ORIGINAL ARTICLE

A quasi Experimental Study to assess the effectiveness of Progressive Muscle Relaxation on level of Anxiety among Alcohol dependence in selected Rehabilitation Centre

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ABSTRACT

Statement: A quasi-experimental study to assess the effectiveness of progressive muscle relaxation on level of anxiety among alcohol dependence in selected rehabilitation centre.

Objective: 1. To find out the level of Anxiety before administration of Progressive Muscle Relaxation among Alcohol dependence. 2. To find out the level of Anxiety after administration of Progressive Muscle Relaxation among Alcohol dependence. 3. To compare the level of Anxiety before and after administration of Progressive Muscle Relaxation among Alcohol dependence. 4. To determine the association between selected Demographic variables and level of anxiety among Alcohol dependence.

Research Methodology: The research methodology adopted for the study was quantitative evaluative research approach. The research design is pre-experimental one group pre-test post-test design. The study was conducted in the Rehabilitation Centre. Accessible population was all the Alcohol dependence who was available during the course of the study. 30 samples were selected with the help of non-probability purposive sampling technique. As per inclusion criteria from the Rehabilitation Centre, Modified State Trait Anxiety Inventory Scale was used for the assessment of level of Anxiety.

Result: In pre-test, majority of 15(50%) of Alcohol dependence were suffering from moderate anxiety, 10(30%) of them had severe anxiety, 6(20%) of them had mild anxiety and no alcohol dependence had normal anxiety. in the post-test, majority of (56.6%) of Alcohol dependence had mild anxiety (Score 26-50), 10(33.3%) of them had normal anxiety, 3(10%) of them had moderate anxiety and there was no Alcohol dependence who had severe anxiety.

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Conclusion: The findings revealed that Progressive Muscle Relaxation is highly effective in reducing level of Anxiety among Alcohol dependence in selected Rehabilitation Centre.

KEYWORDS

• Progressive Muscle Relaxation • Anxiety • Alcohol Dependence

INTRODUCTION

Anxiety is one of the common emotional experiences. It is a universal human emotion. It is experienced by everyone in mild form at some time or another; in a more extreme form it leads to fears of impending death or catastrophe. Anxiety disorder is a feeling of uneasiness and apprehension about some undefined threat. Anxiety disorders are present in a high percentage of alcoholism treatment patients. Anxiety is a normal reaction to stress and can actually be beneficial in some situations. For some people, however, anxiety can become excessive. While the person suffering may realize their anxiety is too much, they may also have difficulty controlling it and it may negatively affect their day-to-day living.

Alcohol is a clear colour liquid with a strong burning taste. It is formed by the reaction of fermenting sugar with yeasts spores. WHO defines alcoholics as excessive drinkers whose dependence on alcohol has reached such proportions that it is evident in psychological aberrations or interferes with their physical and mental health, interpersonal relationships and smooth social and economic functioning. Some people use alcohol as a coping mechanism or to relieve stress and tension, increase feelings of power, and decrease psychological pain. High doses of alcohol, however, actually increase muscle tension and nervousness. After cessation of prolonged drinking, there are some symptoms such as tremors, nausea or vomiting, malaise or weakness, autonomic hyperactivity, anxiety, transient hallucinations or illusions, irritability. Jacobson's relaxation is an important therapeutic technique in the modern treatment of anxiety disorders.

BACKGROUND OF THE STUDY

Nowadays drinking alcoholic beverages is a common feature of social gatherings. Nevertheless, the consumption of alcohol carries a risk of adverse health and social consequences related to its intoxicating, toxic and dependence-producing properties.

The use of alcoholic beverages to the point of causing damage to the individual, society or both is term as alcoholism. Alcoholism causes a large disease, social and economic burden in societies. The harmful use of alcohol can also result in harm to other people such as family members, friends, co-workers and strangers.

Alcohol consumption is a causal factor in more than 200 disease and injury conditions. Drinking alcohol is associated with a risk of developing health problems such as mental and behavioral disorders including Alcohol dependence, major non-communicable diseases such as liver cirrhosis, cancers and cardiovascular diseases as well as injuries resulting from violence and road clashes and collisions.

