

Effectiveness of yogic breathing exercises on depressive symptoms among alcohol dependents in a selected de-addiction centre at IMH, Chennai.

Madhubala S

Associate Professor, St.Xavier College of Nursing, Thanjavur, Tamil Nadu, India

Abstract:

Alcohol may temporarily relieve some of the depressive symptoms initially, but chronic alcohol worsens the depressive symptoms. So, researcher administer the yogic breathing exercises to find effectiveness in reducing the depressive symptoms among alcohol dependents. Pre-experimental research approach was used to “assess the effectiveness of yogic breathing exercises on depressive symptoms among alcohol dependents in a selected de-addiction center at IMH, Chennai”. 60 samples selected by non-randomized purposive sampling techniques. Participant’s depression level assessed by Beck Depression Inventory on before and after administration of Yogic breathing exercises, which include sudarshan kriya yoga and bastrika pranayama. The study result showed that yogic breathing exercises reduced depression level from 22.87 to 13.95 (SD: 4.10 to 3.10) among study participants. The calculated ‘t’ value of 43.82 was significant at 0.001 level. The researcher concluded that there is a significant effect of yogic breathing exercises on depression among alcohol-dependent clients, so integrating yogic breathing exercise in the treatment among alcoholic dependents the outcome will be effective.

Keywords: yogic breathing exercises, Sudarshan kriya yoga, Bastrika pranayama, alcohol dependents, depression

1. Introduction:

Alcohol is a substance that affects the brain tissues and depresses the central nervous system. Alcohol intake cause significant imbalance in the neurotransmitters of dopamine, GABA (Gamma-Aminobutyric Acid), and glutamate in the brain and it play the important role in a person alcohol taking behavior. High doses of alcohol cause depression during the intoxication phase, and following the person feels anxious during the withdrawal phase. This depression and anxiety phase get intensify when the person increases the amount and frequency of alcohol use. According to DSM-V TR classification, depression is a comorbid of moderate to severe alcohol use disorder as a cause of acute intoxication and withdrawal effects. Even though patients receive treatment for alcoholism at a de-addiction ward, they are suffered by depressive symptoms during the withdrawal stage. So many research studies found that yoga therapy can often be an effective way to treat depression. It increases the levels of neurotransmitters in the brain, such as GABA (Gamma-Aminobutyric Acid), which may be useful in the treatment of anxiety and depression. In yoga

therapy, pranayama can help treat a variety of depression and related disorders, enhance autonomic processes, and relieve oxidative stress. Specifically, Sudarshan Kriya and Bhastrika pranayama play a significant role in reducing depression. Sudharshan Kriya helps to release tensions, stress, and depression. It also helps the individual to have a control over one's emotion and reduce the cortisol level in blood. Studies suggest that Bhastrika Pranayama is helpful to improve the individual mood, reduce the depression and increase motivation.

METHODS AND MATERIALS

A Pre-experimental research approach - one group pre-test post-test design was adopted to assess the effectiveness of yogic breathing exercises on depressive symptoms among alcohol dependents. The study was conducted at the Institute of Mental Health (IMH), Chennai after ethical clearance and institutional approval. 60 alcoholic dependents were selected via purposive sampling technique. Beck depression inventory (Beck et al. 1961) was used to assess the participants depression level before and after the yogic breathing exercises. Participants were demonstrated about yogic breathing exercise specifically Sudarshan kriya and Bhastrika pranayama for 5 days. After the demonstration following 14 days participants were practiced the Sudarshan kriya and Bhastrika pranayama with the supervision of researcher. after completion of 19 days of practice participants depression level were analysed. Data were gathered through structure interview method and analysed using SPSS. A p-value ≤ 0.05 was considered as statistically significant.

RESULTS AND DISCUSSION:

Demographic and Clinical Profile

Among the participants only male was included in the study, the largest age group were 30 – 40 years. Most of the participants were resided in urban, married, live as single family, have a low-income status. Among alcoholics 66.7% of them were healthy and most of their reason to be alcoholic was the peer pressure. 46.7% of participants used to take 180ml of alcohol per day and 58.3% of them were taking alcohol daily. Part of them 63.3% were experienced withdrawal symptoms when they try to quit alcohol and 53.3% were tried disulfiram therapy to get rid from alcoholism.

