

# Knowledge, Attitude and Practice among Myope Students

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## ABSTRACT

**Objectives:** The purpose of this study was to evaluate the knowledge, attitude, and practice of myope students at The University of Faisalabad.

**Methods:** Descriptive study was conducted to interpret the medical students' knowledge, attitudes, and practice about myopia. An organized questionnaire with 14 questions was created. The research was carried out between December 2021 and April 2022 in different medical colleges of Punjab. The sample size was 300 female adolescents ranging in age from 18 to 26 years.

**Results:** 300 Asian myopic medical students participated in this study. All were females. The subjects were divided into three groups on the basis of classification of myopia. 1. High myopes 2. Moderate Myopes 3. Low myopes. 234 students had heard of myopia, while 42 students (14%) had not. Out of the 300 participants, 227 (75.6%) were aware that they have myopia, and 230 (76.6%) students are aware that myopes were unable to see clearly at a distance. 245 participants (81.6%) had a history of myopia in their families. Only 81 (or 27% of the total) for a routine yearly eye exam visited an eye doctor or optometrist. 121 (40.3%) of them preferred contact lenses to glasses. Only 57 individuals (19%) wear glasses constantly while 193 people (64.3%) didn't. 134 respondents (44.6%) had a bad attitude regarding those who wear glasses. On average, 210 students (70%) spent fewer than 6 hours outside whereas 189 students (63%) spent more than 6 hours on screens.

**Conclusion:** In this study parental history was positive and screen time was more than 6 hours. Outdoor activities were reduced and also vitamin A intake was reduced. All above possibility were leading factors to progression of myopia in medical students.

**Keywords:** Knowledge, Attitude, Practice, Myopia, Refractive error

## INTRODUCTION

It's called myopia because light rays converge in front of the retina. Measurement of myopia relies on finding out how many diopters of spherical power (or refraction) the diverging lens needs in order to bring light into focus on the retina in the meridian with the least amount of myopia. Myopia is characterised by blurry distance vision, eye rubbing, and squinting<sup>1,2</sup>. Both normal myopia and pathological myopia are subdivided into these two groups. An increase in the eye's axial diameter beyond what is obtained during normal development is the cause of physiologic myopia. Pathologic myopia is characterised by aberrant ocular stretching and oftentimes scleral wall thinning in one's condition<sup>3</sup>. Another type of classification is based on the age at which the disease first manifests itself. When a full-term baby is born, 0.0 to 24.2 percent of them are born with congenital or infantile myopia. The technical problems in detecting refraction in infants are the cause of this variability<sup>4</sup>.

One of the most prevalent causes of visual impairment in people around the world is myopia, which is also known as shortsightedness. Grouped myopia and uncorrected refractive error are among the top causes of blindness and visual impairment in the globe, according to the World Health Organization<sup>5</sup>.

When it comes to myopia prevalence, it differs widely from one country to the next<sup>6</sup>. Myopia is expected to affect 2.5 billion people globally by the year 2020<sup>7</sup>. Myopia is on the rise, and if current trends continue, half of the world's population will be myopic by 2050, according to a recent research<sup>8</sup>. Concerns about public health are being raised by the global rise in the prevalence of myopia<sup>9</sup>. Other ocular diseases like myopic macular degeneration, retinal tears and detachment and glaucoma are also risk factors for myopia, which can result in permanent vision loss<sup>10</sup>. Myopia has an economic and societal cost in the form of direct and indirect treatment expenses, quality-of-life consequences, and lost productivity<sup>11</sup>.

Because myopia is corrected easily with contact lenses, refractive surgery or glasses it is frequently seen as<sup>12</sup>. But, in East Asia, myopia prevalence is quickly growing, and the high socioeconomic costs of correcting myopia make it a severe issue of public health. Furthermore, excessive myopia cannot be entirely corrected and leads to serious vision problems, including

blindness<sup>13</sup>. The purpose of this study was to evaluate the knowledge, attitude, and practice of myope students at The University of Faisalabad. To promote myopia awareness among students and prevent future consequences.

## METHODOLOGY

Descriptive study was conducted to evaluate the students' knowledge, attitudes, and practise about myopia, an organised questionnaire with fourteen questions was created. Between December 2021 and April 2022, the research was carried out at the University of Faisalabad. The sample size was 300 female adolescents ranging in age from 18 to 26 years.

Ethical clearance certificate was obtained from different Medical colleges of Punjab to conduct the study. Participant were divided into 3 groups Low myopia ( $\leq 3D$ ), Moderate myopia (3-6D), High myopia (greater than 6D) and checked the Knowledge, attitude and practice among 3 groups of myopes. Non-probability convenient sampling was used for this study.

