EFFECTIVENESS OF MIRROR TRACING TASK ON DISTRESS TOLERANCE AMONG ALCOHOLICS

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ABSTRACT

The study was conducted to evaluate the effectiveness of mirror tracing task on distress tolerance among alcoholics. A Pre-experimental One group pre test and post test design was used. 60 alcoholics admitted in de-addiction ward at Government Rajaji Hospital, Madurai were selected using consecutive sampling technique. The study was conducted in de-addiction ward at Government Rajaji Hospital, Madurai. Pre test was conducted on the first day after obtaining informed consent from all the subjects then mirror tracing task was given for 15-20 minutes –twice a day for 5 Consecutive days (total 10 sessions) for the subjects having mild and moderate level of distress tolerance as measured by the scores on Distress Tolerance Scale. Post test was assessed on 7th day using the same tool. The findings reveal that the post-test practice score of 53.54 was significantly higher than the mean pre-test practice score 41.39 as evident from the “t” value at 0.05 level of significance. The study concluded that mirror tracing task is cost effective, non invasive, non pharmacological complementary and alternative therapy to enhance the level of distress tolerance among alcoholics.

KEYWORDS: Cost Effective, Non Invasive, Non Pharmacological Complementary and Alternative Therapy

INTRODUCTION

Alcohol-abuse and alcoholism are one of the major public-health problems in both developed and developing countries. The World Health Organization (WHO,2009), estimates approximately 2.5 million deaths each year, world’s third largest risk factor for disease and disability, causal factor in 60 types of diseases and injuries and a component cause in 200 others, approximately 4.5% of the global burden of disease and injury is attributable to alcohol.

A recent National Household Survey of Drug and alcohol Use in India, recorded alcohol use in 51% of adult males. The collective review reveals that nearly 30- 35% of adult men and approximately 5% of adult women consume alcohol (Male to Female ratio being 6:1). Nearly 1 of 3 adult males consumes alcohol in India. In Tamilnadu 25-26% of adult males consume alcohol and among them 68.3% were lifetime abstainers. The mean age of respondents at the initiation of alcohol consumption has decreased from 23.36 years in 1950-1960 to 19.45 years in 1980-1990. On regard of the Government Hospitals in the Madurai district, the Government Rajaji Hospital have an annual census of 5800 alcoholics were attending the outpatient department per month and an average of 70-84 patients were admitted in de-addiction ward per month.

The Motivational model suggests that the four distinct drinking motives: social (external, positive reinforcement), enhancement (internal, positive reinforcement), conformity (external, negative reinforcement), and coping (internal, negative reinforcement) motives (Cooper, 1994). Coping (internal/negative) motives aim to avoid the negative, internal
affects (anxiety, tensions, distraction, bad mood etc.). In this case people drink not to search for particularly positive mood but to keep away from negative internal states.

Distress tolerance is defined as one’s behavioural persistence in the face of emotional and/or physical distress (Daughters, 2005). According to this resiliency to distress is associated with reduced motivation or perceived need to use substances. Distress tolerance is measured as latency in seconds to (mirror-tracing task) task termination.

The **Mirror-Tracing Task** issued as an intervention based on the **Learned Industriousness Theory**.”If the individual exerts high levels of effort during the completion of the task, the effort takes on its own reinforcing value. This is because the individual enjoys the sensation of working hard because it is associated with reinforcement. Therefore, this individual is more likely to generalize this high level of effort to other tasks (distress) because it is less aversive and is associated with positive results”.

It psychiatric nurses to identify, various coping strategies adopted by alcoholics and will help them to strengthen the healthy adaptive coping strategies and rectify the maladaptive coping strategies and help to perceive the stressful situations as manageable and challenging by enhancing the distress tolerance.

**Statement of the Problem**

“A Study to assess the effectiveness of mirror tracing task on distress tolerance among alcoholics admitted in de-addiction ward at Government Rajaji Hospital, Madurai.”

**Objectives**

- To assess the level of distress tolerance among alcoholics admitted in de-addiction ward at Government Rajaji Hospital, Madurai before mirror tracing task.
- To evaluate the effectiveness of mirror tracing task on distress tolerance among alcoholics admitted in de-addiction ward at Government Rajaji Hospital, Madurai.
- To associate the post test level of distress tolerance among alcoholics with their selected socio demographic variables.

