

**"A STUDY ON THE IMPACT OF EYE EXERCISE (SKY YOGA) AND LAMP GAZING PRACTICE ON ENHANCING VISUAL FUNCTION AND WELL-BEING AMONG COLLEGE STUDENTS"**

**Dr. P. Veerasithi Vinayagan**, Assistant professor, Department of Human Excellence, Nallamuthu Gounder Mahalingam College (Autonomous) Pollachi.

**ABSTRACT**

Prolonged academic reading and writing increase the risk of eye problems including strain, dryness, blurriness, and discomfort. If not treated properly, growing technology use makes young people's eyesight issues worse, which has a negative impact on both their physical and emotional health and academic performance and wellbeing. Therefore, the study aimed to measure the impact of (SKY Yoga) Eye exercise and Lamp gazing Practice on enhancing visual function and wellbeing. Students from Nallamuthu Gounder Mahalingam College were randomly selected using the survey method. The study adopts an Experimental research design. The pre-test and post-test one-group designs were adopted to study the impact of (SKY Yoga) Eye exercise and Lamp gazing on enhancing visual functioning and wellbeing among College Students. The sample (N=237) was obtained from students at Nallamuthu Gounder Mahalingam College, Pollachi. The data were obtained and analyzed before - and - after the SKY yoga practice from the respondents concerned. The intervention significantly improved health ratings, reducing "Poor" health reports and improving ocular health. People with "Good" eyesight increased from 22.7% to 90.8%, while "Average" and "Poor" vision were less common. Ocular pain also increased, with "Good" instances rising from 23.1% to 44.5% and "Poor" cases falling. Social functioning improved from 66.8% to 76.9%, and peripheral vision improved from 21.0% to 30.07%. The study has identified that there was a significant improvement on visual functioning after the intervention of the SKY yoga practice. The study has concluded that the benefits of SKY Yoga practice have improved the visual functioning problems of the students. Thus, most of the study review reported that the regular practice of eye exercise and lamp gazing exercise can provide a better improvement for eye sight problems. Therefore, the study highly recommends that the SKY yoga (Simplified Kundalini Yoga) practice has to be performed on regular basis to have a healthy and clear vision. Ultimately, the study suggests that SKY yoga practice can support individuals' physical and mental health, enabling them to maintain a healthy vision and overall well-being, which will, in turn, support them in achieving their life goals.

**Key words:**

visual functioning, SKY yoga practice, Eye exercise and Lamp gazing practice, Well being

**INTRODUCTION:**

College students with visual impairments are increasingly participating in academic activities and using social media to gather information for their academic purposes. Even while they offer previously unheard-of opportunities for learning and social interaction, these platforms create a variety of challenges for students who have visual impairments. As continuous use of digital devices like computers and smart phones has such negative physical and psychological repercussion that students might not be able to achieve their full academic potential.

Long-term screen use can cause dry, itchy eyes, eye strain, blurred vision, and may expedite the development of myopia in young people. Students with visual impairments may experience stress and anxiety owing to academic demands and screen time, as well as feelings of social isolation and low self-esteem brought on by difficulties in accessing visual content and participating in visual-centric activities.

According to recent data, 36 million individuals worldwide are blind (defined as having a visual acuity [PVA] of less than 3/60 in the better eye), with low- and middle-income nations like India

having the greatest incidence of this affliction. India has 62 million people with visual impairments and 8 million blind persons, which makes up around 25% of the world's population with regard to vision-related problems. The World Health Organization (WHO) stated that eyesight loss represented 3.9% of the total global illness burden in 2004 based on disability-adjusted life years. An interesting fact is that 81% of those who are blind or have serious vision impairment are 50 years of age or older.

A study in the Journal of American College Health revealed that college students with untreated vision problems had lower GPAs compared to the peers without such issues. The study indicated weaker performance in subjects like maths, reading, research, computer skills, and written and verbal communication, resulting in an overall lower GPA (Rutstein, 2010). Another study in the Journal of Optometry found that uncorrected refractive errors like nearsightedness, farsightedness, or astigmatism were significantly linked to poor academic performance among college students. The study showed that students with untreated refractive problems were more likely to report lower academic achievements (Saunders et al., 2013).

