Original Article

Efficacy of Yoga therapy and strength -based group intervention on the level of depression, anxiety and stress among persons with alcohol dependence syndrome

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Abstract

Background: Alcohol is a chronic relapsing disorder. The disease is often progressive and fatal. It is characterized by continuous or periodic impaired control over drinking, preoccupation with the drug alcohol, use of alcohol despite adverse consequences and distortion of thinking most notably denial. There are various therapies for the treatment of alcohol dependence syndrome as yoga therapy and strength-based group intervention. **Aims:** To assess and examine the efficacy of yoga therapy and strength- based group intervention among the persons with alcohol dependence syndrome in pre-post and follow up stage. **Tools:** Semi- Structured Socio-demographic data sheet (especially designed for the study), was used for sociodemographic details, Depression, Anxiety and stress scale was applied for the assessment of depression, anxiety and stress on both groups. **Results and Conclusion:** that yoga therapy and strength -based group intervention leads better improvement..

Keywords: Yoga therapy, alcohol dependence, depression, anxiety,stress.

Introduction

Alcohol is a chronic relapsing disorder. The disease is often progressive and fatal. It is characterized by continuous or periodic impaired control over drinking, preoccupation with the drug alcohol, use of alcohol despite adverse consequences and distortion of thinking most notably denial. There are various therapies for the treatment of alcohol dependence syndrome as yoga therapy and strength based group intervention. Koob et al., (2014) described that alcohol is widely used in society for both its social and medicinal benefits. Excessive alcohol intake caused physical disease like liver cirrhosis, brain damage and Heart issues as well as also responsible for psychological morbidity as depression, anxiety and stress. Previous researches showed that there are various therapies are effective for alcohol dependence syndrome in which yoga therapy and strength based group intervention is also effective.

Heavy alcohol use directly affects brain function and alters various brain chemical (i.e., neurotransmitter) and hormonal systems known to be involved in the development of many common mental disorders (e.g., mood and anxiety disorders) (Koob 2000).

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Thus, it is not surprising that alcoholism can manifest itself in a broad range of psychiatric symptoms and signs. The patients suffered from comorbid psychiatric disorders may vary in severity depending upon the amounts of alcohol used. Due to excessive alcohol consumption patients suffered from depression, anxiety and stress also for example, during acute intoxication, smaller amounts of alcohol may produce euphoria, whereas larger amounts may be associated with more dramatic changes in mood, such as sadness, irritability, and nervousness. Alcohol's disinhibiting properties may also impair judgment and unleash aggressive, antisocial behaviors that may mimic certain externalizing disorders, such as antisocial personality disorder (ASPD) (Moeller et al. 1998. There are various therapies are effective for the treatment of persons with alcohol dependence syndrome like relapse prevention therapy, buddhist-philosphy, strength based group intervention and yoga therapy etc. Koob et al., (2014) described that alcohol is widely used in society for both its social and medicinal benefits. Excessive alcohol intake caused physical disease like liver cirrhosis, brain damage and Heart issues as well as also responsible for psychological morbidity as depression, anxiety and stress. Previous researches showed that there are various therapies are effective for alcohol dependence syndrome in which yoga therapy and strength based group intervention is also effective.

Methods

Aim of the study

To assess and examine the efficacy of yoga therapy and strength based group intervention among the persons with alcohol dependence syndrome in pre-post and follow up stage**.**

Instrument

Semi- Structured Socio-demographic data sheet (especially designed for the study), was used for sociodemographic details, Depression, Anxiety and stress scale (DASS – 21) (Lovibond & Lovibond, 1995) was applied for the assessment of depression, anxiety and stress on both groups.

