

A STUDY TO ASSESS THE KNOWLEDGE REGARDING COMPUTER VISION SYNDROME AND ITS PREVENTION AMONG COLLEGIATE STUDENTS ATTENDING ONLINE CLASSES DURING COVID-19 PANDEMIC, AT SELECTED COLLEGES IN CHENNAI, TAMILNADU

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ABSTRACT

Purpose: The aim of this study was to assess the level of knowledge regarding computer vision syndrome and its prevention among collegiate students attending online classes during COVID-19 pandemic. **Methods:** The online electronic survey form was prepared on the Google app. The collegiate students were asked to respond to the questions asked, which had 2 part, part 1 consist of socio demographic variables, part 2 consist of questions related to CVS and its prevention. Total number of 100 samples were participated in this study, their responses were recorded in google sheet. The analysis have done by using descriptive and inferential statistics. **Results:** One hundred college students responded to the questionnaire. The minimum score out of 20 was two and maximum score was 15, the mean value is 8.12, SD was 2.520. Out of 100 sample, approximately 25 percentage of collegiate students alone had more than 50% of knowledge on CVS and its prevention, the majority of 75 percentage of college students had less than 50% of knowledge on CVS and its prevention. The most common digital device used were smartphones ($n = 86, 86\%$). **Conclusion:** Majority of the collegiate students do not have even 50% of knowledge about CVS and its prevention.

Keywords: CVS, Covid-19 pandemic, variables

INTRODUCTION: Computer, Smartphones and tablets have become important in daily life as they provide a convenient and mobile means to seek, access and share information. This convenience carries a downside in the rising concern with health problems like computer vision syndrome. Computer use has become a routine part of students lives. About 90% of school-aged children in the U.S. have access to a computer. And kids are starting to use computers at a younger age. Among collegiate students who were interviewed, 20% said they began using a computer before they were 9 years old. In fact, the use of computers and other digital devices has become so common during childhood that a 2015 report by The Vision

Council revealed that nearly one in four collegestudents spend more than three hours a day using digital devices.

NEED FOR THE STUDY:

Today, millions of collegiate students use computers on a daily basis. Extensive viewing of the computer screen can lead to eye discomfort, fatigue, blurred vision and headaches, dry eyes and other symptoms of eyestrain. These symptoms may be caused by poor lighting, glare, an improper work station set-up, vision problems of which the person was not previously aware, or a combination of these factors. Collegiate students can experience many of the same symptoms related to computer . However, some unique aspects of how college students use computers may make them more susceptible to the development of these problems. The prevalence of near-sightedness, or myopia, increased 1.4 to 3 times in Chinese students aged 18 to 25 years during COVID-19 quarantine, according to a study today in *JAMA Ophthalmology*.

In this study, the college students are our primary concern to assess their level of knowledge on CVS and its prevention, thereby create awareness and reduce use of computer/mobile among collegiate students, also it is mainly focus on assessing their knowledge on prevention of computer vision syndrome by adaptive methods while using computer for online classes.

STATEMENT OF THE PROBLEM:To assess the knowledge regarding computer vision syndrome and its prevention among collegiate students attending online classes during Covid Pandemic, at selected colleges in Chennai, Tamilnadu

OBJECTIVE:

- 1) Assess the knowledge regarding computer vision syndrome and its prevention among collegiate students attending online classes during Covid Pandemic, at selected colleges in Chennai, Tamilnadu.
- 2) Associate the knowledge regarding computer vision syndrome and its prevention among collegiate students attending online classes during Covid Pandemic with their selected demographic variables.

OPERATIONAL DEFINITION

Assess- in this study, assess refers to identify the knowledge of collegiate students regarding Computer Vision Syndrome and its prevention

Computer Vision Syndrome-refers to a repetitive stress disorder characterized by eye-strain, tired eyes, irritation, burning sensations, redness of eyes, dry eyes, blurred, and double vision apart from nonocular complaints like neck, shoulder, and back pain experienced by computer users

MATERIAL AND METHODS:A quantitative non experimental descriptive study was carried out among 100 collegiate students those who are attending online classes. The non-probability Convenience sampling method was used and the sample size was 100. The investigators developed online structured questionnaire. The link of the questionnaire was shared with the college students, with the consent of students, the responses were collected and recorded in google sheet. The questionnaire consist of 2 part such as socio demographic

data and questions related to CVS and its prevention. All participants were explained about purpose of the study and directed to complete the online survey.

ANALYSIS: The obtained data was coded and analysed by using descriptive and inferential statistics. Descriptive analysis was applied to calculate frequencies and means.

RESULT:

Computers are part of modern life, but many people are experiencing a variety of ocular symptoms related to computer use, such as eyestrain, tired eyes, irritation, redness, blurred vision, and double vision. More and more people are now using different types of gadgets, especially smart phones. With the unprecedented growth of users of handheld devices, it is estimated that almost 84% of the world's population will use these by the end of 2018. In this study, mobile phones, computers were the most frequently used gadgets by the college students.

The overall study result shows that, out of 100 collegiate students, 75 percentage of the sample have less than 50% of knowledge on CVS and its prevention. Only 25 percentage of the college students have more than 50% of knowledge on CVS and its prevention.

Table-1 (Frequency distribution on demographic variables of college attending online classes)

n = 100

	Variable	Frequency	Percentage
1	Age in years		
	18-22	3	3
	22-26	25	25
	>26	72	72
2	Education Level		
	Undergraduate	70	30
	Postgraduate	25	21
	Electronic gadgets used most of time		
	Mobiles	86	86
	Tablets	-	-
	Computers	12	12
	Laptops	2	2
	Source of information	30	30
	Health workers	25	25
	Friends and relatives	25	25
Internet	20	20	
Social media			

Table-2: Knowledge on Computer Vision Syndrome

n = 100

Sl No	Knowledge	Min	Max	Mean	SD
1	Knowledge score	2	15	8.12	2.520

Table-3: Level of knowledge on computer vision syndrome

n = 100

Sl No	Level of Knowledge	Frequency	Percentage
1	< 50%	75	75
2	≥ 50%	25	25

Table-4: Association between level of knowledge and socio-demographic variables

n = 100

S. No.	Characteristics	Chisquare	P value	Levels of significant
1	Age in Years	15.547	< 0.001	Significant
2	Education level	9.471	< 0.009	Significant
3	Electronic gadgets used most of time	10.457	0.164	Not significant
4	Source of information	7.254	0.064	Not significant

P<0.05 level

*Significant

. There was no significant association found between knowledge with occupation, no of college students in family, previous knowledge on CVS and source of information

DISCUSSION:

This study helps to provide supportive evidence for knowledge computer vision syndrome and its prevention, which is the easy and acceptable method in implementing assess the knowledge to occupy major group of people, so that we can able to prevent most of the pandemic diseases, which may contribute to sustainable behavioral change.

Ensure that the government health care facilities have health care infrastructure, service personnel and quality of health care services to the need in education the public on prevention of computer vision syndrome. Efforts to be to enhance the capabilities of the doctors, nurses and other paramedical through pre-services and in service training programmed a prevention of computer vision syndrome among the collegiate students.

CONCLUSION:

There is a strong need to create awareness on Computer Vision Syndrome among collegiate students to update their knowledge on CVS and its prevention, so that, we can minimize the usage of e-gadgets by college students and ensure safe use of e-gadgets with more precaution to safeguard the students from computer vision syndrome.

CONFLICT OF INTEREST

NIL

SOURCE OF FUNDING

Self funding

ETHICAL CLEARANCE

Sathyabama Institute of Science and Technology

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