

Role of Yoga-Practices in the Management of Anxiety and Depression

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Abstract

The problems of mental health as well as stress disorders on the one hand and the promising potentials of yoga-practices to arouse positive neuro-physiological and psychological changes, on the other, have been subjects of consistent pursuit of medical and psychological research for the last five decades. In the present study too, based on clinical intervention of yoga-practices on 64 cases of psychological disorders, the impact of yoga-practices in the management of psychological problems was assessed critically and here for two schedules of yoga-practices were so standardized, that one of the schedule was expected to produce composing effect whereas the other was framed to cause bioenergy activation. Both the schedules of yoga-practices in the study comprised similar kinds of yoga-practices. The cases underwent through follow-up assessments after 6, 12, and 18 weeks and evaluated on adequate psychological parameters. It was noted that the second schedule i.e. Schedule B was found to be effective in causing changes in affective behaviour patterns.

Keywords: Yoga practices; Neuro-physiological; Psychological behaviour patterns

Introduction

The ancient form of yoga system was not aimed at management of disorders, nevertheless the aspects of health were covered in the foundation texts of yoga (Svetasvatropanisad/2/12; Bhagwatgita/6/17,23; Yoga Sutra/1/31,32 & 2/2) but later on during the period of later Upanisads and Yoga-Samhitas, it was duly emphasized that the practice of yogic postures and yogic breathing were able to alleviate physical, mental and ethical disorders (Yoga Chudamani Upn/109; Hath Pr/1/19 & 2/16-18; Yoga Vasistha/6/1/81/12-42). In the modern time, the use of yoga practices started for the purpose of treatment of different ailments. After the fifties of 20th century, a large number of medical research reports showing the efficacy of yogic practices in the management of a variety of psychophysiological and functional problems were published in different journals. As far as the applications of yoga-practices for management of mental problems are concerned, the yogic techniques are mostly being used as adjunct to the other psychotherapeutic systems and as a part of psychosomatic rehabilitation and relaxation training.

The psychotherapeutic efficacy of yoga and meditation has also been reported [1-3]. Yoga practices were found to be effective in the management of aging and geriatric problems personality disorders mental retardation and hyperkinetic behaviour and neurotic reactions [4-15]. Meti [14] reported electrical activity of the brain like mild electroconvulsive seizure effect as a result of pranayama irrespective of types.

Present study was also launched to evaluate the comparative efficacy of yoga practices to evolve a proper psychotherapeutic application procedure of psychotherapeutic application of yoga practices for the management of neurotic problems.

Methods

Mostly the therapeutic efficacy of yoga-practices has been compared either with completely control group or with the group of drug intervention or with other types of healing systems. Authors felt that such type of heterogeneous comparison was inadequate. The effect of one drug was compared with that of another drug. One schedule of yoga practices was compared with the other yoga-schedule. For the purpose of comparative evaluation of yogic intervention, two homogeneous regimens of yoga practices were scheduled and used as therapeutic interventions and they were termed as Schedule A and Schedule B. Both the schedules contained one each of the meditative posture (Asana), purificatory practice (Kriya), breathing practice and Pranayama, Mudra and relaxation posture for relaxation, one practice out of each said category of yoga-practices were included and thus Schedule A comprised the practices of *Sukhasana*, *Tratakas*, *Nadi-Shodhan*, *Bhramari*, *Yoni-mudra* and *Shavasana* whereas Schedule-B was consisted of *Vajrasana*, *Kapalabhati*, *Diaphragm breathing*, *Bhasrika*, *Viparitarani* and *Makarasana*. Time supposed to be consumed in both the yoga-schedule was around 35 minutes.

The schedule A and B were so prepared that schedule A was supposed to be effective in the management of anxiety whereas the schedule B was supposed to be effective in the management of depressive reactions. Out of these schedules the schedule-A contained composing practices whereas the other was framed to cause bioenergy activation (Table 1).