Myopia, hyperopia, and astigmatism are examples of refractive abnormalities that commonly affect eyesight worldwide. According to Khandekar et al.'s (2013) study, practicing yoga, which includes breathing techniques and eye exercises, significantly improves visual acuity in persons with refractive problems. Bhavanani et al. (2016) found that practicing yoga helped people with myopia to have better visual acuity. Nagarathna et al. (2015) investigated glaucoma, an optic nerve disorder that results in permanent visual loss. According to their research, glaucoma patients who practiced yoga and included breathing exercises, meditation, and relaxation techniques experienced a decrease in intraocular pressure. Similar to this, glaucoma patients who practiced yoga showed improved visual function, according to Sankaranarayanan et al. (2016).

## **STATEMENT OF THE PROBLEM**

The major goal of the current study is to create an intervention programme based on SKY yoga that was specifically catered to the needs and preferences of college students with vision impairment. Visual impairment is characterized by functional eye restrictions that hinder a person's ability to do basic daily tasks, job-related responsibilities, leisure activities, and navigate safely in their environment. Early onset of visual impairment greatly slows down pupils' academic growth. Students with vision impairment may benefit from yoga's diverse nature, which will help them better handle their difficulties. Yoga has been widely accepted as a physical practice and has demonstrated the potential in enhancing cognitive function, physical fitness, and overall health outcomes, perhaps even outperforming the advantages of exercise.

## **DEFINITION**

Visual Impairment refers to a condition wherein the eyes experience functional limitations, hindering one's capability to carry out essential daily activities, work-related tasks, leisure pursuits, or navigate safely in their environment.

## **REVIEW LITERATURE:**

Trataka practice can help improve the state of mindfulness and reduce the visual strain due to excessive use of digital media.” Swathi, P. S., Saoji, A. A., et al. (2022). The findings indicate that yoga practice seemed to alleviate visual discomfort, whereas the group without any yoga intervention (WL) experienced an increase in discomfort after sixty days. (Telles, S., Naveen et al. 2006). Dry eye syndrome is common health problem among university students. (Abdulmannan, D. M., Naser, et al. 2022). Instrument performance is enhanced by segmenting the original NEI VFQ-25 into separate scales for visual functioning and socio emotional elements. The study conducted in 2023 by Manjula Marella, Konrad Pesudovs, and colleagues showed that these measures provide trustworthy criteria for assessing how reduced eyesight impacts this particular demographic. A study found that trataka kriya was indeed effective in enhancing eye health. Bhadane, M., & Kanojia, A. (2023). Individuals

with Dry Eye Disease (DED) had a more pronounced link between dry eye symptoms and daily activities, and these symptoms were closely associated with daily discomfort. **Choi, J. H., Kim, K. S., et al. (2018)**. A study found that excessive use of Face book led to sleep disturbances and had a negative impact on the concentration of daily tasks among university students. **Hosen, M. J., Eva, S. A.,et al. (2021)**. A study found that Computer Vision Syndrome (CVS) is highly prevalent among university students in Jordan. Given the increased reliance on online education due to the coronavirus disease, it is advisable to promote safe habits in the use of digital devices. **Gammoh, Y. (2021)**. A study suggested that eye exercises can be beneficial for addressing various conditions, such as vergence problems, ocular motility disorders, accommodative dysfunction, amblyopia, learning disabilities, dyslexia, asthenopia, myopia, motion sickness, sports performance, stereopsis, visual field defects, visual acuity, and overall well-being. **Rawstron, J. A., Burley, C. D., et al. (2005)**. A study found that the combination of pranayama and eye exercises can serve as a potential non-pharmacological measure for improving visual acuity. **Gosewade, N., Drugkar, A., et al. (2016)**

Following objectives were framed as per the need of the study.

