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## Efficacy of yogic exercises in management of eating disorder in female college students

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### Abstract

Recent surveys on prevalence of eating disorder in Indian females reveal that about 26% girls between 15 to 25 years of age are suffering from eating disorder. To address the issue of eating disorder role of yoga has also been advocated. The present study aims to assess the efficacy of yogic exercises in management of eating disorder in female college students. Initially 200 female college students (Average age 21.24 years) were selected as sample. Out of these 200 female college students, 24 subjects who meet the criteria for eating disorder were selected as sample. Eating disorder inventory prepared by Agashe and Karkare (2007) was used for assessment of eating disorder. According to norms of this inventory scores above 15 denotes eating disorder. A six months yoga program was designed. The selected subjects were then reassessed with eating disorder inventory after completion of six months yoga program. It was found that mean score on eating disorder inventory was decreased significantly after six months yoga program as compared to pre test mean scores. Further analysis revealed that about 40% female college students did not exhibit eating disorder. It was concluded that yoga program even for a certain duration may be used with other therapeutic tools for management of eating disorder in female college students.

**Keywords:** College students, female, yoga, eating disorder

### Introduction

The term eating disorder means illness which is mainly due to abnormal eating habits that arise from concern towards own body weight or certain shape. It may be in the form of over eating or starving or consuming lot of food in short duration. Eating disorder changes the behaviour of a person towards consumption of food because he/she pays too much attention to body weight or body shape etc. There are three main types of eating disorder. Anorexia nervosa is associated with obsessive perception of body image and fear to gain weight. In this type of eating disorder people think that they are over weight even if they are normal or underweight. This attitude changes their behaviour towards consumption of food and that too in a very limited quantity. The second kind of eating disorder is bulimia nervosa. It is associated with behaviour modification after consuming excessive food. This include too much exercise, forced vomiting or even consuming diuretics. Another type of eating disorder which is very common is binge eating. A person suffering from this disorder has no control over eating. All three kinds of eating disorder is responsible for various psychological and physiological problems. Researchers have identified various factors that are associated with eating disorder. McLean *et al.* (2010) <sup>[4]</sup> found a strong association between eating disorder with age while Nasser (1997) <sup>[6]</sup> found social stigma of unrealistic beauty and body perception as main cause of eating disorder. Initially, it was believed that the idealization of slimness, and the consequent tendency toward eating disorders, was concentrated in the upper-SES strata of the culture of abundance, where after all, abundance is even greater. As our culture becomes increasingly homogenized, with media images of a thin ideal physique now permeating every corner of society, eating disorders have become correspondingly more democratic (Gard & Freeman 1996, Striegel-Moore, 1997) <sup>[2, 21]</sup>. That is why Nivedita *et al.* (2018) <sup>[7]</sup> reported 26.06% prevalence of eating disorder in Indian females between 15 to 25 years of age. Since prevalence of eating disorder is increasing rapidly in modern society, several therapeutic measures have been proposed for its management in which yoga is one of them. The role of yoga in management of eating disorder has been based on theory that it increases the person's

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awareness towards their own body internally and thereby enhances the body image. It has also been opined that yoga invoke new belief in person's mind regarding health and fitness thereby shun the thought of being too unrealistic towards own body shape. However no scientific documentations in this regard are available. Hence the present study was planned to assess the role of yoga in management of eating disorder in female college students.

### Aims and objective

The main objective of the present study is to find out the efficacy of six months supervised yoga program as a therapeutic measure to manage eating disorder in female college students.

### Hypothesis

It was hypothesized that six month yoga program will effectively manage eating disorder in female college students.

### Methodology

The following methodological steps were taken in order to conduct the present study.

### Sample

To conduct the study, 200 female college students (Average age 21.24 years) were selected as sample. The selection of subjects was based on random sampling method. Female college students in and around Nagpur city were selected. After following the criteria, 24 female college students with eating disorder were selected for six months yoga program.

### Tools

To determine the magnitude of eating disorder in female college students, eating disorder inventory prepared by Agashe and Karkare (2007) <sup>[1]</sup> was used. It consists of 25 statements in which some are positive and some are negative. This inventory is highly reliable and valid. According to authors manual, a subjects score above 15 on this inventory indicate towards eating disorder.

### Yoga program

As per the study design, a six month yoga program was prepared after consultation with experts. The program is of one hour duration and practiced five days a week. This includes Asanas with supine, prone and sitting position such as Savasan, Ardha, Chakrasan, Padmasan, Pranayam, OM chanting and Anulom Vilom etc.

### Research design

Single group pre-post design was used in the present study

### Procedure

200 female college students (Average age 21.24 years) were selected as sample. Eating disorder inventory prepared by Agashe and Karkare was administered and response were scored off according to authors manual. Subjects with scores over 15 were segregated and these subjects further took part in this study. The identified 24 subjects with eating disorder took part in six months yogic exercise program. After completion of six months yoga program, eating disordered inventory was re administered and scoring was done as per author's manual. In this single group pre-post design, paired sample 't' test was used for data analysis. Analysis of data is given in table 1

## Result and Discussion

**Table 1:** Pre-Post Data on Eating Disorder (N=24)

Eating Disorder		Mean Difference	't'
Pre Test Mean $\pm$ S.D.	Post Test Mean $\pm$ S.D.		
17.29 $\pm$ 1.16	14.45 $\pm$ 2.18	2.83	6.36**

\*\* Significant at .01 level

Perusal of table 1 indicate that pre-test mean score for subjects on eating disorder was 17.29 whereas the post test mean score for subjects on eating disorder was 14.45. The mean decrease was 2.83. The calculated  $t=6.36$  revealed that tendency towards eating disorder was reduced significantly in female college subjects after participating in six months supervised yogic exercise regimen. When analysed more minutely it was found that around 60% subjects were still suffering from eating disorder but on the other hand yoga cured eating disorder in 40% female college students. Various studies have reported that yoga lower detrimental impact before meal (Hall *et al.*, 2016) <sup>[3]</sup>, enhances the coping skills to tackle abnormal eating behaviour while increasing positive image. Hence the result of the present study also support the fact that yoga may be used as a therapeutic tool for management of eating disorder (McMahon, 2014) <sup>[5]</sup>.

### Conclusion

On the basis of results it was concluded that six months supervised yoga program may be included in treatment of eating disorder in female college students.

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