Need of the Study

Indian Scenario

In India, 15 people die every day or one every 96 minutes from the effects of drinking alcohol. **Alcoholism in India** is a social and a public health issue. Excessive alcoholism causes disastrous health issues and India is one of the countries having excessive alcoholism. Also, chronic alcoholism is one of the greatest causes that had led to the poverty in India. It can be observed that most of the people from rural areas and those belonging to the lower economic groups have this addiction of taking alcohol which causes emergence of severe diseases among them. A global study has found out that alcohol consumption in India has risen by 55% over a period of 20 years. In India, 15% of the individuals trying to get addicted to it. Today India is having almost 63 million alcohol addicted people and the rate of **Alcoholism in India** has risen by 75% in the last three years. Around 35-40% of Indian population has consumed alcohol in the year 2015. Amongst them, 11% of the Indian population is indulged in heavy drinking. The per capita consumption of alcohol in the year 2015-16 is around 2.5 liters which are a quite big figure. This shows that Indian population is highly addicted towards alcoholism.

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Maharashtra is tops in alcohol-related deaths. Maharashtra reported the most alcohol-related deaths, followed by Madhya Pradesh and Tamil Nadu, according to the NCRB data, with experts saying high rates of alcoholism correlate with high crime rates. In January 2015 report, in Maharashtra about 94 people lost their lives due to consumption of toxic liquor. In 2015, consumption of illegally brewed liquor claimed more than 100 lives in Malwani, Mumbai and triggering widespread outrage. As many as 1,699 people died in 2014 after consuming spurious/illicit liquor, an increase of 339 percent from 387 in 2013.

Aurangabad comprises to be a key for alcoholic beverage makers. There are 16 distilleries and breweries in the Aurangabad belt, including those of Carlsberg, SABMiller, United Breweries (UB), United Spirits Ltd (USL), and Radico Khaitan.

Due to easy availability of alcoholic, the people of Aurangabad have been attributing with the effect of alcohol.

Since 2005, it has been increasingly acknowledged that anxiety disorders are highly prevalent in the general adult population. Recent worldwide estimates for the 1-year and lifetime prevalence of any anxiety disorders are 10.6% and 16.6% respectively

With a ratio indicating that a large number of people experience anxiety disorders on a continuing or recurring basis.

During hospital posting the researcher experienced that much Alcohol dependence undergoing the rehabilitation process were subjected to anxiety because of extraneous factors and rehabilitation possess a unique capacity of their own anxiety management skills. The skill of the researcher emphasizes on the Progressive Muscle Relaxation as the intervention would be adopted to equip them to balance their emotional state. Keeping this in view the researcher undertook the present study to add one more gem in the crown.

Hypothesis:

H1: There is a significant association between the level of Anxiety and Progressive Muscle Relaxation.

H2: There is a significant association between level of Anxiety and selected demographic variables.

DELIMITATION

1. Research is limited to only Alcohol dependence of selected Rehabilitation Centre.
2. The study is limited those who can read and write English/ Marathi language.

CONCEPTUAL FRAMEWORK

Conceptual framework is based on General System Model by Ludwig von Bertalanffy. A system is a set consisting of integrated and interacting parts that function as a whole. The conceptual framework was divided into three phases – input, throughput and output.

REVIEW OF LITERATURE

In this study review of literature is organized as follows.

A. **Review of literature related to effectiveness of Progressive muscle relaxation on level of Anxiety**

B. **Review of literature related to Alcohol dependence**

RESEARCH METHODOLOGY

Research Approach-Quantitative research approach

Research Design-Pre-experimental one group pre-test post-test design

Setting of the study: Selected rehabilitation centre.

Sample size: 30 Alcohol dependence

Sampling technique: Non-probability purposive sampling technique.

Inclusion criteria:

1. Who are admitted in the selected rehabilitation centre
2. Who are willing to participate in the study

Exclusion criteria:

1. The Alcoholic dependence patient who are suffering from chronic medical and psychological problem.

Variable:

• Independent variable:

Progressive Muscle Relaxation was the independent variable for the present study.

- Dependent variable
- Level of Anxiety among Alcohol dependence is dependent variable.
- Demographic Variables

The items included age, marital status, type of family, number of children, monthly family income, education, occupation, area of living, history of major life events, age of alcohol consumption started, average amount of alcohol consumption, length of stay in rehabilitation and number of relapses.