Data were collected by using self-designed questionnaire, questions about knowledge, attitude and practice to evaluate among myope students of The University of Faisalabad. We used Statistical Package for Social Science (SPSS) to enter and analyse our data (SPSS Version 22.0).

## RESULTS

Over 300 students of various ages were examined for this research. In this study, all of the participants were women. Students between the ages of 18 and 20 comprised 33% of the student body; students between the ages of 21 and 23 comprised 49%; and students between the ages of 24 and 26 comprised 18% of the student body as shown in figure 1. Participant are divided into 3 groups low myopia ( $\leq 3D$ ), moderate myopia (3-6D), high myopia (greater than 6D) (Table 2).

In present study of the 300 subjects, 203 subjects have low degree of myopia, 72 have moderate degree of myopia while high degree of myopes only 25 participated in this study. In present study majority of the students heard about myopia that's constitute 234(78%) while 42 (14%) haven't know about word myopia. Out of the 300 participants 227 (75.6%) know that they are suffered from myopia as well as 230 (76.6%) students know that myopes can't

see clearly at distance objects. 245 (81.6%) subjects had a family history of myopia (Table 3).

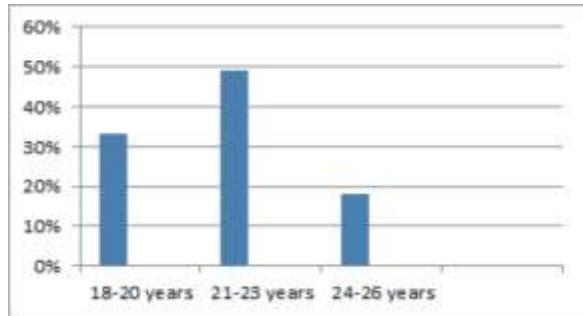


Figure 1: Age Distribution

Table 1: Age Distribution of study participants

| Age Distribution | N   | Mean | Standard Deviation |
|------------------|-----|------|--------------------|
| 18-20 years      | 300 | 1.54 | ± 0.706            |
| 21-23 years      |     |      |                    |
| 24-26 years      |     |      |                    |

Table 2: Degree of myopia

| Degree of myopia             | Frequency | Percent |
|------------------------------|-----------|---------|
| Low myopia( ≥3D)             | 203       | 67%     |
| Moderate myopia(3-6D)        | 72        | 24%     |
| High myopia(greater then 6D) | 25        | 8.33%   |

Table 3: Descriptive statistics - categorical variable of knowledge of myopes

| Knowledge   | Yes         | No         | Don't know |
|---|-------------|------------|------------|
| Have u ever listen about term Myopia?                                     | 234 (78%)   | 42(14%)    | 24(8%)     |
| Have you suffered from myopia?  | 227 (75.6%) | 39 (13%)   | 34 (11.3%) |
| Do you know myopic patient feel difficulty to see distant object clearly? | 230 (76.6%) | 34 (11.3%) | 36( 12%)   |
| Parental history of myopia  | 245 (81.6%) | 37 (12.3%) | 18 (6%)    |

121 (40.3 %) preferred to wear contact lens instead of wearing spectacle. Only 57 (19% ) wear glasses for all the time for the sake of clear vision while 193(64.3% ) don't wear glasses. 134 ( 44.6%) have negative attitude towards who wear glasses. 221 (73.6%) don't take vitamin A intake supplements in diet only 17(5.6%). On average 189(63%) students have more then 6hours screen work while 210 (70%) students have less then 6hours outdoor activities. These two factors have major contribution in progression of myopia (Table 4).

