



Original Research Article

## **A Study to Assess the Effectiveness Ophthalmic Exercise on Eye Problem among the Computer Staff Workers at Srinivasan Engineering College, Perambalur**

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### **ABSTRACT**

Eye disease (ED) is a common and chronic condition, which is considered a major health concern internationally. It causes eye discomfort and pain; it limits vision and reduces quality of life. Those with dry eye are two to three times more likely to report problems with everyday activities such as reading, performing professional work, computer use, watching television, and daytime or night time driving etc. ophthalmic exercise reduces the risk of eye disease. Ophthalmic exercise is essential for the good vision of a person. However need of knowledge and attitude may lead to reduce the eye problem. proper ophthalmic exercise and adequate vision condition play a major role in reduce the eye problem with developing countries.

Hence the incidence of eye disease increasing. it is mainly due to lack of awareness about importance of comprehensive eye examination, use of proper lighting, minimize glare, failure to adjust your computer display setting, failure to blink more often while working in front of computer, poor knowledge about eye exercise, computer eye wear etc and lack of knowledge regarding prevention of eye disorder.

**Key Words:** Eye disease, Ophthalmic exercise, Computer staff worker.

### **INTRODUCTION**

Vision is our most precious sense. Our eyes are in constant use every waking minute of every day. The way we use our eyes can determine how well we work throughout our lifetime. Over eighty percent of our learning is mediated through our eyes, indicating important role our vision plays in our daily activities. Prolong usage computer will lead to occur vision problem such as eye movement disorder, non-strabismus binocular dysfunction, focusing disorder, strabismus, nystagmus, visual perceptual disorder, vision muscle pain headache.

Vision disturbance is a silent enemy that only appears after long period of continued stress in the world it has been nearly 60 million people experience vision problem. Vision discomfort is common in majority of people who continuous use laptops, mobile internet and other technology gadgets that strain the eye. In India Over 75 percent of young software professionals and IT students reported to self related vision discomfort.

Computers have now become basic and essential desktop equipment in almost every establishment. Worldwide, approximately 90 million adults use

computers regularly. In world it has been estimated that nearly 60 million people experience vision problems as a results computer use. The computer population in India is 20 million plus and 80% of them (16 million) have discomfort due to vision problem.

The prevalence of eye symptoms among Computer workers ranges from 25-93% as reported by various investigators. Studies show that eye strain and other bothersome visual symptoms occurring 50-90% of computer workers.

Computer is a man made machine which faithfully follows man-given orders and shortly gives man-wanted result. In the present world, inventions of computers recorded new heights in technological advancement, because of these improvements life has become so easy and comfortable.

Computer will not permanently damage the eyes; however, they can cause strain or exacerbate existing eye conditions, it is important to remember, that there are many other potential problems associated with sitting down and staring at a long periods of times such as deep vein thrombosis (DVT).

Hence using of computer will cause major eye disease and their life style practices, it shows that there is a need for health education among computer staff workers to create and to increase their level of awareness and knowledge regarding prevention of eye disease, Such awareness and knowledge could lead to better understanding and acceptance of the importance of routine eye examinations for the early detection and treatment of eye disease, and thereby reducing the risk of eye disease and its complication among computer staff workers.

#### **OBJECTIVES:**

- To assess the level of knowledge and attitude regarding ophthalmic exercise on eye problem among the computer staffs.

- To determine the effectiveness of ophthalmic exercise on eye problems among computer staffs
- To findout the association between the post test level of knowledge and attitude regarding ophthalmic exercise on eye problem among computer staff workers.

#### **HYPOTHESES**

- H<sub>1</sub>: There is a significant difference between pretest and posttest knowledge and attitude scores of computer staff workers.
- H<sub>2</sub>: There is a significant effectiveness of ophthalmic exercise on eye problems among computer staffs workers.
- H<sub>3</sub>: There is significant association between the post test level of knowledge and attitude score of computer staff workers along with their selected demographic variables.

#### **ASSUMPTION**

- Computer users may have some knowledge and positive attitude regarding ophthalmic exercise.
- Computer users will give co-operation during the pre-test and post-test.
- This interventional study is an effective strategy to improve the knowledge and attitude among computer staff workers.