Tool and technique:

The data for the present study were collected by constructing the following tools:

- **Section A:** Demographic data of samples consisting of 13 variables.

- **Section B:** Modified state-trait anxiety inventory Scale.

- **Section C:** Progressive Muscle Relaxation protocol. Questionnaire consists of 40 questions. It is a modified tool comprising of 20 state and 20 trait anxiety statements. Each statement in the state category has four choices numbering which is indicated by 1= not at all; 2= somewhat; 3= moderately so; 4= very much so respectively which the patient has to mark to indicate how he is feeling at the moment of testing. No time limit but the person is instructed to do as quickly as possible. The whole Progressive Muscle Relaxation technique took 30 minutes approximately.

- **Progressive Muscle Relaxation Protocol**

The Progressive Muscle Relaxation was invented by Edmund Jacobson. The basic idea is to systematically train tensing and relaxing groups of muscles. During the first training session each group of muscle (forearm, upper arm, and so on) is exercised separately. Later these exercises are combined so that at the end person should be able to relax the whole body at once. It is performed by tightening each group of muscle and holding the tension for about 5 seconds, and then relaxing for about 10 seconds. While focusing our inner perception on the muscles just exercised, we sensed that the process of relaxation progresses a little after releasing the muscles. The Progressive Muscle Relaxation used in this study had 18 step of relaxation. In each step different muscles of the body relaxed one by one. Each muscle tensed for 5 seconds and relaxed in 10 seconds. The whole Progressive Muscle Relaxation took 30 minutes approximately.

- **Score interpretation**

Modified State-Trait Anxiety Inventory Scale.

- **State Anxiety:** 20 items

Direct Scoring items: 3; 4; 6; 7; 9; 12; 13; 14; 17 and 18.

Reverse Scoring items: 1; 2; 5; 8; 10; 11; 15; 16; 19 and 20.

- Trait Anxiety: 20 items

  - **Direct Scoring items:** 2; 4; 5; 8; 9; 11; 12; 15; 17; 18 and 20.

  - **Reverse Scoring items:** 1; 3; 6; 7; 10; 13; 14; 16 and 19.

  - **Maximum Score:** 160

  - **Minimum Score:** 40

  - **Normal:** 0-40 (0-25%)

  - **Mild Anxiety level:** 41-80 (26-50%)

  - **Moderate Anxiety level:** 81-120 (51-75%)

  - **Severe Anxiety level:** 121-160 (76-100%)

VALIDITY:

The tool was submitted to 11 experts. The tool was validated by Psychiatrists-2, Psychologist-1, Psychotherapist-1, Mental Health Nurse-6 and Biostatistician-1.

Reliability: The reliability of the tool was established by Split half method and r=0.90 which was considered to be highly reliable and adequate.

PILOT STUDY

Pilot study was conducted in selected Rehabilitation from 3rd December 2016 to 10th December 2016. The study was conducted among 10 persons suffering from Alcohol dependence after obtaining permission from the concerned authority.

RESULT

The data gathered was analyzed and interpreted according to the objectives. Descriptive statistics were used. Mean percentage and standard deviation with graphical representation of data was done. Inferential statistics was used at 0.05 levels of significance.

Socio-Demographic Data:

In concern with the age, 17(56.6%) of samples were from 31-40 years of age. 24(80%)

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of them were married. In regard with the types of family, 20(66.6 %) of them had joint family. In concern with the number of children, 18(60 %) of them had two children. In regard with monthly income 11(33.3%) of them had income Rs.15001-20000.In regard with the education, 9(30 %) of them had middle education. In concern with occupation, 11(36.6%) of them were daily labour. In regard with area of living, 20(66.66%) of them were from rural area. In regard with history of major events, 11(36.6%) of them had history of financial problem. Among Alcohol dependence, 10(33.33%) of them were started to consumed alcohol from 21-30 years of age. In concern with average amount of alcohol consumption, 11(36.6%) of them had consumed 500-750ml of alcohol in a day, regarding with length of stay in Rehabilitation Centre, 13(43.3%) of them were to be stayed one-two month of stay. In concern with number of relapses, 11(36.6%) of them had one relapses.

Objective I: To find out the level of Anxiety before administration of Progressive Muscle Relaxation.