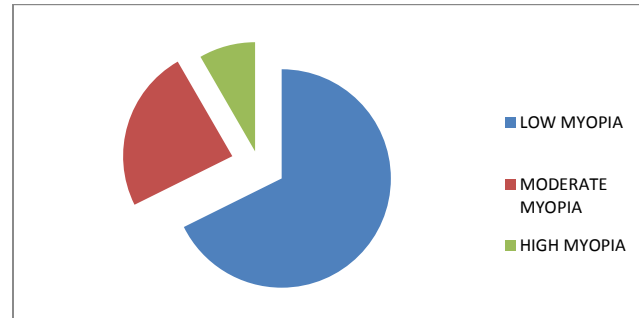


Figure 2: Degree of Myopia

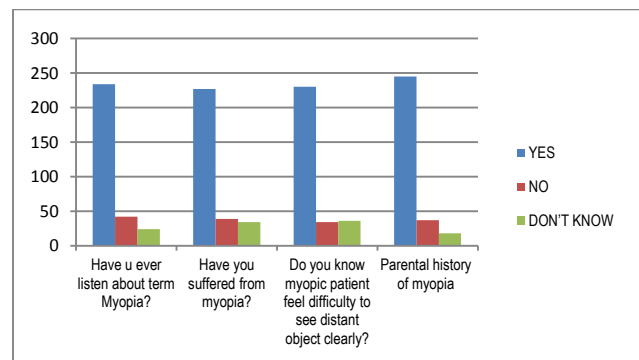
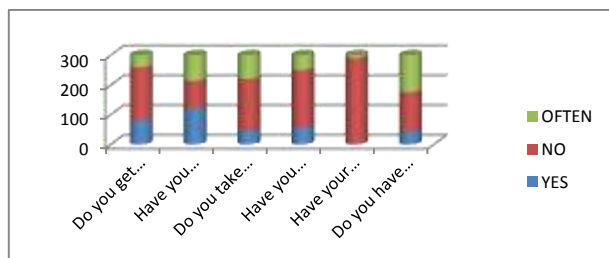


Figure 3: Frequency of knowledge of myopes

In present study majority of the students don't visit ophthalmologist or optometrist for yearly regular eye checkup only 81 (27%) visit eye doctor on regular basis. Of the 300 students,

Table 4 : Descriptive statistics - categorical variable of attitude and practice of myopes

| Attitude & Practice   | Yes         | No          | Often       |
|---|-------------|-------------|-------------|
| Do you get your eyes checked on a regular basis?  | 81(27 %)    | 179 (59.6%) | 40 (13.3%)  |
| Have you ever considered wearing contact lenses instead of glasses?                     | 121 (40.3%) | 93 (31%)    | 86 (28.6%)  |
| Do you take a break after 30-45 minutes and then return to work?                        | 45 ( 15%)   | 175 (58.3%) | 80 (26.6%)  |
| Have you always worn glasses for the sake of distant clear vision?                      | 57 (19%)    | 193 (64.3%) | 50 (16.6%)  |
| Have your eye doctor recommend drops (atropine) instead of spectacles for clear vision? | 2 (0.66%)   | 289 (98.3%) | 9 (3%)      |
| Do you have a positive attitude toward someone who wears glasses?                       | 42 (14%)    | 134(44.6%)  | 124 (41.3%) |
| Have you ever intake of Vit A supplements ?   | 17 (5.6%)   | 221 (73.6%) | 62 (20.6%)  |
| Habitual Working 33-40 cm   | 149 (49.6%) | 112 (37.3%) | 39 (13%)    |
| On average, your screen work is more than 6hours?                                       | 189 (63%)   | 89 (29.6%)  | 22 (7.3%)   |
| On average, your outdoor activities less than 6 hours?                                  | 210 (70%)   | 67 (22.3%)  | 23 (7.6%)   |



Graph 4: Frequency of attitude and practice of myopes

## DISCUSSION

By using data obtained for this study, came to know that the prevalence of myopia is increasing day by day. Myopia is mostly present in young population .excessive use of screen and deficiency of vit A is leading cause of myopia. High myopia is leading cause of blindness. In previous study also mentioned that the prevalence of myopia is high myopia is global health issue and its prevalence increase day by day associated with ocular sight threatening complication. In East and South-East Asia countries prevalence is 80% younger age group [14]. As a result, sufficient guidance and awareness concerning myopia should be provided.

There should be a programme to raise awareness about myopia in all disciplines. Because myopia causes blindness, earlier investigations have found that high myopes causes degenerative changes, caused permanent visual loss blindness from macular degeneration, retinal detachment, glaucoma and cataract [15].

However, lack of primary care and screening programmes, as well as a lack of accurate prevalence data, were frequent hurdles in adopting myopia management measures on a national level [16, 17]. Collaboration between governments and non-governmental groups is encouraged, particularly in the field of education [18]. Governments and non-governmental groups, particularly education and health ministries, are encouraged to collaborate to implement nationwide myopia prevention programmes in primary care. Finally, it's crucial to emphasise the importance of key guidelines like increasing students' outdoor time, taking a break from continual close work, and getting enough vitamin A.

## CONCLUSION

The majority of students has already heard the word "myopia" and were aware that myopes have trouble seeing distant objects clearly. The proportion of students rarely goes to an optometrist or ophthalmologist for routine eye exams was low. After 30-45 minutes of nonstop work, the number of students rarely take a break. Parental history of myopia was positive in this study, and screen time exceeded 6 hours. Both vitamin A consumption and outdoor activities were decreased. All of the abovementioned scenarios contributed to the evolution of myopia among Medical students.

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