors are influencing alcohol consumption. Alcohol dependence is a major problem of general health. Alcohol will decrease the hormone Cortisol which usually releases when stress occurs. A study conducted on 392 American mothers receiving measured stressful life events and economic hardship on psychological distress and problem drinking overtime and the study concluded that stressful life situations increased the chances of problem drinking (Mulia et al, 2008). Stressor is an external pressure that is brought to bear on the individual and the subjective emotional response to that stressor is anxiety. A study to assess the relationship between numbers, types of past year stressful experience and alcohol consumption. 26946 past year drinkers were selected for study. Result showed that frequency of heavy drinking increased with each additional stressor (24%) by men and 13% by women. Job related and legal sources of stress were more significantly associated with alcohol consumption and the study

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was concluded that brief intervention and treatment might benefit from addressing the issue of tension (Deborah et al, 2005).

Progressive muscle relaxation is a technique in which one progressively relaxes each of the muscle group and relaxation is attained by relaxing and letting go of all contractions in the muscle. A quasi experimental study was done for 100 male alcoholic patients, and pre and post test was done to assess the effectiveness of video assisted teaching module on progressive muscle relaxation to relieve anxiety. Highly significant difference was found between pre and post stress and anxiety (Kumar et al, 2015).

Aware questionnaire was used for assessing the warning signs of relapse. When score increases, it means the increase nature of relapse. Stress is considered as a major risk for alcohol relapse. The impact of alcoholism affect the entire family, so the researcher decided to include the patient and their spouse in the intervention program only for experimental group during admission time, discharge period at home and in each follow up (post test 1, 2 and 3). In this study the dependent variable was stress and independent variable was progressive muscle relaxation (jacobson's). Demographic variables were age, marriage duration, education, occupation, monthly family income, duration of alcoholism and support from family and society. 100 persons ( 50 each in control and experimental group) between 25-55 years of age, first time admitted as alcohol dependence syndrome with their legally married spouse and able to read and write Malayalam were selected by simple random method. Research tools were structured questionnaire for personal data, perceived stress scale of Sheldon Cohen, a standardized five-point scale consisting of 10 items and advanced warning signs of relapse (AWARE) scale by Miller and Harris. The permission was obtained from De-addiction centre and informed consent was obtained from both sample and spouse. Stress level was assessed for both groups at the time of admission. Progressive muscle relaxation was given for sample and their spouse in the experimental group for 15 minutes every day in the early morning with the help of a video assisted program. A diary was given to them during discharge to record their adherence level at home based on intervention. Telephone conversation was made once in every week to maintain the relationship with the experimental group and reminded them to do intervention at home every day. Again the intervention was reminded during their follow up after discharge (2<sup>nd</sup> 4<sup>th</sup> and 6<sup>th</sup> month). Post test was done with perceived stress scale and AWARE scale during their follow up visits for both control and experimental groups.

### **Result:-**

Figure 1 shows that pre test values of control and experimental groups were not significant. But, between the post test 1, post test 2 and post test 3 among control and experimental groups were significant ( $P < 0.001$ ). Mann Whitney rank sum test showed that experimental group had reduced stress levels in each post test when compared with the pre test and with the control group.

Stress and aware correlation were expressed in Figure 2. Control group post test 1, post test 2 and post test 3 were positively correlated. AWARE score was increasing when stress increases ( $p = < 0.001$ ). In experimental group, perceived stress was decreased due to intervention and AWARE score also decreased. Correlation was weak and positive in nature. Experimental group post test 1 was not significant ( $p = 0.033$ ), post test 2 ( $p < 0.001$ ) and post test 3 ( $p = 0.015$ ) were significant

This study concluded that progressive muscle relaxation had significant effect in perceived stress and thereby decreases the relapse chance in the experimental group of persons with alcohol dependence syndrome.

### **Discussion:-**

Stress is considered as a major factor for initiation and continuation of substance use. It has been known that stress increases the reason for alcohol relapse. Family involvement in the treatment of an alcoholic client can change the motivational level of the patient. A study to examine the reasons for drinking alcohol and situational factors on alcohol consumption among 781 Michigan drinkers selected randomly. Perceived stress was a reason for alcohol consumption and had a significant interaction between drinking for social reasons and friend's alcohol consumption (Abey et al, 2015).

Progressive muscle relaxation (Jacobson's) is a relaxation technique is used to reduce stress. Stressors are many times a reason for starting alcohol after abstinence. The impact of alcoholism is always leading to family stress and family burden. A quasi experimental study was conducted to assess the effectiveness of Jacobson's progressive

muscle relaxation among 60 de-addiction patients, 30 each in experimental and control group. The results depicted the mean pre-training and anxiety of experimental group was 22.26 percent and post-training was 7.93 percent, and pre and post training of control was 19.56 percent. The findings revealed that there was decrease in the anxiety level of alcoholic patients of experimental group after JPMR training (Kaur, 2015). A study conducted to assess the stress of spouses of alcoholics, 100 wives were selected by non probability purposive sampling, stress level was assessed and found that 88 percent of the participants had severe stress and only two person had low stress. The data showed that significant attention is necessary for spouses of alcoholic to lead a happy life (Shreya, 2014).

The result of present study also revealed that the intervention program was effective for reducing stress among experimental group than control group and relapse symptoms were decreased in experimental group than the control group.

**Conclusion:-**

The study showed the effect of progressive muscle relaxation on perceived stress of persons with alcohol dependence syndrome. Friedman's repeated measures of ANOVA showed significant change in perceived stress of experimental group during their post test when compared with pre test ( $p < 0.001$ ). Mann Whitney rank sum test showed significant change in perceived stress of the post test 1, post test 2 and post test 3 of the control and experimental groups ( $p < 0.001$ )

Carl Pearson's correlation showed that when stress decreases relapse symptoms also decrease in experimental group.