**Assumption**

- Alcoholics may have varying level of distress tolerance.
- Persistence on mirror tracing task may enable the alcoholics to improve their distress tolerance level.

**Hypotheses**

- **H₁**: There is a significant difference between the pre test and post test level of distress tolerance among the alcoholics.
- **H₂**: There is a significant association between the post test level of distress tolerance among alcoholics with their selected socio demographic variables.

**Conceptual Framework**

The Conceptual framework of the present study was based on Modified Sister callista Roy’s Adaptation Model based on the concept of person as an interrelated system of physiological, psychological, social and emotional being. The
person cope with changing world, the individual used both innate and obtain coping mechanism from the environment. The researcher considers the mirror tracing task as a focal stimulus to the distressful alcoholic adults.

**METHODOLOGY**

**Research Approach**

The research approach utilized in this study was quantitative evaluative approach.

**Research Design**

The research design adopted in this study was one group pretest post test, Pre experimental design.

**Setting of the Study**

The study was conducted in de-addiction ward, Government Rajaji Hospital, Madurai. It is the oldest and illustrious institution catering to the population of the adjoining Southern Districts. This is one of main psychiatric institution serving people of southern Tamil Nadu. The hospital is equipped with bed strength of 2518 beds. Psychiatric ward is equipped with bed strength of 60 beds and de-addiction ward with 20 beds with an annual census of 5800 patients and alcoholics on an average 5500 new cases and 350 old cases were attending the outpatient department per month and an average of 70-80 patients were admitted in psychiatric ward per month and alcoholics also 70-84 individuals were admitted for de-addiction ward.

**Sample**

Samples were alcoholics admitted in De-Addiction ward, Government Rajaji hospital and those who fulfilled the inclusion criteria.

**Sample Size**

The sample consisted of 50 alcoholics admitted in De-Addiction ward, Government Rajaji hospital, Madurai.

**Sampling Technique**

The sample for this study was selected through Consecutive sampling technique.

**Sampling criteria**

The study sample was selected by the following inclusion and exclusion criteria.

**Inclusion Criteria**

- The subjects those who were alcoholics and admitted for de-addiction Therapy.
- The individuals those who were having low and moderate Distress tolerance capacity.
- The individuals those who can understand either Tamil or English.
- The individuals who were available at the time of data collection.

**Exclusion Criteria**

- The individuals those who were not willing to participate in the study.
- The individuals those who were disoriented, those who had sensory deficit and fine motor disturbances.
DESCRIPTION OF THE TOOL AND TECHNIQUE

Section – I (Baseline Data)

This section includes baseline variable items such as Age, education, occupation, income per month, religion, marital status, number of children, type of family, place of domicile, duration of alcoholism.

Section – II

Distress Tolerance Scale which consist of 15 items, developed by Simons and Gaher (2005). It is a 15 item questionnaire rated on a 5 point scale: which were rated as follows (5) strongly disagree, (4) mildly disagree (3) Agree and disagree equally, (2) mildly agree, (1) strongly agree. High scores represent high distress tolerance. Possible minimum and maximum score was 15 and 75 respectively.

DATA COLLECTION PROCEDURE

Formal permission was obtained from the Professor and Head of the Department, Department of psychiatry, Government Rajaji Hospital, Madurai, to conduct the study in De-Addiction ward. Before conducting the study, a brief self-introduction and explanation regarding the nature and purpose of the intervention was given. Written and oral consent was obtained from all the subjects. The subjects were explained that if they drew the star tracing picture correctly they will be given a monetary prize of Rs.50 after completion of the drawing by the investigator. Pre-test was conducted using Distress tolerance scale to assess the level of distress tolerance among alcoholics by interview method on day 1. Mirror tracing task was given from day 1 after the pre-test for 15-20 minutes twice a day for 5 consecutive days (10 sessions). Then post-test distress tolerance was assessed on day 6 using the same tool. Approximately 8-10 subjects were interviewed per week.