In pre-test, the majority of 15(50%) of Alcohol dependence were suffering from moderate anxiety, 9(30%) of them had severe anxiety and 6(20%) of them were suffering from mild anxiety.
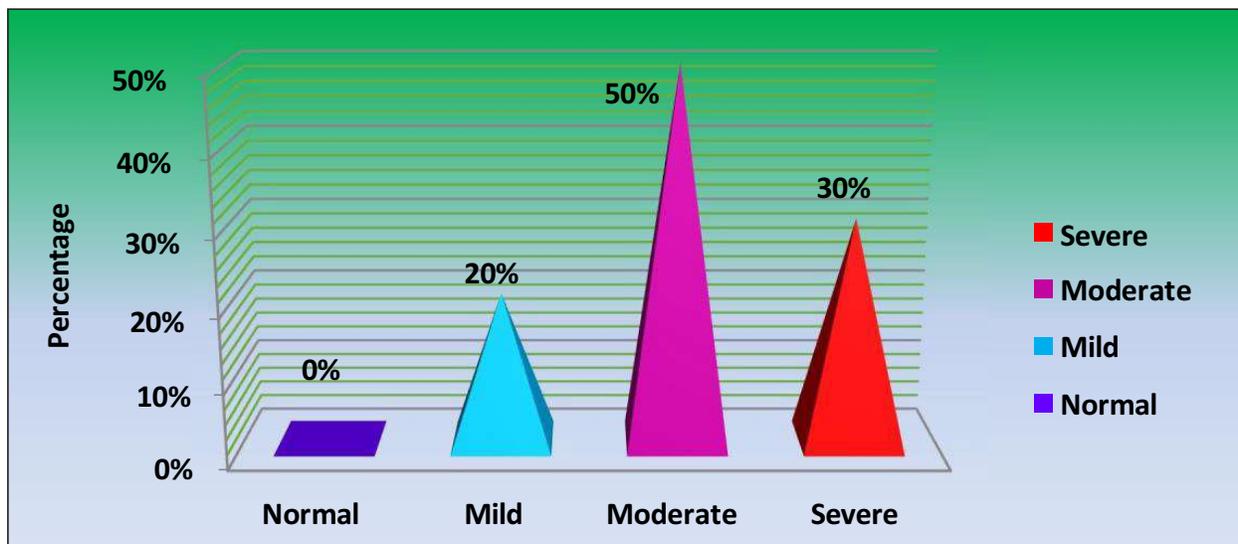

Figure 1: Stacked cylinder depicts the distribution of samples according to level of Anxiety before administration of Progressive Muscle Relaxation
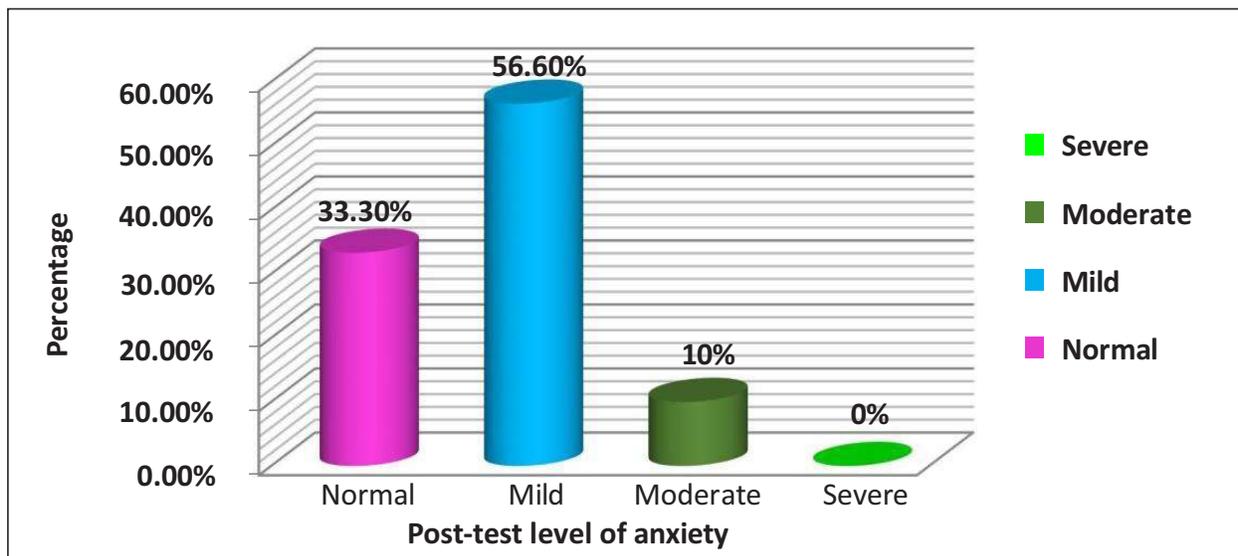

