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

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 practices of Sukhasana, Tratakas, Nadi-pranayama, Mudra and relaxation posture for relaxation, one practice of Shodhan, Bhramari, Yoni-mudra and Shavasana whereas Scheudle-B was consisted of Vajrasana, Kapalabhati, Diaphragm breathing, Bhasrika, Viparitakarani 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 yogie intervention, 16 cases in both the said mental problems as well as for each yogie 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.

### 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 5-point rating scale. Each scale contains 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).

| 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 | Bhashrika | 6 rounds/5 mins |
| 5      | Mudra | Yoni Mudra | 6 rounds/5 mins | Viparita-karani | 6 rounds/5 mins |
| 6      | Relaxation | Shavasana | 7 mins | Makarasana | 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.

#### 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.

### Notes

- 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.
### Statistical Significance of Changes

|     | Schedule A (N =16) | Schedule B (N =16) |
|-----|-------------------|-------------------|
|     | Follow-ups        | Follow-ups        |
|     | Ist   | IInd  | IIIrd | Ist   | IInd  | IIIrd |
| 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   |       |       |       |       |       |       |
| t     | X     | 1.39  | 2.54  | t     | X     | 0.27  | 1.08  |
| p     | N.S.  | <0.05 | p N.S | N.S   |       |       |
| 2nd   |       |       |       |       |       |       |
| t     | X     | X     | 1.16  | t     | X     | 1.07  |       |
| p     | N.S.  |       | p     | N.S   |       |       |

Parameter: Trait Anxiety, Group: Depressive Reactions

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

| Regimen-Assessment | Schedule A | Schedule B |
|--------------------|------------|------------|
| Follow-ups         | Initial    | Initial    |
| Mean               | 91.33      | 94.33      |
| SD (SEM)           | 9.56 (2.47)| 16.92 (4.37)|
| 1st Follow-up      | 87.53      | 89.81      |
| Mean               | 7.59 (1.94)| 11.07 (2.86)|
| SD (SEM)           | 10.34      |
| 2nd Follow-up      | 80.52      | 78.47      |
| Mean               | 9.57 (2.47)| 10.04 (2.59)|
| SD (SEM)           | 2.86       |
| 3rd Follow-up      | 73.38      | 72.6       |
| Mean               | 6.86 (1.77)| 10.03 (2.59)|
| SD (SEM)           | 1.73       |

Statistical Significance of Changes

|     | Schedule A (N =16) | Schedule B (N =16) |
|-----|-------------------|-------------------|
|     | Follow-ups        | Follow-ups        |
|     | Ist   | IInd  | IIIrd | Ist   | IInd  | IIIrd |
| Initial |       |       |       |       |       |       |
| t     | 0.63  | 1.56  | 3.54  | t     | 0.84  | 1.74  | 3.16  |
| p     | N.S.  | <0.01 | <0.01 | p N.S | <0.01 | <0.001|
| 1st   |       |       |       |       |       |       |
| t     | X     | 1.1   | 3.34  | t     | X     | 1.15  | 2.99  |
| p     | N.S.  | <0.01 | p     | <0.01 | <0.001|
| 2nd   |       |       |       |       |       |       |
| t     | X     | X     | 1.75  | t     | X     | 1.59  |       |
| p     | N.S.  |       | p     | N.S   |       |       |

Parameter: Free-Floating Anxiety, Group: Anxiety Neurosis

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

| Regimen-Assessment | Schedule A | Schedule B |
|--------------------|------------|------------|
| Follow-ups         | Initial    | Initial    |
| Mean               | 77.72      | 73.63      |
| SD (SEM)           | 17.53 (4.53)| 20.59 (5.15)|
| 1st Follow-up      | 73.89      | 66.45      |
| Mean               | 12.97 (3.35)| 14.07 (3.63)|
| SD (SEM)           | 13.96      |
| 2nd Follow-up      | 70.56      | 63.37      |
| Mean               | 12.07 (3.12)| 13.93 (3.60)|
| SD (SEM)           | 13.64      |
| 3rd Follow-up      | 70.04      | 62.78      |
| Mean               | 11.73 (3.02)| 13.02 (3.36)|
| SD (SEM)           | 13.26      |

Statistical Significance of Changes

|     | Schedule A (N =16) | Schedule B (N =16) |
|-----|-------------------|-------------------|
|     | Follow-ups        | Follow-ups        |
|     | Ist   | IInd  | IIIrd | Ist   | IInd  | IIIrd |
| 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   |       |       |       |       |       |       |
| t     | X     | 2.28  | 4.79  | t     | X     | 1.15  | 2.99  |
| p     | <0.05 | <0.001| p     | N.S   | <0.01 |
| 2nd   |       |       |       |       |       |       |
| t     | X     | X     | 2.48  | t     | X     | 1.98  |       |

Parameter: Free-Floating Anxiety, Group: Depressive reactions
Initial  |  Initial  | Initial  | Initial  \
|--------|---------|--------|---------|
| t      | 0.68    | 1.3    | 1.41    | 1.63    | 1.76  |
| p      | N.S.    | N.S.   | N.S.    | N.S.    | N.S.  |
| 1st    |         |        |         |         |
| t      | X       | 0.73   | 0.85    | t       | X     | 0.6   | 0.74 |
| p      | N.S.    | N.S.   | p       | N.S.    | N.S.  |
| 2nd    |         |        |         |         |
| t      | X       | X      | 0.12    | t       | X     | X     | 0.12 |
| p      | N.S.    | p      | N.S.    | N.S.    |

Parameter: Neurotic Depression, Group: Anxiety Neurosis

Table 6: Changes during follow-up assessments 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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