### OBJECTIVES:

- To study the demographic profile of the respondents.
- To study the impact of demographical variable on visual functioning.
- To measure the impact of eye exercise and lamp gazing practice on visual functioning and wellbeing.
- To provide suitable suggestions on improving visual functioning and wellbeing based on the findings.

### METHODOLOGY

The study employed an Experimental research design with a pre-test and post-test one-group design to examine the impact of SKY Yoga practices, on enhancing visual function and wellbeing among college students. The research was conducted at Nallamuthu Gounder Mahalingam College, Pollachi, and the participants were college students who engaged in SKY Yoga practices during February 2023. A total of 237 respondents were surveyed for the study. Data were collected using a set of questionnaires that consisted of 25 items related to visual functioning. These questionnaires encompassed 12 domains aimed at measuring the perception level of visual functioning conditions among college students. Additionally, demographic profiles of the participants were also collected. The pre-test and post-test data were collected before and after the intervention of SKY Yoga practice, respectively. The data obtained from the questionnaires and demographic profiles were analyzed using methods such as simple percentage analysis, paired t-test, and ANOVA to derive meaningful results.

### INTERVENTION PROCEDURE:

The SKY yoga program consists of Eye exercises, Lamp Gazing practice, and Meditation practices. Participants are engaged in the SKY yoga practice two days per week for duration of 12 weeks. Before administering the questionnaire, the main purpose of the study was thoroughly explained to the participants to ensure they clearly understood its meaning and objectives. The pre-test data was collected from the college students before they began the SKY yoga practices.

Total hours of the practice cover 1 and half hour per week over a period of three months (12weeks). After completing the 12 weeks program, the post-test was collected from the concern participants. The practice procedure of Simplified Kundalini Yoga included the following yoga practices.

### PRACTICE SCHEDULE:

S.No	Particulars	Time/Hours
1.	NaddiSuddhi	5 Minutes
2.	Meditation	10 Minutes

3.	Eye exercise	30 minutes
4.	Lamp Gazing practice	30 minutes
5.	Discussion	15 minute

During the session, college students were instructed in various SKY Yoga practices. The session began with a 5-minute Nadisuddhi pranayama practice to help participants attain a normal mental state. Following this, a 10-minute meditation practice was introduced to achieve a balanced state of mind. Subsequently, the students were engaged in a 30-minute Eye exercise to maintain flexibility, relaxation, and alleviate eye pressure. Afterwards, a Lamp gazing practice was conducted for 30 minutes to strengthen the eye muscles and reduce eye-related issues. Towards the end of the session, a 15-minute discussion period was allocated for participants to ask questions and clarify any doubts they may have. Finally, proper guidance was provided to ensure that the students can systematically perform the SKY yoga practices.

**Table 1. Demographic Variable**

Variables	Particulars	Before				After			
		N	Mean	Std. Dev	Test Value	N	Mean	Std. Dev	Test Value
Age	17	30	40.50	7.07	ANOVA (F=0.617 Sig=0.717)	30	61.10	8.96	ANOVA (F=0.248 Sig=0.960)
	18	72	41.30	8.07		72	62.50	10.23	
	19	60	39.43	7.1		60	61.30	8.42	
	20	55	39.98	5.74		55	62.00	7.56	
	21	15	38.53	6.13		15	60.93	7.34	
	22	4	38.75	8.26		4	61.75	8.65	
Gender	Male	92	39.75	7.17	T-test Value (F= 0.271 Sig= 0.603)	92	61.17	9.57	T-test Value (F= 2.432 Sig= 0.120)
	Female	145	40.50	7.00		145	62.22	8.22	

The analysis of variance (ANOVA) results showed that there was no statistically significant variation in visual functioning across different age groups prior to the implementation of SKY yoga practice (F=0.617, p=0.717). Additionally, following the SKY yoga session, an ANOVA revealed that there was no longer a noticeable variance in visual functioning between the various age groups (F=0.248, p=0.960). The t-test results showed no significant difference in visual functioning between males and females before SKY yoga (F=0.271, p=0.603). After the training, the results of the t-test (F=2.432, p=0.120) confirmed that there were no significant variations in visual functioning between males and females.

