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## Effect of selected yogic exercise on males visual acuity

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### Abstract

The present study was designed to determine the effect of selected yogic exercise on right and left eye males visual acuity. Total twenty (N= 20) from Punjabi University Patiala were selected to act as subjects for the present study. The study was conducted on random basis, 20- 25 years of age group. To effect of yogic exercises on left eye visual acuity all eyesight samples were taken by the optometrist & were examined in a fully computerized ophthalmology clinic. Palming, Blinking, Sideways viewing Front, Sideways viewing Rotational viewing up, down viewing near & distant mean, standard deviation and t-test were employed. The level of significance choose in to test the hypotheses was 0.05,  $P < 0.05$ . Results of the study explicated statistically that there was significant difference in Right Eye and Left Eye Male.

**Keywords:** Visual acuity, male, right eye, left eye and yogic exercises

### Introduction

Contrary to popular belief, long periods of reading do not damage the eyes providing the mind and eyes are relaxed whilst doing so. If there is tension, then even a short period of reading can strain the eyes. Try to develop the ability to read with relaxed awareness and a good posture. Before starting to read, if mental or muscular tension is experienced in the eyes, perform shashankasana for a few minutes. This asana will do much to calm the mind and relax the eyes. Examined this study was performed to investigate the effects of yogic eye exercises on eye fatigue in undergraduate nursing students. The study used a pretest-posttest design with a non-equivalent control group. Forty undergraduate nursing students were selected by convenience sampling, with 20 assigned to an exercise group and 20 assigned to a control group. The yogic eye exercise intervention was performed for 60 minutes, two days a week for 8 weeks. It consisted of 8 steps: palming, blinking, sideways viewing, front and sideways viewing, rotational viewing, up and down viewing, preliminary nose tip gazing, and near and distant viewing. Eye fatigue was measured using a questionnaire for evaluating ocular fatigue. The exercise-group measurements revealed a significantly decreased eye-fatigue score compared with that of the control group. These findings indicate that yogic eye exercises could reduce the eye fatigue score in undergraduate nursing students (Kim 2016) [2].

Spatial updating refers to the ability to keep track of position and orientation while moving through an environment. People with impaired vision may be less accurate in spatial updating with adverse consequences for indoor navigation. In this study, we asked how artificial restrictions on visual acuity and field size affect spatial updating, and also judgments of the size of rooms. Normally sighted young adults were tested with artificial restriction of acuity in Mild Blur (Snellen 20/135) and Severe Blur (Snellen 20/900) conditions, and a Narrow Field ( $8^\circ$ ) condition. The subjects estimated the dimensions of seven rectangular rooms with and without these visual restrictions. They were also guided along three-segment paths in the rooms. At the end of each path, they were asked to estimate the distance and direction to the starting location. In Experiment 1, the subjects walked along the path. In Experiment 2, they were pushed in a wheelchair to determine if reduced proprioceptive input would result in poorer spatial updating. With unrestricted vision, mean Weber fractions for room-size estimates were near 20%. Severe Blur but not Mild Blur yielded larger errors in room-size judgments. The Narrow Field was associated with increased error, but less than with Severe Blur. There was no effect of visual restriction on estimates of distance back to the starting location, and only Severe Blur yielded larger errors in the direction estimates.

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Contrary to expectation, the wheelchair subjects did not exhibit poorer updating performance than the walking subjects, nor did they show greater dependence on visual condition. If our results generalize to people with low vision, severe deficits in acuity or field will adversely affect the ability to judge the size of indoor spaces, but updating of position and orientation may be less affected by visual impairment (Legge *et al.* 2016) [3].

**Methodology and Procedure**

To conduct the study, 20 subjects (10 males and 10 females). The age of the subjects ranged between 20-25 years. All the samples were selected on purposive basis. Visual acuity (VA) commonly refers to the clarity of vision. Visual acuity is dependent on optical and neural factors, i.e., (i) the sharpness of the retinal focus within the eye, (ii) the health and functioning of the retina, and (iii) the sensitivity of the interpretative faculty of the brain. 10 males and 10 females subjects for visual acuity were selected from Punjabi University, Patiala and the subject was mentioned of tools in a time duration of 30-45 minutes in peaceful corner of the institution under laboratory like conditions. The four weeks yogic training protocol was consist following exercises such as Palming, Blinking, Sideways viewing, Front and Sideways viewing, Rotational viewing, Up and down viewing, Near & distant viewing etc. Before and after the commencement of exercises protocol, the eyesight of all subjects was measured.

All eyesight samples were taken by the optometrist and examined in a fully computerized ophthalmology clinic.