Sample

The cases included in this study were the outpatients of Ayurveda hospital, suffering by anxiety and reactive depression. Firstly, the observation was made on 155 cases out of which 83 cases were suffering from anxiety and 72 were the cases of reactive depression, visited hospital for indigenous management of their problems. They were subjected to yogic intervention. Out of a total 155 cases of yogic intervention, 16 cases in both the said mental problems as well as for each yogic schedules, who attended all the three follow-up assessments

more or less regularly, were selected as subject for the longitudinal observation and thus the results on a total 64 of cases were recorded and assessed.

Sl. No.	Yoga Practices (Categories)	Schedule A		Schedule B	
		Name of exercises	Time/frequency	Name of exercises	Time/frequency
1	Asana	Sukhasana	5 to 7 mins	Vajrasana	5-7 mins
2	Kriya	Trataka	3 mins	Kapalabhati	3 mins
3	Breathing Practice	Nadi-sodhan	3 rounds/ 5 mins	Diaphragm breathing	5 mins
4	Pranayama	Bhramari	6 rounds/ 5 mins	Bhastrika	6 rounds/ 5 mins
5	Mudra	Yoni Mudra	6 rounds/ 5 mins	Viparita-karani	6 rounds/ 5 mins
6	Relaxation	Shavasana	7 mins	Makarasan a	7 mins

Table 1: Yoga practices.

Setting

The study took place in the Kayachikitsa Department of Ayurveda Hospital of the Banaras Hindu University. For the instruction of yoga-practices, a separate chamber, adjacent to the outpatient department, having optimum noise, light and ventilation as well as soothing atmosphere was selected.

Parameters

The following three psychological tests were used in this study:

Self-assessment rating scale of anxiety

It is a scale to measure three kinds of anxieties i.e., State, Trait and Free-floating. Thus it contains three separate subscales to measure kind of anxiety. It is based on empirical criterion method. Subjects were to respond on each item of the subscale on 5point rating scale. Each scale contained positive and negative items and scoring was done accordingly. In the present study only the observations on the subscale of Trait-Anxiety and Free-floating anxiety in being presented.

Scale of neurotic depression

It is also based on empirical criterion method, response pattern and method of scoring is the same, as in aforesaid scale [7].

Results

It was observed that as far as management of free-floating anxiety is concerned Schedule A was found to be effective in the group of anxiety neurotics and Schedule B was seen as effective in the cases of depressive reactions. Schedule A caused significant changes in the group/cases of anxiety-neurotics and depressive reactions on the 2nd and 3rd follow-up i.e., after 12 weeks. Both the schedule of yoga-practices caused no significant changes in the management of neurotic depression in anxiety neurosis. It may be due to the relatively low

degree of neurotic depression in the group of anxiety neurotics (Tables 2-7).

Regimen-Assessment	Schedule A			Schedule B			
	Mean	SD (SEM)		Mean	SD (SEM)		
Initial	77.26	13.07 (3.26)		76.22	11.89 (3.07)		
1st Follow-up	73.53	12.26 (3.64)		72.19	10.11 (2.61)		
2nd Follow-up	67.33	11.02 (2.76)		69.33	12.07 (3.12)		
3rd Follow-up	62.08	9.93 (2.48)		66.27	9.12 (2.36)		
Statistical Significance of Changes							
	Schedule A (N =16)			Schedule B (N =16)			
	Follow-ups			Follow-ups			
	1st	2nd	3rd	1st	2nd	3rd	
Initial	Initial			Initial			
t	0.83	2.32	3.7	t	1	1.57	2.57
p	N.S.	<0.05	<0.001	p	N.S	N.S	<0.05
1st	1st			1st			
t	X	1.51	2.9	t	X	0.7	1.68
p		N.S	<0.05	p		N.S	N.S
2nd	2nd			2nd			
t	X	X	1.42	t	X	X	0.78
p			N.S	p			N.S
Parameter: Trait Anxiety, Group: Anxiety Neurosis							

Table 2: Changes recorded during follow-up assessments and statistical significance of changes.