- Intervention : Mirror Tracing Task
- Frequency : Twice a day
- Duration : 15 -20 minutes
- Duration of therapy : 10 sessions

Data Analysis

The data was analysed by using Descriptive statistics in terms of Frequency, percentage distribution, Mean, standard deviation and Inferential statistics in terms of Paired t-test and Chi-square analysis

RESULTS

Section A: Frequency and Percentage Distribution of Demographic Variables

In the Pre test, Majority of alcoholics, 22 (53.66 %) had mild distress tolerance level and 19 (46.34 %) had moderate distress tolerance level.

These findings were supported by the following study; Buckner (2007) conducted a study to assess the relationship between distress tolerance level and the substance abuse. The study results suggests that distress tolerance
Effectiveness of Mirror Tracing Task on Distress Tolerance among Alcoholics

Scale scores concurrently mediated the relationship between distress tolerance level and alcohol use problems.

Section B: Effectiveness of Mirror Tracing Task on Distress Tolerance among Alcoholics

The Mean Pre test and Post test distress tolerance was 41.39 and 53.54 respectively and Standard Deviation was 7.18 and 5.43 respectively. The Mean difference was 12.15.

The paired “t” test value was 10.30. The Calculated value was greater than the table value (2.021), there was a significant difference between the pre test and post test distress tolerance level, this difference might be due to the intervention mirror tracing task also this difference was purely by chance and not by choice.

These findings were supported by the following study, Daughters and Lejuez (2005) conducted a study to investigate the relationship between alcohol abstinence attempt and psychological distress tolerance, as indexed by persistence on mirror tracing task for 10 days. The persons with mild distress tolerance has delayed alcohol abstinence attempt. The study results suggest that mirror tracing task enhances distress tolerance level among alcoholics.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Mean Difference</th>
<th>SD</th>
<th>&quot;t&quot;-Value</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Test</td>
<td>41.39</td>
<td>12.15</td>
<td>7.18</td>
<td>10.30*</td>
<td>0.05</td>
</tr>
<tr>
<td>Post-Test</td>
<td>53.54</td>
<td></td>
<td>5.43</td>
<td>(2.021)</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at 0.05 level

Section C: Association between the Post Test Levels of Distress Tolerance among Alcoholics with Their Selected Socio Demographic Variables

The association between selected socio demographic variables and post test score of distress tolerance among alcoholics were calculated by x2 at 0.05 level of significance.

Level of distress tolerance among alcoholics in the post test was significantly associated with their education since
the calculated value 7.9121 was greater than table value 7.82 and also with their income per month since the calculated value 11.7144 was greater than table value 7.82 at P<0.05.

Table 2: Associations between Post Test Level of Distress Tolerance among Alcoholics and their Selected Socio Demographic Variables