Procedure

It was a hospital study. This study was conducted at Ranchi Institute of Neuro – Psychiatry and Allied Sciences, Kanke, Ranchi. Patients were selected according to inclusion and exclusion criteria. Informed consent was taken from each patient. Sample was selected by using random sampling technique 30 sample of alcohol dependence syndrome were chosen according to ICD-10 DCR criteria and were divided randomly into two groups experimental group and control group. Level of depression, anxiety and stress was assessed among all the participant of experimental as well as control group by using Depression, anxiety and stress scale. After base line assessment yoga therapy and strength based group intervention both therapies were given to the experimental group and strength based group intervention therapy was given to control group alone. After assessment both the group assessed by using depression anxiety and stress scale. Treatment as usual has been provided to both the groups**.**

Stastical analysis

SPSS – 16 version was used for analysis.

Result

Table-1

Table showing age of the Experimental Group and Control Group of Individual with Alcohol Dependence Syndrome.

Subjects / Variables	Experimental Group	Control Group	Mann Whitney U Test	
			U Value	Z Score
	Mean± SD	Mean± SD		
Age (in years)	**29.00±5.35**	29.60±2.32	109.00	.146NS

NS Not Significant

Table 1 shows sample characteristics of experimental group and control group of persons with alcohol dependence syndrome on variables of age. Mean age of the participants from experimental group and control group was 29.00±5.35 and 29.60±2.32 years respectively. There was no significant difference between experimental group and control group regarding age (U value=109.00; Z Score=.146).

Table-2

Table showing age of the Experimental Group and Control Group of Individual with Alcohol Dependence Syndrome.

Variables	Subjects	Experimental Group	Control Group	Chi Square Value Df
Education	**Illiterate**	2 (13.3%)	0 (0%)	7.361 (3)
	Below matric	5 (33.3%)	11 (73.3%)	
	Matric	1 (6.7%)	2 (13.3%)	
	Above	7 (46.7%)	2 (13.3%)	
Occupation	**Employed**	10 (66.7%)	13 (86.7%)	1.677 (1)
	Unemployed	5 (33.3%)	2 (13.3%)	
Family Income	**>5000**	5 (33.3%)	12 (80%)	7.261 (3)
	6000-10000	6 (40%)	2 (13.3%)	
	11000-20000	2 (13.3%)	0 (0%)	
	>20000	2 (13.3%)	1 (6.7%)	
Marital Status	**Married**	11 (73.3%)	10 (66.7%)	0.159 (1)
	Unmarried	4 (26.7%)	5 (33.3%)	
Family Type	**Joint**	9 (60%)	11(73.3%)	0.439 (1)
	nuclear	6 (40%)	4 (26.4%)	
Domicile	**Rural**	5 (33.3%)	6 (40%)	0.144 (1)
	Urban	10 (66.7%)	9 (60%)	
Religion	**Hindu**	6 (40%)	12 (80%)	5.3600 (3)
	Muslim	4 (26.7%)	1 (6.7%)	
	Christian	1 (6.7%)	1 (6.7%)	
	Sarna	4 (26.7%)	1 (6.7%)	

NS Not Significant

Table 2 shows socio demographic variables of experimental group and control group of Persons with Alcohol dependence syndrome. Subjects belonging to both experimental group and control group were male. Female patients could not be included in the study due to difficulty in meeting inclusion criteria. There were no significant differences in marital status, religion, occupation, domicile, socio economic status and family type. Most of the patients were married, Hindu, educated up to below matric, employed and from joint family.

Table-3

Table showing age of onset and Duration of illness of the Experimental Group and Control Group of Individual with Alcohol Dependence Syndrome.

Subjects / Variables	Experimental Group	Control Group	Mann Whitney U Test	
	Mean± SD	Mean± SD	U Value	Z Score
Age of onset (in years)	**20.5±2.29**	20.0±4.22	107.00	0.23NS
Duration of illness (in years)	9.06±1.98	9.00±1.51	106.00	0.275NS

NS Not Significant

Table 3 shows clinical characteristics of experimental group and control group of persons with alcohol dependence syndrome. The mean age at the onset of illness for experimental group and control group was 20.5±2.29 and 20.0±4.22 years respectively. There was no significant difference between experimental group and control group for age of onset (U value=107.00; Z score=0.23). The mean duration of illness for experimental group and control group was 9.06±1.98 and 9.00±1.51 years respectively. Here also no significant difference was found between the experimental and control group (U value=106.00; Z score=0..275).

