

Effect of Trataka Practice on Eye Health of Physical Education Students with Eye Problem

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Abstract: *Introduction:* Human eyes do wondrous things. Eyesight is one of the most valuable assets to any human being. Yoga as a practice has innumerable benefits that positively affect an individual both physically and mentally. Trataka is a form of meditation also known as ‘concentrated gazing’. It is most commonly referred to as ‘candle gazing’. *Objective:* The study was to examine the effects of Trataka practice on eye health of physical education students. *Methodology:* Five physical education trainees pursuing their BPED and MPED courses were selected as a subject. The study design was a pre-post experimental study. Single subject research design is used in this study. A convenient sampling technique was used to select the subjects. This study included subjects who having problems with visual acuity and with migraine problem. They perform Trataka practice on everyday basis after Pre-test till five weeks duration, for approximately 20 minutes everyday evening after practical classes. In order to test the visual acuity of selected subjects, Landolt Ring reference optotype for use in the vision-testing was used. *Results:* In this study, It was found that Un-Corrected Visual Acuity of right eye in one subjects improved significantly from severe low vision to moderate low vision. It was found that the Un-Corrected Visual Acuity of left eye in one subjects decreased significantly from normal to moderate low vision. There were no significant changes in Best-Corrected Visual Acuity of both right and left eye due to practice of Trataka. *Conclusion:* This study concludes that there is significant increase, decrease and no changes in the subjects with visual acuity after practicing trataka.

Keywords: Trataka, Eye health, Visual acuity

1. Introduction

The modern lifestyle has a number of advantages which includes easing peoples life, saving hundreds of people’s lives by the new development of medicine and vaccines. Modern life style increases the risk of obesity. Consequently, leading to diabetes, heart diseases, and cancers. Pollution caused by the machines and advanced transportation causes different respiratory diseases. While many people strongly agree that unplugging or taking a digital detox now and then is important for mental health, in reality, only 28 percent of those people periodically switch off from technology.

Parents often struggle to balance familial and digital connections, and they can face a constant battle trying to limit their child’s screen time. However, screen time for kids is not all bad. Research examining more than 120, 000 adolescents found that evidence linking the relationship between screen time and well-being is weak at best, even at the highest levels of engagement. Video gaming is another area that has gained a bad reputation, with some research suggesting a link between video games and violence. Despite the potential risks to mental health, trends over the past decade show that use of technology and social media is increasing, so these problems are not likely to disappear anytime soon, with habits unlikely to change.

Modern life may increase the risk of some physical and mental health problems, but striking a balance between online and real-world social relationships, going forward, may help to keep our mental health in check.

Human eyes do wondrous things. Eyesight is one of the most valuable assets to any human being. Yoga is the ancient science which originated in India and is now used by people all over the world for maintaining physical, emotional and mental health. Yoga as a practice has

innumerable benefits that positively affect an individual both physically and mentally.

Trataka is a form of meditation also known as ‘concentrated gazing’. It is most commonly referred to as ‘candle gazing’. Trataka is originally one of the shatkarmas, or ‘six actions’ used to cleanse the internal organs. Trataka or yogic practice of concentrated gazing is an ancient hatha yoga exercise used for all round development of our body, mind and soul. Trataka acts as a means of advancement between physically oriented exercises and mental exercises which finally lead to higher awakening. Trataka is really helping in removing all kinds of neural disorders and blockages and it also assists an individual in gaining deep concentration and meditation. Trataka is good for overcoming eye problems as per Gheranda samhitha, one of the classical texts of yoga, Trataka can cure 20 types of eye disorders. Trataka can be done at any time; but the most suitable time is early morning after practice of asanas and pranayamas one has to practice Trataka.

The purpose of the study was to examine the effects of Trataka practice on eye health of physical education students.

2. Materials and Methodology

The study design was a pre-post experimental study for the duration of five weeks. For this study five physical education trainees pursuing their BPED and MPED courses were selected as a subject, among them four subjects were having problems with visual acuity and one subject was diagnosed with migraine problem. In order to test the visual acuity of selected subjects, Landolt Ring reference optotype for use in the vision-testing was used in the present study.