**Table 2. Descriptive Statistics of Impact of SKY Yoga on Visual Functioning**

S. No.	Particulars	Before		After	
		Frequency	Percentage	Frequency	Percentage
<b>General Health</b>					
1.	Good	140	58.8	165	69.3
2.	Average	43	18.1	67	28.2
3.	Poor	54	22.7	5	2.1
<b>General Vision</b>					
1.	Good	54	22.7	216	90.8
2.	Average	125	52.5	18	7.6
3.	Poor	58	24.4	3	1.3
<b>Ocular Pain</b>					
1.	Good	55	23.1	106	44.5
2.	Average	143	60.1	115	48.3
3.	Poor	39	16.4	16	6.7

Near vision					
1.	Good	130	54.6	132	55.5
2.	Average	81	34.0	94	39.5
3.	Poor	26	10.9	11	4.6
Distance Vision					
1.	Good	104	43.7	107	45.0
2.	Average	102	42.9	99	41.6
3.	Poor	31	13.0	30	12.6
Social Functioning					
1.	Good	159	66.8	183	76.9
2.	Average	66	27.7	51	21.4
3.	Poor	12	5.0	3	1.3
Mental Health					
1.	Good	174	73.1	175	73.5
2.	Average	46	19.3	45	18.9
3.	Poor	17	7.1	17	7.1
Role of difficulties					
1.	Good	43	18.1	83	34.9
2.	Average	154	64.7	132	55.5
3.	Poor	40	16.8	22	9.2
Dependency					
1.	Good	19	8.0	36	15.1
2.	Average	73	30.7	93	39.1
3.	Poor	145	60.9	108	45.4
Driving					
1.	Good	47	19.7	77	32.4
2.	Average	103	43.3	99	41.6
3.	Poor	87	36.6	60	25.2
Color vision					
1.	Good	65	27.3	175	73.5
2.	Average	109	45.8	54	22.7
3.	Poor	63	26.5	8	3.4
Peripheral vision					
1.	Good	50	21.0	73	30.7
2.	Average	109	45.8	118	49.6
3.	Poor	78	32.8	46	19.3

The study assessed the effects of yoga on various perception domains among individuals. Before yoga, "Good" general well-being was reported by 140 individuals (58.8%), increasing to 165 (69.3%) after yoga. Similarly, "Average" perception increased from 18.1% to 28.2%, and "Poor" perception dropped from 22.7% to 2.1%. Yoga positively impacted general well-being, raising positive perception (69.3% from 58.8%) and decreasing negative perception (2.1% from 22.7%). In terms of general vision, "Good" perception improved from 22.7% to 90.8%, and negative perception decreased from 24.4% to 1.3%. Initially, 55 individuals (23.1%) reported "Good" vision, while after yoga, it rose to 106 (44.5%). Correspondingly, "Average" perception increased from 60.1% to 48.3%, and "Poor" perception dropped from 16.4% to 6.7%. Yoga reduced ocular pain, increasing positive perception (44.5% from 23.1%) and decreasing negative perception (6.7% from 48.3%). For distance vision, "Good" perception improved from 43.7% to 45.0%, "Average" increased to 41.6%, and "Poor" perception decreased to 12.6%. Similarly, social functioning perception improved, with "Good" perception rising from 66.8% to 76.9%, and "Poor" perception dropping from 5.0% to 1.3%. In terms of mental health,

positive perception increased from 73.1% to 73.5%, while negative perception remained at 7.1%. Similarly, for role difficulties, "Good" perception rose to 34.9%, and "Poor" perception dropped to 9.2% from 16.8%. Dependency perception improved with "Good" perception rising to 15.1%, "Average" perception increasing to 39.1%, and "Poor" perception decreasing to 45.4%. Driving perception improved, with "Good" perception rising to 32.4%, and "Poor" perception dropping to 25.2% from 36.6%. Similarly, for color vision, "Good" perception rose to 73.5%, and "Poor" perception decreased to 3.4% from 22.7%. Peripheral vision perception improved, with "Good" perception rising to 30.7%, and "Poor" perception decreasing to 19.3% from 32.8%.

