



Short Communication

Yoga therapy for breathlessness among women

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Abstract

Aim of the current study is to assess the effect of yogic practices on Breathlessness. Yoga therapy sessions were conducted at Hostel's hall in Women's university hostel, Mangalore University, Mangalagangothri. Known cases of breathlessness females aged between 20 years to 25 years were selected for the study. Simple random sample technique is used to divide the subjects in to experimental and control group which had 10 subjects each. Yogic practices were progressively introduced to the experimental group everyday in the morning from 6.00a.m to 7.00am, for period of 30 days. The result revealed that the practice of Yoga significantly helped to reduce the breathlessness.

Keywords: Yoga therapy, Breathlessness.

Introduction

Breathlessness is one of the main problems that challenge to the present society. Many of the respiratory diseases, allergens and environmental pollution induce Breathlessness¹. Yoga is a great gift of God or great part of Gods teaching which can destroy the ailments embracing the world with open arms. Yoga therapy is a technique of using the various practices of yoga for the betterment of health². Here it is about overcoming the breathlessness by practicing different limbs of yoga like asanas, pranayamas, meditation etc by which it improves the functioning of lung functions³. This is an effort to study the effect of Yoga practices on Breathlessness.

Review of literature: Krishna Bharamappa K. has done a study on the effect of yoga therapy on breathlessness and allied disorders at well ventilated spacious hall in the "GWASF" Quality Castings (P) LPT, Industrial Area Baikampady, Mangalore-575011 in 2008-2009. The main aim of the study was to assess the effect of yogic practices on Breathlessness and Allied Disorders. The sample consisted of 18 males containing 9 experimental group and 9 control group. Yoga sessions were conducted one hour daily for a period of 30 days. The results revealed that the practices of Kriya, Asanas, Mudra, Pranayama, Meditation and Relaxation technique (yoganidra), significantly overcomes breathlessness and allied disorders.

Methodology

Aim of the study: The main aim of the current study is to assess the effect of yogic practices on Breathlessness.

Hypotheses: It is hypotheses that "The yogic practices will have a significant impact in the improvement of lung functioning".

Duration of study: The selected Breathlessness subjects were trained in yoga practices for a period of 30 days.

Design of the study: The yoga therapy sessions were conducted at University hostel for women from 26-2-2015 to 30-3-2015 for regularly one hour except every Sundays, during the time 6.00 to 7.00 am. Case history was taken in the beginning of the study. According to subjects problem lab test was given. After 2 days by seeing their lab report yoga practices were designed. The experimental project intended to understand the variation on disorder level of the subjects as a result introducing yogic practices.

Proper instruction was given to the subjects regarding the practice, basics of yoga, its relevance and importance. The asanas were introduced gradually. On the first day three asanas, one pranayama and yoganidra were taught and one new asana was taught for every next day. For the subjects having Breathlessness, all yogic practices were taught. Gradually all pranayama were taught and subjects were asked to take five breathing properly in the final position of the asanas. Subjects also advised to keep concentrating on the practice. During the yogic practice session asanas were taught for 30 minutes, next 15 minutes subjects practiced pranayama and last 15 minutes they undergone savasana. During yogic practice session individual concentration given to the subjects and mainly concentration given to the synchronization of breath and along with the body movement.

The list of yogic practices administered for experimental group: **Asanas:** i. Svastikasana, ii. Vajrasana, iii. Supta Vajrasana, iv. Simhasana, v. Tadasana I, vi. Katiparivarthasana, vii. Trikonasana, viii. Parsvakonasana, ix. Purvottanasana, x. Pavanamuktasana, xi. Bhujangasana, xii. Dhanurasana, xiii.

Ustrasana, xiv. Bharadwajasana, xv. Ardhamatsyendrasana, xvi. Viparitararani, xvii. Uttanapadasana.

Pranayama: i. Ujjayee, ii. Anuloma-viloma, iii. Bhastrika, iv. Bhramari.

Relaxation: i. Savasana 1&2, ii. Yoganidra.

Parameters: FVC - Forced Vital Capacity: This measures the amount of air one can exhale with force after the deep inhalation.

FEV1 - Forced Expiratory Volume (in 1 second): The amount of air exhaled in one breath. It may be measured at 1 second (FEV1), 2 seconds (FEV2), or 3 seconds (FEV3). FEV1 divided by FVC can also be determined, it is FEV1/FVC.