**Recommendation:-**

A comparative study of perceived stress of alcoholic patient and their spouses can be done to see the differences in the scores.

A comparative study can be done to see the differences of urban and rural people with alcohol dependence syndrome.

**Conflict of Interest:**

Author had no relationship / condition / circumstances that present a potential conflict of interest.

**Source of Funding:**

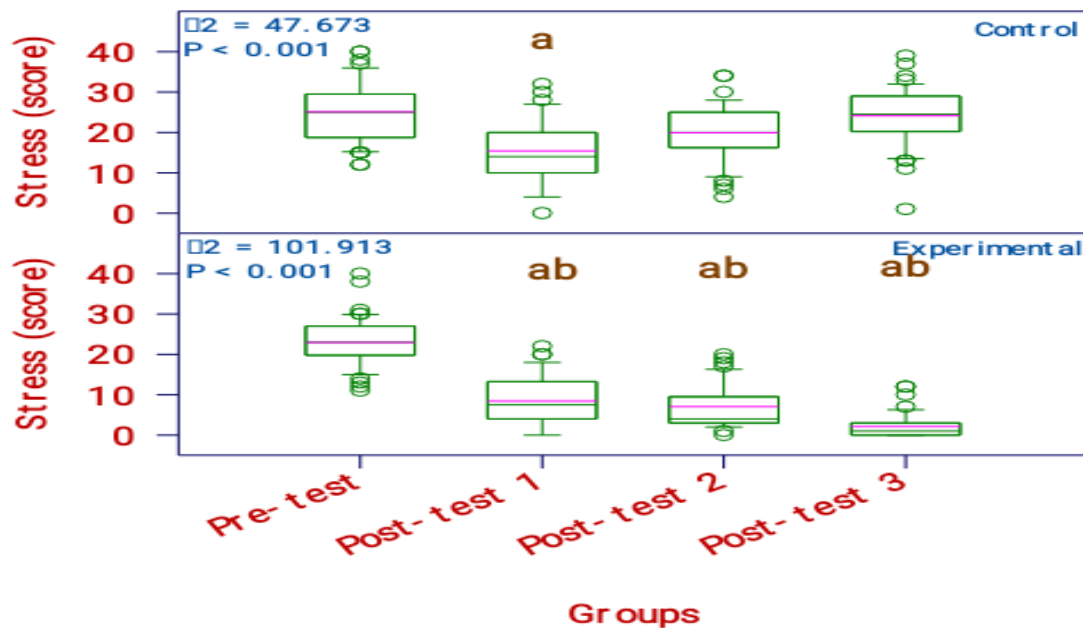
The author didn't receive any financial support from any third party related to the submitted work.

**Ethical Clearance:**

The study was conducted after getting approval from the institutional ethics committee and after obtaining written consent from all subjects.

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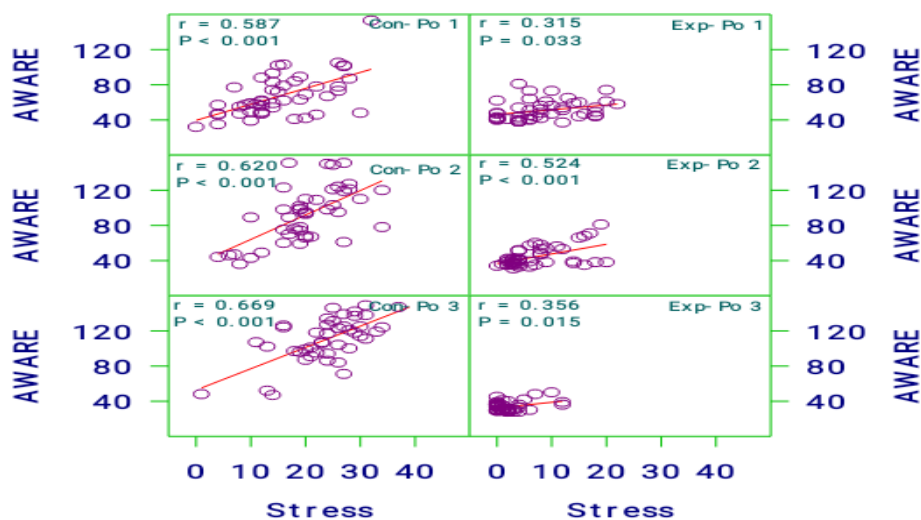


**Figure 1:-** Progressive muscle relaxation (Jacobson's) on stress of persons with alcohol dependence syndrome (n = 50 each).

The middle green line is the median and the pink line is the mean. The control and experimental groups are evaluated by Friedman's RM ANOVA on ranks with Dunn's comparison with pre-test.  
a Significantly different compared to the respective pre-test.

The pre-test, post-test 1, post-test 2 and post-test 3 of control and experimental are compared by Mann Whitney rank sum test. The 'T' and 'P' values of pre-test are 2727 and 0.165, the 'T' and 'P' values of post-test 1 are 1614 and  $< 0.001$ , the 'T' and 'P' values of post-test 2 are 2858 and  $< 0.001$ , and the 'T' and 'P' values of post-test 3 are 2988 and  $< 0.001$  respectively.

b Significantly different the respective pre-test or post-test.



**Figure 2:-** Correlation of perceived stress (stress) and AWARE SCORE of persons with alcohol dependence syndrome in control and experimental groups (n = 50 each).

The 'r' and 'P' are from Pearson's correlation. Con-Po1 = control post-test1      Exp-Po1 = experimental post-test 1  
 Con-Po2 = control post-test2      Exp-Po2 = experimental post-test 2  
 Con-Po3 = control post-test3      Exp-Po3 = experimental post-test 3

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