**RESEARCH DESIGN:** pre-experimental research design with one group pre and post test design was adopted.

**SAMPLING TECNIQUE:** Researcher was adopted convenience sampling technique.

**SAMPLE SIZE:** Sample size composed 30 staffs with age group 25-40 yrs.

#### **DESCRIPTION OF TOOL:**

The instrument used for the study is structured knowledge questionnaire, which were designed by the investigator. It consists of 3 parts.

Section A:- demographic variables

It consist of the demographic data of subjects which includes age, gender,

educational status, previous knowledge, occupation.

Section C:- 5 point Likert scale to assess attitude on prevention of eye disease .

Section B:-

It consists of structured questionnaire to assess knowledge on prevention of eye disease.

The items were given one score for correct answer and zero mark for wrong answer.

**SECTION A: Distribution of Demographic Variables**

Frequency and percentage distribution of demographic variable among computer staffs.

(N =30)

S.NO	DEMOGRAPHIC VARIABLES		FREQUENCY(N)	PERCENTAGE (%)
1	AGE	A 20-30 yrs	16	53
		B 30-40 yrs	12	40
		C 40-50 yrs	2	7
2	GENDER	A Male	20	67
		B Female	10	33
3	OCCUPATION	A IT workers	-	-
		B officer	-	-
		C computer workers	30	100
4	HEALTH HISTORY	A normal	25	83
		B visual problem	2	7
		C none of this	3	10
5	PREVIOUS KNOWLEDGE	A Yes	8	27
		B No	22	73
6	FOOD HABIT	A chemical food	1	3
		B non chemical food	8	27
		C both	21	70

**SECTION B: Assesment of Knowledge and Attitude Regarding Ophthalmic Exrcise among Computer Staffs.**

Frequency and percentage distribution of knowledge on ophthalmic exercise among computer staffs.

S.NO	LEVEL OF KNOWLEDGE	PRETEST		POST TEST	
		FREQUENCY	PERCENTAGE	FREQUENEY	PERCENTAGE
1	INADEQUATE	15	50	0	0
2	MODERATE ADEQUATE	14	47	15	50
3	ADEQUATE	1	3	15	50

Frequency and percentage distribution of attitude on ophthalmic exercise among computer staffs.

S.NO	LEVEL OF ATTITUDE	PRETEST		POST TEST	
		FREQUENCY	PERCENTAGE	FREQUENCY	PERCENTAGE
1	UNFAVOURABLE	0	0	0	0
2	FAVOURABLE	20	67	13	43
3	HIGHLY FAVOURABLE	10	33	17	57

**SECTION C: Assessment of Mean and Standered Deviation of Knowledge and Attitude Score of Computer Staff Workers.**

Determine the effectiveness of knowledge regarding ophthalmic exercise among computer staff workers  
N=30

TEST	LEVEL OF KNOWLWDGE			LEVEL OF ATTITUDE		
	MEAN	STANDARD DEVIATION		MEAN	STANDARD DEVIATION	
PRE TEST	9	2.70	T=10 P=2.23 significant	57	6.10	T=28 P=2.05 Significant
POST TEST	15	1.92		61	5.39	

### **Association of level of knowledge and attitude on prevention of eye problem among computer staff with their demographic variables.**

**Knowledge of Computer Staff** = There is a no significant association between the knowledge and the demographic variables.

**Attitude of Computer Staff** = There is significant association between the attitude and the demographic variables of previous knowledge age. There is no association with other demographic variables.

## **DISCUSSION**

The present study was done to assess the effectiveness of eye exercise on eye problem among computer staff workers. In order to achieve the objectives of the study, quasi experimental design (one group pre test and post test design) was adopted. Non-probability convenient sampling technique was used to select the samples. Pre test knowledge and attitude was conducted prior to the implementation of intervention (eye exercise) and post test knowledge and attitude was conducted after seven days. Effectiveness was assessed by using structured questionnaire method for pre test and post test knowledge score regarding prevention of eye problem among computer staff workers, 5 point Likert scale was used to assess the pre test and post test attitude on prevention of eye problem among computer staff workers.