Figure 2: Stacked Cylinder depicts post-test level of Anxiety after administration of Progressive Muscle Relaxation

Objective II: To find out the level of Anxiety after administration of Progressive Muscle Relaxation

It revealed that in the post-test, the majority of 17(56.7%) of Alcohol dependence had mild anxiety, 11(33.3%) had normal anxiety and 3(10%) had moderate anxiety. There was no Alcohol dependence who had severe anxiety. This indicated that there was a marked decrease in the level of anxiety of Alcohol dependence after administration of Progressive Muscle Relaxation.

Objective III: To compare the effectiveness of level of Anxiety before and after administration of Progressive Muscle Relaxation.

In pre-test, the mean and S.D were108.7 and 28.71 respectively. But, in post-test the mean and S.D were reduced to 58.46 and 17.62 respectively. The mean and S.D difference of pre-test and post-test level of anxiety were 50.27 and 11.09. The 't' value for this comparison was 8.17 at 29 degrees of freedom. Thus, it was indicated that Progressive Muscle Relaxation decreased the level of Anxiety among Alcohol dependence.

Table 1: Evaluating the effectiveness of Progressive Muscle Relaxation among Alcohol dependence

Test	Mean	S. D	't' Value	
			Calculated	Table
Pre-test	108.7	28.71		
Post-test	58.46	17.62	8.17	2.05
Difference	50.27	11.09		

Objective IV: To determine the association between selected demographic variables and the level of Anxiety.

Among 13 demographic variables, 3 demographic variables were found to be significant (at 0.05 levels). According to calculated x^2 value of age ($x^2 = 19.86$), marital status ($x^2 = 49.2$) and number of children ($x^2 = 20.4$) was found to be significant. The remaining demographic variables were no significant association between selected demographic variables and the level of Anxiety.

Hypothesis

H1: There is a significant association between the level of Anxiety and Progressive Muscle Relaxation.

The 't' value for Pre and post-test level of anxiety was 8.17 at 29 degrees of freedom. Average mean anxiety score in pre-test was 108.73 which was decreased to 58.46 in post-test level of Anxiety. Hence, H1 research hypothesis was accepted.

H2: There is a significant association between level of Anxiety and selected demographic variables.

Among 13 demographic variables, 3 demographic variables such as age, marital status and number of children were found to be significant (at 0.05 levels). The remaining demographic

variables were no significant association between selected demographic variables and the level of Anxiety as calculated value x^2 was smaller than the table value. Hence, H2 was no accepted.

IMPLICATION

It can be included as a part of relaxation therapy; therefore, this study has an important implication in:

Nursing practice

1. Hospital

Most patients with physical or psychological disorder suffer from anxiety which has not been revealed during hospitalization. The nurse has to assess all the person's suffering from alcohol dependence undergoing rehabilitation therapy about their level of anxiety. Progressive muscle relaxation needs to be implemented as a part of other therapies and be practiced by the nurse in day-to–day nursing care of persons suffering from alcohol dependence in the rehabilitation unit.

Community

The nurse who focuses on the psychiatric rehabilitation in the community should know about the progressive muscle relaxation. This technique should be taught to the people in the community so that they can use it for themselves or can teach others to reduce the anxiety. Nurse can also formulate intervention

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programs with progressive muscle relaxation technique for various age groups, which will have a cost beneficial effect.

Nursing education

Findings of the study have implications for nursing education too. Nursing curriculum equips the essential knowledge, skills and attitude to fulfil their duties and responsibilities during the upcoming professional life.