## RESULTS AND DISCUSSION

In this study, college students' perceptions of 12 distinct components of visual functioning were examined. Significant score differences after the SKY yoga practice intervention indicated a positive effect on visual functioning. 12 domains spotted notable improvements: general vision, general health, ocular pain, near- and far-vision challenges, social functioning limitations brought on by vision, mental health issues related to vision, role limitations brought on by vision, dependency brought on by vision, driving issues, color vision deficits, and peripheral vision issues. Health and vision-related categories saw a noticeable improvement as a result of the intervention.

## CONCLUSION

On the whole, the study's result underlines the positive impact of practicing SKY Yoga on improving perception of visual functioning across 12 domains in college students. Additionally, multiple studies have emphasized the considerable benefits of performing eye exercises and the habit of gazing at lamps for enhancing visual functioning and wellbeing among college students. In a substantial portion of the student population, the use of SKY yoga has demonstrated its ability to reduce symptoms such eye strain, headaches, blurred vision, and eye discomfort. Therefore, these studies concisely support the implementation of SKY yoga practice, especially for college students who frequently interact with smart phones and computers. SKY yoga incorporates flexing, stretching, and relaxation techniques to alleviate eye strain as well as postpone and prevent the onset of nearsightedness and farsightedness problems. Overall, the study suggests that the regular practice of SKY yoga should be actively embraced by all institutions, including educational institutions, private enterprises, and organizations, given the importance of fostering a clear vision for the future of the younger generation. The young people in society can benefit from this preventive measure by having a brighter future and improved eye health and wellbeing.

## REFERENCE:

1. Swathi, P. S., Saoji, A. A., & Bhat, R. (2022). The role of trataka in ameliorating visual strain and promoting psychological well-being during prolonged use of digital displays: A randomized controlled trial. *Work*, 71(2), 327-333.
2. Bhadane, M., & Kanojia, A. (2023). Trataka Kriya for Eye Health: A Bibliometric Analysis. *International Journal of Indology*, 1(1).
3. Telles, S., Naveen, K. V., Dash, M., Deginal, R., & Manjunath, N. K. (2006). Effect of yoga on self-rated visual discomfort in computer users. *Head & Face Medicine*, 2(1), 1-6.
4. Abdulmannan, D. M., Naser, A. Y., Ibrahim, O. K., Mahmood, A. S., Alyoussef Alkrad, J., Sweiss, K., ... & Kautsar, A. P. (2022). Visual health and prevalence of dry eye syndrome among university students in Iraq and Jordan. *BMC ophthalmology*, 22(1), 265.
5. Choi, J. H., Kim, K. S., Kim, H. J., Joo, S. J., & Cha, H. G. (2018). Factors influencing on dry eye symptoms of university students using smartphone. *Int. J. Pure Appl. Math*, 118, 1-13.
6. Hosen, M. J., Eva, S. A., Rahman, M. M., Ibrahim, M., Lira, U. F., Hossain, A. B., ... & Uddin, M. J. (2021). Health impacts of excessive use of Facebook among university students in Bangladesh. *Heliyon*, 7(6).

7. Gammoh, Y. (2021). Digital eye strain and its risk factors among a university student population in Jordan: a cross-sectional study. *Cureus, 13*(2).
8. Rawstron, J. A., Burley, C. D., & Elder, M. J. (2005). A systematic review of the applicability and efficacy of eye exercises. *Journal of Pediatric Ophthalmology & Strabismus, 42*(2), 82-88.
9. Gosewade, N., Drugkar, A., & Shende, V. (2016). Effect of pranayama and eye exercises on visual acuity of medical students: a case control study. *International Journal of Contemporary Medical Research, 3*(4), 1133-1136.