On the light of these findings it may be concluded that the therapeutic process in cases of mental problems may be started with schedule B of yoga-practices followed by Schedule A of yoga practices to form a better psychotherapeutic application procedure of yoga practices. As believed that clam introspection during meditation can be used in dynamic psychotherapy. Orme-Johnso [15] found an increased ability to resolve conflicts and higher score of self-esteem caused by yoga-practices.

Doubtlessly it may be observed that yoga practices may ably cause relaxogenic effect, some improvement in mental faculties, increased electrical activity in the brain as well as integration in personality variables [16]. All these factors are the main essential components of management of mental problems. In the light of these interesting findings, present study will certainly prove to be an invitation for further research.

Regimen-Assessment	Schedule A		Schedule B	
	Mean	SD (SEM)	Mean	SD (SEM)
Initial	79.38	12.86 (3.32)	74.97	14.93 (3.73)

1st Follow-up	76.06	12.34 (3.19)	68.22	11.18 (2.80)			
2nd Follow-up	69.75	12.47 (3.22)	67.33	7.09 (1.77)			
3rd Follow-up	64.38	12.81 (3.31)	64.67	6.92 (1.73)			
Statistical Significance of Changes							
	Schedule A (N =16)			Schedule B (N =16)			
	Follow-ups			Follow-ups			
	Ist	IIInd	IIIrd	Ist	IIInd	IIIrd	
Initial	Initial			Initial			
t	0.72	2.08	3.2	t	1.45	1.85	2.51
p	N.S.	<0.10	<0.01	p	N.S	N.S	<0. 05
1st	1st			1st			
t	X	1.39	2.54	t	X	0.27	1.08
p		N.S	<0.05	p		N.S	N.S
2nd	2nd			2nd			
t	X	X	1.16	t	X	X	1.07
p			N.S	p			N.S
Parameter: Trait Anxiety, Group: Depressive Reactions							

Table 3: Changes recorded during follow-up assessments and statistical significance of changes.

Regimen-Assessment	Schedule A		Schedule B				
	Mean	SD (SEM)	Mean	SD (SEM)			
Initial	91.33	17.71 (4.57)	87.25	15.53 (4.08)			
1st Follow-up	87.53	8.87 (2.27)	83.13	10.39 (2.68)			
2nd Follow-up	80.52	11.02 (2.04)	78.97	9.48 (2.45)			
3rd Follow-up	73.98	6.44 (1.66)	71.81	10.35 (2.67)			
Statistical Significance of Changes							
	Schedule A (N =16)		Schedule B (N =16)				
	Follow-ups		Follow-ups				
	Ist	IIInd	IIIrd	Ist	IIInd	IIIrd	
Initial	Initial		Initial				
t	0.86	2.28	3.69	t	0.84	1.74	3.16
p	N.S.	<0.05	<0.01	p	N.S	N.S	<0.01
1st	1st		1st				
t	X	2.28	4.79	t	X	1.15	2.99
p		<0.05	<0.001	p		N.S	<0.01
2nd	2nd		2nd				
t	X	X	2.48	t	X	X	1.98

p			<0.05	p			<0.10
Parameter: Free-Floating Anxiety, Group: Anxiety Neurosis							

Table 4: Changes during follow-up assessments and statistical significance of changes.

