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Effect of selected yogic exercise on females visual acuity

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Abstract

The present study was designed to determine the effect of selected yogic exercise on right eye and left eye females 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 right 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 insignificant difference in Right Eye Female. However, significant difference was found in Left Eye Female.

Keywords: Visual acuity, female, right eye, left eye and yogic exercises

Introduction

Many people wear spectacles or contact lenses to improve their vision. Glasses, however, do not actually cure bad eye sight. In fact, eye problems frequently get worse through their use, necessitating ever more powerful lenses. Conducted mobile phone use while walking can cause dual-task interference and increases safety risks by increasing intentional and cognitive demands. While the interference effect on cognitive function has been examined extensively, how perception of the environment and walking dynamics are affected by mobile phone use while walking is not well understood. The amount of visual information loss and its consequent impact on dynamic walking stability was examined in this study. Young adults (mean, 20.3 years) volunteered and walked on a treadmill while texting and attending to visual tasks simultaneously. Performance of visual task, field of regard loss, and margin of stability under dual-task conditions were compared with those of single-task conditions (i.e., visual task only). The results revealed that the size of visual field and visual acuity demand were varied across the visual task conditions. Approximately half of the visual cues provided during texting while walking were not perceived as compared to the visual task only condition. The field of regard loss also increased with increased dual-task cost of mobile phone use. Dynamic walking stability, however, showed no significant differences between the conditions. Taken together, the results demonstrate that the loss of situational awareness is unavoidable and occurs simultaneously with decrements in concurrent task performance. The study indicates the importance of considering the nature of attentional resources for the studies in dual-task paradigm and may provide practical information to improve the safe use of mobile phones while walking (Lim *et al.* (2017) [3].

Conducted a multitude of events bombard our sensory systems at every moment of our lives. Thus, it is important for the sensory and motor cortices to gate unimportant events. Tactile suppression is a well-known phenomenon defined as a reduced ability to detect tactile events on the skin before and during movement. The study was found detection rates decrease just prior to and during finger abduction and decrease according to the proximity of the moving effector. However, what effect does vision have on tactile gating? There is ample evidence observing increased tactile acuity when participants see their limbs. The present study examined how tactile detection changes in response to visual condition (vision/no vision). Ten human participants used their right hand to reach and grasp a cylinder.

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Tactors were attached to the index finger and the forearm of both the right and left arm and vibrated at various epochs relative to a "go" tone. Results replicate previous findings from our laboratory (Colino *et al.* in *Physiol Rep* 2(3):e00267, 2014). Also, tactile acuity decreased when participants did not have vision. These results indicate that the vision affects the somatosensation via inputs from parietal areas (Colino *et al.* (2016) ^[1].

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 male 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 of following exercises. There are Palming, Blinking, Sideways viewing, Front and Sideways viewing, Rotational viewing, Up and down viewing, Near and 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 Eye of Females

Group	N	Mean	Standard Deviation	Standard Error mean	t-value
Pre Test	10	0.950	0.483	0.15	1.9091
Post Test	10	0.775	0.617	0.19	

t.05 (09) = 2.26

The table & figure 1 reveals that the mean of pre and post-test of right eye female were recorded as 0.950 & 0.775 whereas the standard deviation was 0.483 & 0.617 respectively. The calculated t- value for pre and post Yogic exercises on Visual Acuity was 1.9091, which is less than the tabulated t- value (2.26) at .05 level of significance. So, it implies that there was insignificant difference found between pre and post value of right eye female.

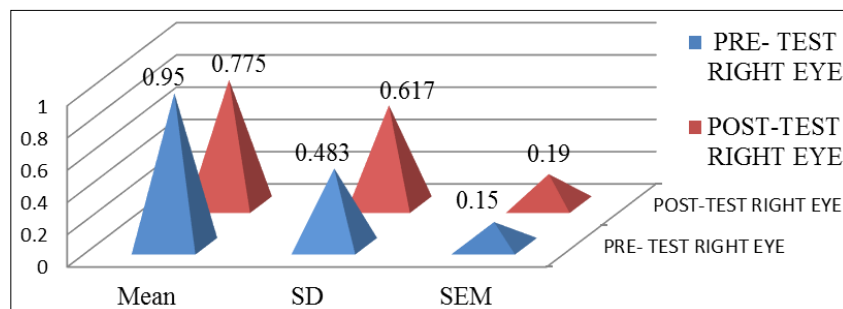


Fig 1: Shows Pre and Post Test of Four Weeks Training Program On Visual Acuity of Right Eye of Females

Table 2: Shows Pre and Post Test of Four Weeks Training Program On Visual Acuity of Left Eye of Females

Group	N	Mean	Standard Deviation	Standard Error mean	t-value
Pre test	10	0.950	0.483	0.15	4.3846*
Post test	10	0.475	0.381	0.12	

t.05 (09) = 2.26

The table & figure 2 reveals that the mean of pre and post-test of left eye female were recorded as 0.950 & 0.475 whereas the standard deviation was 0.483 & 0.381 respectively. The calculated t- value for pre and post Yogic exercises on Visual

Acuity was 4.3846*, which is greater than the tabulated t- value (2.26) at .05 level of significance. So, it implies that there was significant difference found between pre and post value of left eye female.

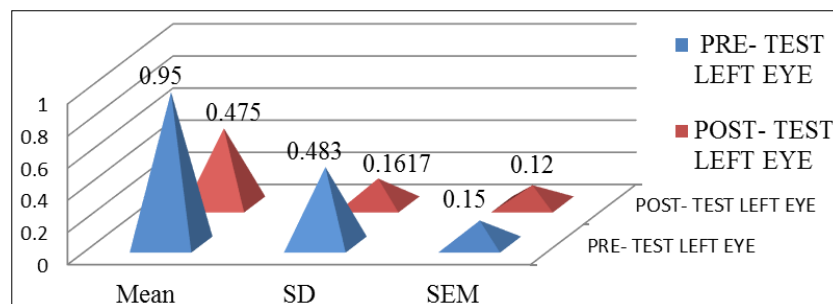


Fig 2: Shows Pre and Post Test of Four Weeks Training Program On Visual Acuity of Left Eye of Females

Discussion of the findings

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

1. Right Eye Female: The result of the study revealed that right eye of females shows insignificant difference in single experimental group after the application of four weeks of yogic exercises. These results of the study confirmed the findings of (Jaiswal, 2016) ^[2] who also reported that insignificant showed a higher P100 (VEP) latency in the right eye as compared to controls, but the difference was statistically insignificant.
2. Left Eye Female: The result of the study revealed that left eye of females shows significantly 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) 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 authenticated that, insignificant differences among between pre and post-test of visual acuity of right eye female.
2. Significant differences were found between pre and post-test of visual acuity of right eye female.

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