The analysis of data is organized and presented under the following section:-

### **Section A:-** demographic variables

Section A consist of the demographic data of subjects which includes age, gender, previous knowledge, occupation, health history, food habit.

### **Section B:-**

Section B consist of structured questionnaire to assess knowledge on prevention of eye problem among computer staff workers.

### **Section C:-**

5 point Likert scale to assess attitude on prevention of eye problem among computer staff workers.

### **Section E:-**

Association of post test level of knowledge and attitude on prevention of eye problem among computer staff workers with their demographic variables.

#### **1. The first objective was to assess the ophthalmic exercise among the computer staff workers**

The findings reveals that out of 30 samples 15 (50%) had inadequate knowledge: 14(47%) of them had moderate adequate knowledge; 1(3%) none of them had adequate knowledge and 0 (0%) of them had unfavorable attitude; 20(67%) of them had favourable attitude; 10(33%) of them had most favourable attitude.

H<sub>1</sub> There is a significant difference between pre test and post test knowledge and attitude scores of computer staff workers. Hence, hypothesis was accepted.

#### **2. The second objectives of this study was to determine the effectiveness of knowledge and attitude regarding ophthalmic exercise**

The finding reveals that out of 30 samples with respect to knowledge, the mean value was 9 with SD 2.70 of pre test knowledge among computer staffs and the mean value 15 with SD 1.92 of pre test and post test knowledge among computer workers; paired 't' value as 10 for pre test and post test statistically significant at p= 2.23 and the analysis reveals that with respect to attitude, the mean value was 57 with SD 6.10 of pre test and post test attitude among computer staffs and the mean value of 61 with SD 5.39 of pre test and post test attitude among computer staffs, paired 't' value as 28 for pre test and post test is statistically significant p= 2.0

H<sub>2</sub>: There is a significant effectiveness of ophthalmic exercise on eye problems among computer staffs. Hence, hypothesis was accepted.

#### **3. The third objectives objective of the study was to find the association of post test knowledge**

### and attitude scores with their selected demographic variables.

Chi square test was computed to determine the association between post test knowledge and attitude scores regarding ophthalmic exercise among computer workers.

The finding reveals that there is no significant association between the knowledge and their demographic variables. The finding reveals that there is significant association between the attitude and the demographic variables of previous knowledge.

### CONCLUSION

The following conclusions were drawn on the basis of the finding of the study .the finding of the pre test knowledge showed that none of the subjects had adequate knowledge on prevention of eye disease, the finding of the pre test attitude showed that most of the computer staff workers have unfavourable attitude on prevention of eye disease. After intervention they had gained knowledge especially in the areas of causes, sign and symptoms, risk factors, treatment, eye exercise and prevention of eye disease, and also they have gained favourable attitude after the intervention on eye exercise.

The paired 't' test which was computed between pre test and post test knowledge and attitude scores indicates a true gain in the knowledge and attitude

regarding prevention of eye disease among computer staff workers.

Hence it was concluded that, eye exercises (ophthalmic exercise) was an effective method to prevent the eye problem among computer staff workers.

### REFERENCES

- Brunner and Suddarth 'S, A Textbook Medical Surgical Nursing. volume 2, 13<sup>th</sup> edition, published by wolter klower [India] pvt ltd 2014 New delhi. Page no: [1627-1632]
- Onila Salins''A Textbook Of Medical Surgical Nursing' 1 edition [2003] published by jayvee brothers medical publishers [pvt] ltd. Newdelhi. Page no [200-210]
- Polite and Peck''A Textbook Of Research And Statistics, 6<sup>th</sup> edition [2011] published by Elsevier publishers [put] ltd. New Delhi. Page no [310- 315]
- Barbara k. timby "Introduction Of Medical Surgical Nursing "9th edition (2007), published by lippincott, Williams and wilkins, newyork London.

### .NET REFERENCE:

- <http://www.pubmed.com>
- <http://www.research-ophthalmic-exercise.co.uk/line/tips20ASP>
- <http://www.Ophthalmic-exercise-webmet.com>
- <http://www.google.com>
- <http://www.who.com>
- <http://www.yahoo.com>

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