Regimen-Assessment	Schedule A		Schedule B				
	Mean	SD (SEM)	Mean	SD (SEM)			
Initial	91.33	9.56 (2.47)	94.33	16.92 (4.37)			
1st Follow-up	87.53	7.59 (1.94)	89.81	11.07 (2.86)			
2nd Follow-up	80.52	9.57 (2.47)	78.47	10.04 (2.59)			
3rd Follow-up	73.98	6.86 (1.77)	72.6	10.03 (2.59)			
Statistical Significance of Changes							
	Schedule A (N =16)		Schedule B (N =16)				
	Follow-ups		Follow-ups				
	Ist	IIInd	IIIrd	Ist	IIInd	IIIrd	
Initial	Initial		Initial				
t	0.63	1.56	3.54	t	0.84	1.74	3.16
p	N.S.	N.S.	<0.01	p	N.S	<0.01	<0.001
1st	1st		1st				
t	X	1.1	3.34	t	X	1.15	2.99
p		N.S.	<0.01	p		<0.01	<0.001
2nd	2nd		2nd				
t	X	X	1.75	t	X	X	1.59
p			N.S.	p			N.S
Parameter: Free-Floating Anxiety, Group: Depressive reactions							

Table 5: Changes during follow-up assessments and statistical significance of changes.

Regimen-Assessment	Schedule A		Schedule B			
	Mean	SD (SEM)	Mean	SD (SEM)		
Initial	77.72	17.53 (4.53)	73.63	20.59 (5.15)		
1st Follow-up	73.89	12.97 (3.35)	66.45	14.07 (3.63)		
2nd Follow-up	70.56	12.07 (3.12)	63.37	13.93 (3.60)		
3rd Follow-up	70.04	11.73 (3.02)	62.78	13.02 (3.36)		
Statistical Significance of Changes						
	Schedule A (N =16)		Schedule B (N =16)			
	Follow-ups		Follow-ups			
	Ist	IIInd	IIIrd	Ist	IIInd	IIIrd

Initial				Initial			
t	0.68	1.3	1.41	t	1.14	1.63	1.76
p	N.S.	N.S.	N.S.	p	N.S.	N.S.	N.S.
1st				1st			
t	X	0.73	0.85	t	X	0.6	0.74
p		N.S.	N.S.	p		N.S.	N.S.
2nd				2nd			
t	X	X	0.12	t	X	X	0.12
p			N.S.	p			N.S.
Parameter: Neurotic Depression, Group: Anxiety Neurosis							

Table 6: Changes during follow-up assessments and statistical significance of changes.

Regimen-Assessment	Schedule A			Schedule B			
	Mean	SD (SEM)		Mean	SD (SEM)		
Initial	89.08	12.95 (3.34)		87.85	11.54 (2.88)		
1st Follow-up	85.27	10.33 (2.67)		81.82	11.93 (2.98)		
2nd Follow-up	82.89	10.39 (2.68)		73.51	11.03 (2.76)		
3rd Follow-up	73.67	8.12 (2.09)		64.78	11.59 (2.65)		
Statistical Significance of Changes							
	Schedule A (N =16)			Schedule B (N =16)			
	Follow-ups			Follow-ups			
	Ist	IInd	IIIrd		Ist	IInd	IIIrd
Initial				Initial			
t	0.89	1.43	3.9	t	1.45	3.59	5.88
p	N.S.	N.S.	<0.001	p	N.S.	<0.01	<0.001
1st				1st			
t	X	1.69	3.42	t	X	2.05	4.27
p		N.S.	<0.01	p		<0.05	<0.01
2nd				2nd			
t	X	X	1.56	t	X	X	2.29
p			N.S.	p			<0.01

Parameter: Neurotic Depression, Group: Depressive Reactions

Table 7: Changes recorded during follow-up assessment and statistical significance of changes.

Conclusion

It was observed that in the group/cases of Anxiety-neurotics, Schedule A was more effective and caused significant changes. But, it was not so effective in the cases/group of neurotic depression. Schedule-B, however, was effective in both the groups. It was noted that Schedule A was more effective on the IIIrd follow-up assessment, that is after 18 weeks of consistent intervention, whereas schedule B was quite effective on the very 1st follow-up assessment (i.e., after 6 weeks) but thereafter its effect reduced slowly. Research findings showed that schedule A was more effective in the management of anxiety-trait whereas schedule B was effective for the management of neurotic depression and free floating anxiety.

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