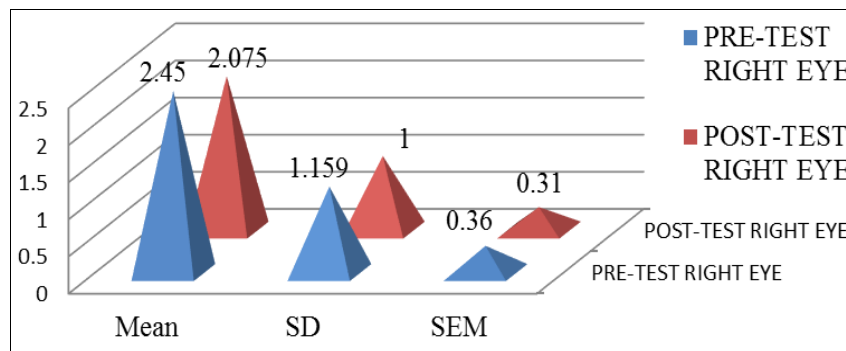
- i) Palming
- ii) Blinking
- iii) Sideways viewing
- iv) Front & Sideways viewing
- v) Rotational viewing
- vi) Up & down viewing
- vii) Near & distant

**Table 1:** Shows Pre and Post Test of Four Weeks Training Program On Visual Acuity of Right Eyes of Males

Group	N	Mean	Standard Deviation	Standard Error mean	t-value
Pre test	10	2.450	1.159	0.36	4.0249*
Post test	10	2.075	1.000	0.31	

t.05 (09) = 2.

The table & figure 1 reveals that the mean of pre and post-test of right eye of males were recorded as 2.450 and 2.075 whereas the standard deviation was 1.159 and 1.000 respectively. The calculated t- value for pre and post Yogic exercises on Visual Acuity was 4.0249\*, which is greater than the tabulated t- value (2.26) at .05 level of significance. So, it implies that there was significant difference between pre and post value of right eye of males.



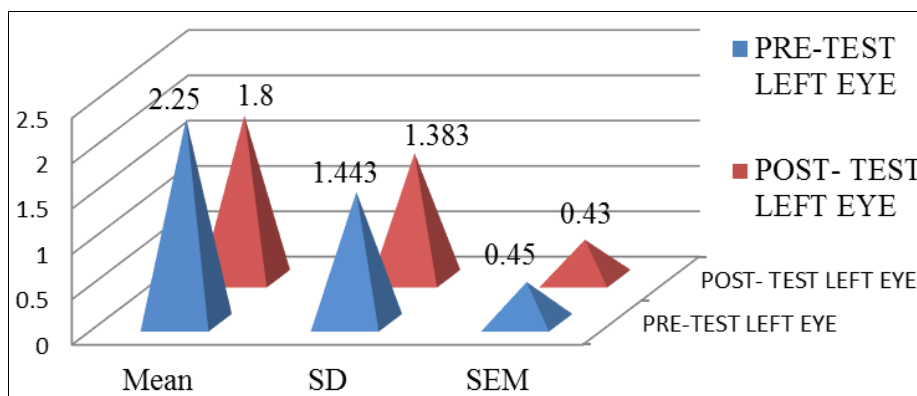
**Fig 1:** Shows Pre and Post Test of Four Weeks Training Program On Visual Acuity of Right Eyes of Males

**Table 2:** Shows pre and post test of four weeks training program on visual acuity of left eye of males

Group	N	Mean	Standard Deviation	Standard Error mean	t-value
Pre Test	10	2.250	1.443	0.45	5.5114*
Post Test	10	1.800	1.383	0.43	

t.05 (09) = 2.26

The table & figure 2 reveals that the mean of pre and post-test of left eye male were recorded as 2.250 & 1.800 whereas the standard deviation was 1.443 & 1.383 respectively. The calculated t- value for pre and post Yogic exercises on Visual Acuity was 5.5114\*, which is greater than the tabulated t- value (2.26) at .05 level of significance. So, it implies that there was significant difference between pre and post value of left eye of males.



**Fig 2:** Shows Pre and Post Test of Four Weeks Training Program On Visual Acuity of Left Eye of Males

### **Discussion of the Findings**

Based on the statistical analysis of data following findings were drawn by the researcher:

1. **Right Eye Male:** The result of the study revealed that right eye of male shows significant difference in single experimental group after the application of four weeks of yogic exercises. These results of the study confirmed the findings of (Gosewade, et. al. 2016) <sup>[1]</sup> who also reported that significant improvement in visual acuity in subjects practicing pranayama and eye exercises. Visual acuity values in study group in right eye before and after intervention.
2. **Left Eye Male:** The result of the study revealed that left eye of male shows significant difference in single experimental group after the application of four weeks of yogic exercises. These results of the study confirmed the findings of (Kim, 2016) <sup>[2]</sup> who also revealed a significantly decreased eye-fatigue score compared with that of the control group. These findings indicate that yogic eye exercises could reduce the eye fatigue score in undergraduate nursing students.

### **Conclusions of the Study**

On the basis of findings of present study, the following conclusions were drawn.

1. The results powerfully prove that, significant differences were observed between pre and post-test of visual acuity of right eye male.
2. The results strongly confirm that, insignificant differences were observed between pre and post-test of visual acuity of left eye male.

### **References**

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