PEFR - Peak Expiratory Flow Rate: This is maximum flow rate achieved by the subject during forced vital capacity.

MVV - Maximum Voluntary Ventilation: This measures the greatest amount of air you can breathe in and out during one minute.

The statistical test which was employed in the study to analyze the significance of the result is paired ‘t’ test.

Results and discussion

The subjects were tested for above parameters before and after the study period which consisted one hour yoga practice for 30 days. The obtained result for FEV1, FEV1/FVC, PEFR and MVV in Experimental group shows improvement in all the parameters is concerned. There was an improvement in the parameters for every individual of Experimental, but not such significant improvement from the Control group. i. As far as Forced Expiratory Volume in 1 second (FEV1) concerned, all the experimental group subjects showed a significant result. ii. Subjects of experimental group showed significant improvement in Maximum Voluntary Ventilation (MVV). iii. There is no

significant result in control group compared to experimental group.

Statistical analysis: For the present study a paired ‘t’ test is used to assess the effect of yoga practices on Breathlessness.

A highly significant value $t = -6.25086$ And $P = 0.00014$ [< 0.05] were obtained in FEV1.

A highly significant value $t = -6.20934$ And $P = 0.000157$ [< 0.05] were obtained in PEFR.

The Pulmonary function test which indicates the patients results that it has shown improvement in Breathlessness. The statistical values obtained for control group was not show any significant result for pulmonary function test in breathlessness subjects.

Discussion: Yoga therapy has given for 10 subjects in Women’s University hostel Mangalagangothri, with a duration of one month. Among 10 subjects 8 subjects are regular to the class and more than the 85% of attendance, showed significant changes. Other 2 subjects were less than 85% of attendance showing insignificant in the result. By this we can say that to get the good results regular practice of yoga is needed⁴. The yogic practices are brought changes in the breathlessness subject’s body, so the hypothesis of this project work is the yogic practices are helpful to bring up the balance in between breathlessness⁵.

Conclusion

In this present study, the result obtained shows that yogic practices give positive results on Breathlessness. Pulmonary function tests for Breathlessness statistically proved significant improvement. Pulmonary function test shows improvement in FVC, FEV1, in case of experimental group. When the results of experimental and control group are compared, the latter was not significant after the study period. Long term study with more samples and parameters could bring significant result in the case of Breathlessness.

Table-1: Experimental group.

| Mean ± standard deviation | | | | | |
|---------------------------|------------------|-----------------|-----------|-----------|--------------------|
| TEST | PRE | POST | ‘t’ value | ‘p’ value | Result |
| FVC | 1.713 ± 0.729 | 2.3 ± 0.591 | -2.1431 | 0.060714 | Non significant |
| FEV1 | 0.953 ± 0.6567 | 2.064 ± 0.336 | -6.25086 | 0.00014 | Highly significant |
| FEV1/FVC | 58.455 ± 34.228 | 99.451 ± 4738 | -3.77491 | 0.004383 | Highly significant |
| PEFR | 1.749 ± 0.68468 | 4.774 ± 1.52428 | -6.20934 | 0.000157 | Highly significant |
| MVV | 44.7 ± 22.206354 | 70.8 ± 20.02109 | -284607 | 0.019212 | Significant |

Table-2: Control group.

| Mean ± standard deviation | | | | | |
|---------------------------|------------------|------------------|-------------|------------|-----------------|
| TEST | PRE | POST | 't' value | 'p' value | Result |
| FVC | 1.38 ± 0.352703 | 1.233 ± 0.386696 | 1.255493 | 0.240916 | Non significant |
| FEV1 | 1.024 ± 0.472750 | 10.907 ± 31.3072 | -0.99797922 | 0.34436338 | Non significant |
| FEV1/FVC | 72.549 ± 19.9464 | 73.192 ± 19.6066 | -1.35275 | 0.20914 | Non significant |
| PEFR | 1.384 ± 0.6899 | 1.277 ± 31.18126 | -0.99865 | 0.344055 | Non significant |
| MVV | 33.1 ± 18.06439 | 36.6 ± 17.957975 | 1.102822 | 0.298719 | Non significant |

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