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Administering Test

All the subjects were referred to Shankara Eye Hospital, Shivamogga for Visual acuity test-both Uncorrected visual acuity and Best Corrected Visual Acuity. The values were given in full range of visual acuity values in the recommended step size of 0.1 log unit from normal vision to near blindness (International Council of Ophthalmology, Visual Acuity Measurement Standard, 1984). Single subject research design is useful when the researcher is attempting to change the behavior of an individual or a small group of individuals and wishes to document that change. First, the dependent variable (Visual acuity) is measured repeatedly over time (in weeks) at regular intervals. Second, the study is divided into distinct phases, and the participant is tested under one condition per phase. The results on Uncorrected visual acuity and Best Corrected Visual Acuity were tested against the available norms given by International Council of Ophthalmology (Kyoto, 1978). Single-subject research differs from group research in the way the data are typically analyzed. Single-subject research, by contrast, relies heavily on a very different approach called 'visual inspection'. This involves, the plotting of individual participants' data, examining the data, and making judgements about whether and to what extent the independent variable (Trataka) had an effect on the dependent variable (Visual acuity). In visually inspecting their data, single-subject researchers take several factors into account.

Experimental Protocol

Trataka practice was done on everyday basis after Pre-test till five weeks duration. 'Jatur Trataka' and 'Jyothir Trataka' were practiced individually in a closed room setting under the supervision of investigator. The treatment in the form of Trataka practice was done for approximately 20 minutes everyday evening after practical classes.

Jatur Trataka – Gazing the tip of index finger at the level of eyes without blinking. **Jyothir Trataka** – Gazing the whole flame at the level of eyes without blinking.

3. Results and Discussion

Table 1: Results of Un-Corrected Visual Acuity of right eye in physical education trainees with visual problems

	UCVA Pre Test	Normative category	UCVA Post test	Normative Category
Subject 1	4/60	Severe low vision	6/60	Severe low vision
Subject 2	2/36	Severe low vision	6/36	Moderate low vision
Subject 3	2/60	Severe low vision	4/60	Severe low vision
Subject 4	4/60	Severe low vision	6/60	Severe low vision

The Un-Corrected Visual Acuity of right eye in physical education trainees with visual problems improved from severe low vision to moderate low vision in one case (as stated in Table-1). In all other cases, the normative category did not change after five weeks of Trataka practice. Although slight improvement was observed in some subjects, but it was not good enough to find a change in normative category.

Table 2: Results of Un-Corrected Visual Acuity of left eye in physical education trainees with visual problems

	UCVA Pre Test	Normative category	UCVA Post Test	Normative category
Subject 1	4/60	Severe low vision	6/60	Severe low vision
Subject 2	6/36	Moderate low vision	6/36	Moderate low vision
Subject 3	6/60	Severe low vision	6/60	Severe low vision
Subject 4	6/9	Normal	6/36	Moderate low vision

The Un-Corrected Visual Acuity of left eye in physical education trainees with visual problems decreased from normal to moderate low vision in one case (as stated in Table-2). In all other cases, the normative category did not change after five weeks of Trataka practice. Although slight improvement was observed in some subjects, but it was not good enough to find a change in normative category.

Table 3: Results of Best-Corrected Visual Acuity of right eye in physical education trainees with visual problems

	BCVA Pre Test	Normative category	BCVA Post Test	Normative category
Subject 1	6/6	Normal	6/6	Normal
Subject 2	6/6	Normal	6/6	Normal
Subject 3	6/24	Moderate low vision	6/24	Moderate low vision
Subject 4	6/12	Normal	6/12	Normal

Table 4: Results of Best-Corrected Visual Acuity of left eye in physical education trainees with visual problems

	BCVA Pre test	Normative category	BCVA Post test	Normative category
Subject 1	6/6	Normal	6/6	Normal
Subject 2	6/6	Normal	6/6	Normal
Subject 3	6/9	Normal	6/9	Normal
Subject 4	6/18	Normal	6/9	Normal

The Best-Corrected Visual Acuity of both right and left eye in physical education trainees with visual problems did not change after five weeks of Trataka practice (as stated in Table-3 & 4) Although slight improvement was observed in some subjects, but it was not good enough to find a change in normative category.

The subjects are practiced this experiment for only five weeks which may be short duration to show an significant changes.

4. Conclusions

Mixed results were found in eye health of physical education trainees with eye problems following five weeks Trataka practice. It was found that the Un-Corrected Visual Acuity of right eye in one subjects improved significantly from severe low vision to moderate low vision. It was found that the Un-Corrected Visual Acuity of left eye in one subjects decreased significantly from normal to moderate low vision. There were no significant changes in Best-Corrected Visual Acuity of right eye due to practice of Trataka. There were no significant changes in Best-Corrected Visual Acuity of left eye due to practice of Trataka.

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