Nursing administration

Nursing is an evolving profession. To improve the quality of care the practice should be evidence based. The present study shows that there is effectiveness of progressive muscle relaxation on anxiety. The administrator can communicate these findings to practicing nurses and they can incorporate this in patient care; she can motivate practicing nurses to attend the class on progressive muscle relaxation.

Nursing research

Practice emerges from research, evidence-based practice improves the quality of nursing care. This study focuses on improving the quality of nursing care to the patients with anxiety. Research adds value to the comprehensive and holistic care. The nurses of service side need to be educated on relaxation therapy in turn they can educate the patients and enrich the evidence-based practice.

RECOMMENDATION FOR FUTURE STUDY

Replication of the study could be done with a larger sample to validate and generalize the findings.

DISCUSSION

The first objective of the study was to find out the level of Anxiety before administration of Progressive Muscle Relaxation among Alcohol dependence.

Objective I: To find out the level of Anxiety before administration of Progressive Muscle Relaxation.

In pre-test, the majority of 15(50%) of Alcohol dependence were suffering from moderate anxiety, 9(30%) of them had severe anxiety and 6(20%) of them were suffering from mild anxiety.

A quasi-Experimental study was conducted to assess the effectiveness of Jacobson Progressive Muscle Relaxation (JPMR) training on anxiety level among 60 alcoholic patients selected through convenient sampling technique in Jalandhar Punjab. The results depicted that the mean pre training anxiety score of experimental groups was 22.26 and mean post training score was 7.93. The difference between the mean of pre training and post training anxiety score was statistically significant at p< 0.05 level. The mean pre training anxiety score of control group was 19.56 and mean post training score was 19.56. The difference between pre training and post training mean anxiety score was statistically non-significant. The pre training anxiety score of alcoholic patients of experimental was 22.26 and control group was 19.56. This difference in mean was statistically non-significant at p<0.05 level. The post training anxiety score of alcoholic patients was 7.93 of experimental and 19.56 of control group. This difference in the means was statistically significant at p<0.05 level. The study concluded that there was decreased in the anxiety level of alcoholic patients of experimental group after receiving JPMR training.

Objective II: To find out the level of Anxiety after administration of Progressive Muscle Relaxation

It revealed that in the post-test, the majority of 17(56.7%) of Alcohol dependence had mild anxiety, 11(33.3%) had normal anxiety and 3(10%) had moderate anxiety. There was no Alcohol dependence who had severe anxiety. This indicated that there was a marked decrease in the level of anxiety of Alcohol dependence after administration of Progressive Muscle Relaxation.

Objective III: To compare the effectiveness of level of Anxiety before and after administration of Progressive Muscle Relaxation.

In pre-test, the mean and S.D were108.7 and 28.71 respectively. But, in post-test the mean and S.D were reduced to 58.46 and 17.62 respectively. The mean and S.D difference of pre-test and post-test level of anxiety were 50.27 and 11.09. The 't' value for this comparison was 8.17 at 29 degrees of freedom. Thus, it was indicated that Progressive Muscle Relaxation decreased the level of Anxiety among Alcohol dependence.

A study was conducted to assess the effectiveness of progressive muscle relaxation technique on level of anxiety among 100 alcoholic dependence patients, selected by convenient sampling technique in Pune. The result revealed that among control group, in pre-test, majority of (94%) of the persons suffering from alcohol dependence undergoing alcohol rehabilitation program suffered from moderate anxiety (Score 81-120) and (6%) of them had severe anxiety (score 121-160). But in pre-test score of experimental groups, majority of (84%) of the persons suffering from alcohol dependence undergoing alcohol rehabilitation program had moderate anxiety and (16%) of them had severe anxiety among experimental group. In post-test, the entire experimental group suffering from alcohol dependence undergoing alcohol rehabilitation program had mild anxiety. Average anxiety score in pre-test was 113.2 which decreased to 68.2 in post-test. Average change in anxiety score of experimental groups was 44.96 which was 0.000 for control group. So, it is concluded that Jacobson progressive muscle relaxation technique reduces the anxiety of persons suffering from alcohol dependence undergoing alcohol rehabilitation program.

CONCLUSION

The findings revealed that Progressive Muscle Relaxation is highly effective in reducing Level of Anxiety among Alcohol dependence in selected Rehabilitation Centre.

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