<table>
<thead>
<tr>
<th>Socio Demographic Variable</th>
<th>Mild Distress Tolerance Level</th>
<th>Moderate Distress Tolerance Level</th>
<th>High Distress Tolerance Level</th>
<th>Chi-Square (χ²) Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE</td>
<td>20-30 years</td>
<td>20</td>
<td>20</td>
<td>1.7532</td>
</tr>
<tr>
<td></td>
<td>31-40 years</td>
<td>30</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>41- 50 years</td>
<td>40</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>51-60 years</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>61 years and above</td>
<td>60</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>EDUCATION</td>
<td>No Formal Education</td>
<td>1</td>
<td>1</td>
<td>7.9121*</td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High School</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Higher Secondary Degree</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>OCCUPATION</td>
<td>Private</td>
<td>2</td>
<td>6</td>
<td>6.2311</td>
</tr>
<tr>
<td></td>
<td>Govt.</td>
<td>0</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Coolie</td>
<td>7</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self Employment</td>
<td>1</td>
<td>4</td>
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<tr>
<td>INCOME PER MONTH</td>
<td>&lt; 2000</td>
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<td>0</td>
<td>1.7642</td>
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<tr>
<td></td>
<td>2001-5000</td>
<td>5</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5001-10000</td>
<td>3</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 10000</td>
<td>0</td>
<td>5</td>
<td></td>
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<tr>
<td>MARITAL STATUS</td>
<td>Unmarried</td>
<td>1</td>
<td>4</td>
<td>2.3140</td>
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<tr>
<td></td>
<td>Married</td>
<td>8</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Divorced</td>
<td>0</td>
<td>1</td>
<td></td>
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<tr>
<td></td>
<td>Separated</td>
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<td>0</td>
<td></td>
</tr>
<tr>
<td>RELIGION</td>
<td>Hindu</td>
<td>6</td>
<td>12</td>
<td></td>
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<tr>
<td></td>
<td>Christian</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Muslim</td>
<td>1</td>
<td>3</td>
<td></td>
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<tr>
<td>NO.OF CHILDREN</td>
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<td>2</td>
<td>2</td>
<td>1.8354</td>
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<tr>
<td></td>
<td>One Child</td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Two Children</td>
<td>3</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; Three</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unmarried</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>TYPE OF FAMILY</td>
<td>Nuclear Family</td>
<td>3</td>
<td>11</td>
<td>1.4004</td>
</tr>
<tr>
<td></td>
<td>Joint Family</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Extended Family</td>
<td>2</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>DOMICILE</td>
<td>Urban</td>
<td>4</td>
<td>7</td>
<td>4.5260</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>6</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sub Urban</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>DURATION OF ALCOHOLISM</td>
<td>&lt; 5 Years</td>
<td>3</td>
<td>4</td>
<td>3.6052</td>
</tr>
<tr>
<td></td>
<td>6-10 Years</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11- 15 Years</td>
<td>2</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16 - 20 Years</td>
<td>3</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 21 Years</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

* Significant at 0.05 level
IMPLICATIONS

Nursing Practice

Nurses need awareness to educate the alcoholics about the benefits of Mirror Tracing Task and encourage them to practice. Alcoholics who pose a greater risk to have mild distress tolerance due to psychosocial causes and require greater reinforcement regarding distress tolerance management which can be achieved by Mirror Tracing Task.

Nursing Education

The study of body and mind relationship is vital component of mental health nursing. Current concept and adequate practical training in complementary and alternative modality should be included in nursing curriculum. It is also helpful to the student nurses to lead a distress free life by enhancing distress tolerance through practicing Mirror Tracing Task.

Nursing Administration

Nurse administrators can encourage nursing staff to make important contribution to the prevention of distress by practicing complementary and alternative therapies like mirror tracing task thereby improving distress tolerance level. Nurse administrators can plan various complementary and alternative therapies in the hospital and community to place emphasis on the distress tolerance management.

Nursing Research

There is plenty of scope for research in the field of distress tolerance and alcoholics. Research studies on distress tolerance among alcoholics can help to identify the existing knowledge gap in nursing practice and nursing education and to fill in existing gaps.

RECOMMENDATIONS

- Complementary and alternative therapy can be amalgamated with other system of medicine.
- Similar study can be replicated with a large sample size and in different settings.
- A comparative study can be conducted to evaluate the effectiveness of Mirror Tracing task with other complementary therapies and among other chronic illnesses such as Cerebro Vascular Accidents, drug addiction and neurotic patients
- A True experimental study can be done with control group

CONCLUSIONS

- These findings of the study had been discussed in terms of objectives, theoretical base and hypothesis. The following conclusion were drawn from the study findings
- Majority of the alcoholics had mild to moderate level of distress tolerance.
- Mirror Tracing Task was effective in enhancing the level of distress tolerance among the alcoholics.

It indicates that Mirror Tracing Task proved as an effective therapy in improving the distress tolerance level and helps to lead a healthy life. Out of the 41 subjects 27 of them completed the drawing correctly and got the monetary prize of Rs.50 and this monetary prize reinforced the other subjects also, thus improving their skills which inturn improved their distress tolerance level. Sample atresia / subject dropouts were there. During the data collection 9 of the subjects were
dropped for various reasons such as unwillingness during the study, discharge during the study without completing the posttest. So mirror tracing task interventions are cost effective, non-invasive, non-pharmacological, free from side effects and highly feasible. It is not only helpful for the alcoholics but also for the normal human being to strengthen their vitality and enhance the coping skills to overcome distress in day today life thereby improving distress tolerance.

REFERENCES