Table-4

Clinical Variables of the Experimental Group and Control Group of Individual with Alcohol Dependence Syndrome.

Variables	Subjects	Experimental Group	Control Group	Chi Square Value Df
Family history of ADS	**Yes**	11 (73.3%)	10 (66.7%)	0.159 (1)
	No	4 (26.7%)	5 (33.3%)	
Family history of Psychiatric illness	**Yes**	5 (33.3%)	6 (40%)	0.144 (1)
	No	10 (66.7%)	9 (60%)	

NS Not Significant

Table 4 shows clinical variables of experimental group and control group of Persons with Alcohol dependence syndrome. There were no significant differences in family history of alcohol dependence syndrome and Family history of Psychiatric illness.

Table-5

Baseline Assessment of Experimental Group and Control Group of Persons with Alcohol Dependence Syndrome on Depression, Anxiety and Stress Scale.

Subjects / Variables	Mean±SD		Mann Whitney U Test			
			Mean Rank			
	Experimental Group	Control Group	Experimental Group	Control Group	U Value	Z Score
Depression	4.26±0.593	3.93±0.883	17.17	13.83	87.50	1.112
Anxiety	4.80±0.414	4.06±0.632	16.60	14.40	96.00	0.883
Stress	4.06±0.798	3.80±0.941	16.83	14.17	92.50	0.884

NS Not Significant

Table: 6

Post Intervention Assessment of Experimental Group and Control Group of Persons with Alcohol Dependence Syndrome on Depression, Anxiety and Stress Scale.

Subjects / Variables	Mean±SD						Mann Whitney Test			
	Experimental Group			Control Group			Mean Rank			
	Pre	Post	Difference Pre-Post	Pre	Post	Difference Pre-Post	Experimental	Control	U	Z
Depression	**4.26±0.593**	1.00±0.00	3.26±0.593	3.93±0.883	2.26±0.457	1.66±0.816	21.77	9.23	18.50	4.090*
Anxiety	4.80±0.414	1.00±0.00	3.80±0.414	4.06±0.632	`2.33±0.487	2.26±0.703	22.40	8.60	9.00	4.533*
Stress	4.06±0.798	1.00±0.00	3.06±0.798	3.80±0.941	2.20±0.414	1.60±0.828	21.20	9.80	27.00	3.678**

*p<0.05 level, ** p<0.01 level

Table shows the post intervention assessment of experimental group and control group of persons with alcohol dependence syndrome on Depression, Anxiety and Stress scale. There were significant differences between all the domain of scale between the experimental group and control group. The difference was significant at 0.01 level for Depression (U value=18.50, Z score=4.090), Anxiety (U value= 9.00, Z score=4.533), and for Stress (U value= 27.00, Z score=3.678).

