



PREVALENCE OF MYOPIA AMONG MEDICAL STUDENTS

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KEYWORDS :

AIM AND INTRODUCTION:

Today all over the globe, with increasing level of education and living standard, the prevalence and severity of myopia appear to be an upward trend. High incidence and progression rates of myopia have been reported in individuals who spend long hours in near work activity.

Myopia or near-sightedness is the most frequent cause of vision deterioration with growing burden worldwide. Besides several other factors, possible genetic factor and occurrence of myopia was also determined.

OBJECTIVE:

To study the prevalence of myopia and associated risk factors in medical students.

MATERIALS AND METHODS:

Place Of Study: The study was carried out among medical students in andhra pradesh and telangana.

Study Design: This was a cross-sectional study done in private and government hospitals.

Study Period: The study was carried out for 2months (January&February 2025)

Study Participants: Medical students of all years

Sample Size: 110 samples collected on the basis of a questionnaire.

Data Collection Procedure: Data was collected through an online pre designed questionnaire.

Data Analysis And Interpretation: Data was entered using Microsoft Excel sheet Summarisation and analysis of data was carried out by using IBM SPSS Software version 20(licensed).

Inclusion Criteria: Medical students of all years.

Exclusion Criteria: Those who are not willing to participate in semi structured questionnaire.

Confidentiality: Particulars and details of all the participants were kept confidential throughout the study only summary of the details was used for declaring the result.

Ethical Consideration: Institutional ethics committee approval and informed consent was taken.

RESULTS

This study screened 107 medical students for the presence of myopia, their ages ranging from 18 to 27 years old with a mean age of 22 years. Of the 107 students, myopia was detected in 75.5% of whom 56.1% were males and 43.9% were females. Hypermetropia was detected in (2%) individuals of

whom 6 were males and 3 were females.

Out of medical students with myopia, 70% gave positive family history of myopia, whereas 30% had none. Time spent on electronic gadgets was highest, nearly 75% are spending more than 2hrs on digital devices daily (Fig 1) and 56.3% complained of worsening of their myopia with the medical studies. Majority of the myopics (49.5%) in this study showed lens power between -0.5 to -1.75 D (Fig 2).

How many hours per day do you spend on digital devices?



Fig 1

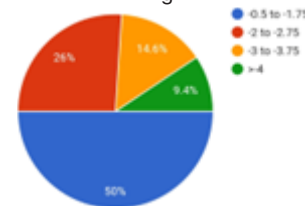


Fig 2

According to our study group's opinion Excessive screen time (65%) and Genetics (43%) are the major contributors for developing myopia (Fig 3). Majority of myopics have habits of reading in low light (55%) and excessive screen time (43%) (Fig 4)

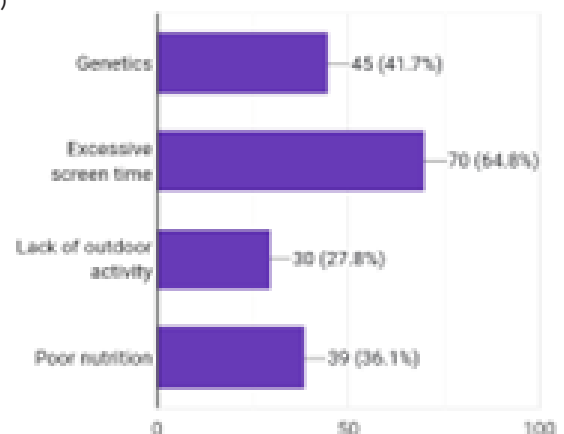


Fig 3

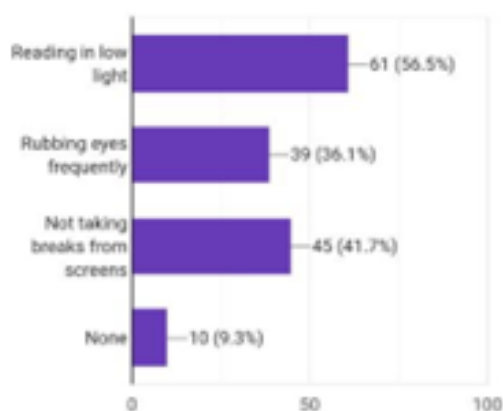


Fig 4

DISCUSSION

Myopia is a most frequent cause of vision impairment with increasing prevalence worldwide.

Of the studied group, the prevalence of myopia in males was 56.1% and females were 46.9%, respectively. Approximately 60.7% of myopia cases were using glasses, and using contact lenses 24.3% and the remaining 15% were currently without aids.

The use of both spectacles and contact lenses offers acceptable visual functioning for everyday activities in young people suffering from mild to moderate myopia. In the present study, the highest percentage of cases with myopia were seen among those at 22 years old or older. It was reported that the myopia rate increased significantly with age.

In the current study 52.4% of those with myopia have a family history of myopia.

Majority of the myopes (49.5%) in this study showed lens power between -0.5 to -1.75 D. This was in agreement with Chalasani et al.⁽¹⁾ who found that increased percentage of myopes had lens power < 2.00D.

It was observed in our study that myopia is also highly associated with use of electronic gadgets such as smart phones and computers. This observation was in agreement with the findings of Reddy et al. who found that more than 2 hours continuous use of computer was significantly associated with occurrence of symptoms of computer vision syndrome. Our results in this regard are also consistent with another study suggesting that prolonged use of computers is responsible for visual fatigue which in turn may lead to myopia.

Our study showed that the maximum reading distance was < 15 cm (near work) in myopic. This was in consistent with the results of Saw et al.⁽⁵⁾, Richler et al.⁽¹⁴⁾ and Sood et al.⁽⁷⁾, who reported that excessive near work has been identified as one of the predisposing factor for high myopic incidence in medical students.

CONCLUSION

High prevalence of myopia was found among the medical students. The increased applicability of electronic gadgets, laptops, computers and smart phones were found to be the major associated risk factors along with the family history.

Further studies are recommended for the prevention of increasing frequency of myopia among the young population.

Myopia is the predominant refractive errors among the medical students studying in this college. In this regard, the importance of rigorous academic hard work in the previous years to qualify the admission test related to medical study is one of the risk factor.

Majority of myopic students score highest marks in common entrance, achievement in carrier other than syllabus study.

The prevalence of myopia increased with hours of work on computer, playing videogames & watching television.

Majority of the parents of myopic medical students are also found to be myopic. Thus genetic factor may play a more substantial role in the development of myopia.

This data could help health care professionals to develop targeted myopic control policies for the population of students in medical field & insure the policies are more rational, useful, & effective.

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