Level of Depression

At pre-test 38.3% of participants had borderline clinical depression, 30% of them had a moderate depression, and 31.7% had mild mood disturbances and after administration of yogic breathing exercises participants depression score were reduced as 66.7% were moved to mild depression score, 20.0% had a borderline clinical depression and 13.3% had no depression as presented in [Table 1](#). On an average alcohol dependent depression level were reduced from 22.87 to 13.95 after administration of yogic breathing exercises as presented in [Fig 1](#). The mean difference was 8.92 (8.51 – 9.32) and calculated t value was 43.82 at $P = 0.001$ as presented in [Table 2](#). The estimated study result according to 95% class interval was 14.15% and internal estimate is 13.50% to 14.79%. It showed that there is a significant reduction of depression score among alcoholic dependent after yogic breathing exercises as presented in [Table 3](#).

Table 1: Comparison of pre-test and post-test level of depression score

Level of depression	Pre-test		Post-test		Generalized McNemar's test
	N	%	N	%	
Normal	0	0.0%	8	13.3%	$\chi^2=44.43$ P=0.001***(S)
Mild mood disturbance	19	31.7%	40	66.7%	
Borderline clinical depression	23	38.3%	12	20.0%	
Moderate depression	18	30.0%	0	0.0%	
Severe depression	0	0.0%	0	0.0%	
Extreme depression	0	0.0%	0	0.0%	
Total	60	100.0%	60	100.0%	

***significant at $p < 0.001$ level

Table 2: Comparison of overall depression score before and after yogic breathing exercises

	No. of alcohol dependent	Pre-test Mean $\pm$ SD	Post-test Mean $\pm$ SD	Mean difference Mean $\pm$ SD	Student's paired t-test
Overall Depression Score	60	22.87 $\pm$ 4.10	13.95 $\pm$ 3.14	8.92 $\pm$ 1.57	t=43.82 P=0.001*** DF = 59, significant

*** Very high significant at $P \leq 0.001$

Table 3: effectiveness and generalization of yogic breathing exercises

	Max score	Mean score	Mean Difference of depression reduction score with 95% Confidence interval	Percentage Difference of depression reduction score with 95% Confidence interval
Pre-test	63	22.87	8.92 (8.51 – 9.32)	14.15 % (13.50% – 14.79%)
Post-test	63	13.95		