Discussion

In the present study, yoga therapy resulted reduction in the level of depression, anxiety and stress. Similar finding was reported by Hallgren et al. (2014) explored the feasibility of yoga as part of a treatment program for alcohol dependence. Yoga was found to be a feasible and well accepted adjunct treatment for alcohol dependence. Alcohol consumption reduced more in the treatment as usual plus yoga group compared to the treatment as usual only group and thus marked differences were reported in depression, anxiety and stress. Reviewing the existing literature demonstrated that this result was consistent with the results of Aghayousefi*et al.(2010)*Likewise, in both groups plasma cortisol as well as ACTH fell after two weeks but significantly more so in SKY group. Reduction in BDI scores correlated with that in cortisol in SKY but not in control group. Results extend the antidepressant effects of SKY in alcohol dependence subjects. Reduction in stress-hormone levels (cortisol and ACTH) along with BDI reductions possibly support a biological mechanism of SKY in producing beneficial effects. When we conducted yoga therapy along with strength based group intervention on persons with alcohol dependence, Table showed improvement was reported in experimental group on depression, anxiety and stress and total. Similar findings were also reported by Bondolfi et al. (2010). Mindfulness-based cognitive therapy (MBCT) is a group intervention that integrates elements of cognitive behavioral therapy (CBT) with components of mindfulness training to prevent depressive relapse. A recent study of Pascoe & Bauer (2015) explored that yoga has mood-enhancing properties possibly related to its inhibitory effects on physiological stress and inflammation, which are frequently associated with affective disorders. And also investigated the effects of yoga on sympathetic nervous system and hypothalamic pituitary adrenal axis regulation measures and suggested that yoga practice leads to better regulation of the sympathetic nervous system and hypothalamic-pituitary-adrenal system, as well as a decrease in depressive and anxious symptoms in a range of populations. to investigate the efficacy of a Kundalini Yoga intervention, relative to Cognitive behavior therapy and a control condition. Another study of Hofmann et al.,(2015) investigated importance of yoga therapy specially kundalini yoga and explained that Kundalini yoga and CBT are compared with each other in a non inferiority test and both treatments are compared to stress education training, an attention control intervention, in superiority tests. Improvement by yoga therapy on depression, anxiety and stress is supported by many studies which also favoured the present study (Marefat et al., 2011, Park et al., 2015).Here hormonal (Cortisol) improvement is also associated with reduction in depressive features. Sarubin et al. (2014) assessed the impact of Hatha yoga as add-on treatment in depressed patients. They included 60 in-patients suffering from major depressive disorder (MDD) according to DSM-IV were randomized for a 5 week treatment with Yoga or not (control group). And found that cortisol improvers in week 1 of therapy (reduction in cortisol peak value within the DEX/CRH test) reached significant greater amelioration of depressive symptoms after 5 weeks. Stoutenberg et al. (2016) found that exercise training may have multiple beneficial effects in individuals with mental health or substance use disorders. The role of exercise in enhancing the social environment and increasing individual self-efficacy to reduce excess and/or inappropriate alcohol consumption. Another study also supported that hormonal effect also gets corrected through daily yoga practices. Streeter et al. (2012) found that the decreased PNS and GABAergic activity that underlies stress-related disorders can be corrected by yoga practices resulting in amelioration of disease symptoms. This has far-reaching implications for the integration of yoga-based practices in the treatment of a broad array of disorders exacerbated by stress. Exercises have antidepressant effects in people with depressive disorder (Schuch et al., 2016). People would benefit more from exercise and yoga practice.

Linardatou et al. (2014) explored that relaxation breathing –RB- and progressive muscle relaxation revealed a statistically significant amelioration of stress, depression, anxiety symptoms and an increase of life-satisfaction and a better daily routine in participants of the intervention group. Previous researches have shown that breathing exercises and music reduces the stress levels of clients.

Another study also supported the present study, Gardiner et al. (2015) reported that stress management and relaxation techniques gives significant improvement and conducted this study on 623 people and found that greater utilization of stress management and relaxation techniques among all racial groups and found improvement in depressive features among addicted persons. The significant improvement in psychological health as a result of yoga therapy and strength based group intervention as found in the present study shows uniformity with some prior study with persons with alcohol dependence syndrome (Barnhofer et al., 2009; Kearney et al., 2016). Spiritual and yoga based treatment on addicted patients suggested that spirituality has stronger negative and significant associations were found between perceived stress and spirituality among drug addicted and alcohol addicted women (Arévalo et al., 2008).

Conclusion

Study revealed that yoga therapy and strength based group intervention leads better improvement. Prior studies has investigated that mindfulness meditation or mindfulness-based interventions have been shown to have beneficial effects on health, well-being, and a number of clinical disorders, including anxiety, depression, addiction, stress-related symptoms, and chronic pain.

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