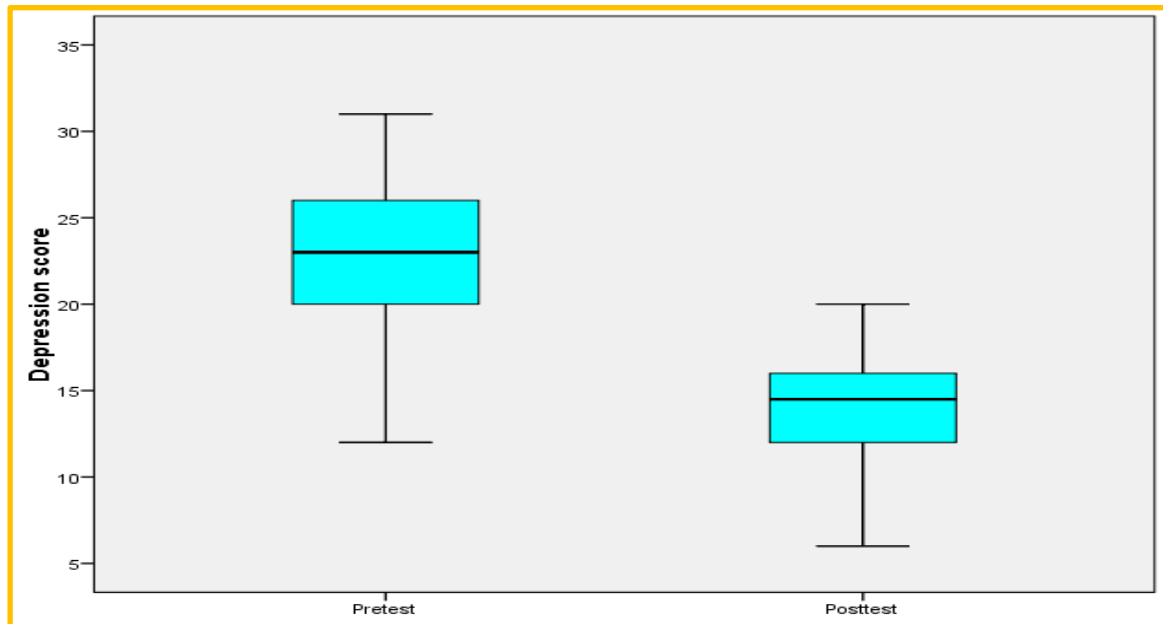


Fig 1: Box plot compares the overall depression score before and after yogic breathing exercises
Association with Demographic and Clinical Variables

Better depression reduction noted among the participants, who are in the age group of > 50 years and live-in joint family with their parents and participants who were healthy and had a previous history of disulfiram use. Thus, there is a significant association between the alcohol dependents depression score and their demographic and clinical variables after yogic breathing exercises as presented in [Fig 2](#).

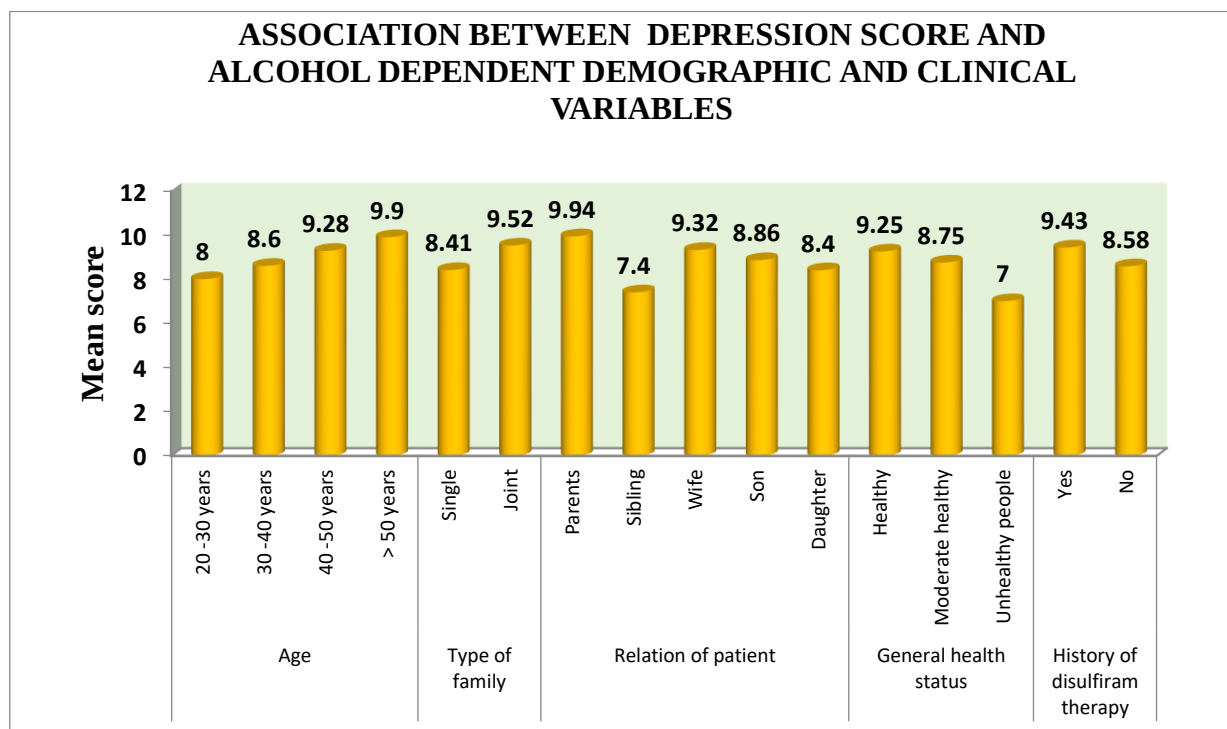


Fig 2: Association between post-test depression score and alcohol-dependent demographic and clinical variables

Conclusion:

Yogic breathing exercises showed significant improvement in the alcohol dependents depression level. Incorporating this yoga strategies in the patient treatment we could find the early recovery and prevent the relapse of alcohol addiction.

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