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## Original Research Article

# Survey on health and fitness among ophthalmologists in India

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### ABSTRACT

**Purpose:** This work studies various factors related to health and fitness among the ophthalmologists in India.

**Materials and Methods:** A multi-dimensional study using a comprehensive questionnaire which addressed the areas of work patterns, fitness activity patterns, food consumption patterns, the prevalence of occupation-related musculoskeletal disorders and other health hazards, the impact of COVID-19, and career satisfaction. A total of 537 Ophthalmologists from across the country participated in the survey.

**Results:** Considerable number of respondents (21.34 %) reported that they do not get at least one off day per week. Majority of respondents (84.99%) gets at least 6 hours of sleep per day. Only 49.16% of ophthalmologists exercise regularly, out of which 51.77% exercise for at least 30 minutes per day, where the majority prefers walking, yoga or gym as their preferred fitness activity. Majority of respondents (67.59 %) find it difficult to spend time for fitness, majorly due to work pressure, lack of motivation and inflexible workplace. A significant number of Ophthalmologists (57.16 %) suffered from occupation-related neck and back pain. The major occupational hazards reported were psycho-social stress, injury from sharp and verbal abuse. A significant number of respondents (48.29 %) suffered from a salary cut due to COVID-19. 64.04% Ophthalmologists reported that they were content with their career with good confidence.

**Conclusions:** Majority of ophthalmologists suffer from occupational health hazards. Even though there is a strong desire to spend time on fitness activities, the majority find it difficult. COVID-19 hurt Ophthalmologists due to salary cuts and contraction of the disease.

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## 1. Introduction

The World Health Organization (WHO) defines health as 'a state of complete physical, mental and social well being and not merely the absence of disease or infirmity' (WHO, 1948). Health and fitness of employees severely affects the productivity in any professional community. This is even more relevant in the case of doctors who are responsible for well-being of individuals in a society.

As the world is fighting a pandemic, doctors across the world are leading the fight from the frontline. Health and

fitness of doctors are important than ever. Considering the fact that India is a country with a high population density where ophthalmologist-patient ratio is low, absenteeism due to sickness and poor health can have adverse effects.

In this survey based study, effort has been put to study the various aspects related to health and fitness among ophthalmologists in a comprehensive way. This is realized by analysing the following aspects: work and sleep patterns, fitness activity patterns, food habits, prevalence of occupational hazards, impacts of covid-19 and career satisfaction.

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## 2. Materials and Methods

A comprehensive questionnaire was created in Google form and distributed to ophthalmologists across India through various social media platforms like WhatsApp, Facebook and Telegram during the time period between March 1, 2022 and May 1, 2022. Ethical clearance was not taken as it was an opt in survey. Out of the invited, 537 ophthalmologists participated in the survey. The respondents included 413/537 (76.91 %) females and 124/537 (23.09 %) males. The respondents included 270/537 (50.28 %) Residents, 219/537 (40.78%) Consultants, and 48/537 (8.94%) Fellows. The identifiable details of the respondents were made optional entries in the survey to check for authenticity. However, the responses were anonymized before analyzing the survey results. Respondents were allowed to submit the survey only after answering the entire set of mandatory questions.

The initial set of questions targeted to study the work patterns of ophthalmologists. This included questions related to average amount of work hours and sleep time they get. The following set of questions studied the fitness activity patterns and food consumption patterns among the respondents and its relation to the work nature. Along with it, the efforts put on by the Ophthalmologists to move to healthier lifestyle through changes in the fitness regime and food consumption was also analyzed.

The latter part of the survey tried to study the prevalence of occupational health hazards among ophthalmologists in India and various aspects related to it. The impact of COVID-19 on the respondents were studied in the last set of questions along with career satisfaction.

The results of the survey were analyzed in detail and compared on the basis of gender and designation. Association between categorical variables of the study was analyzed using Chi-Square test implemented in python.

## 3. Results

### 3.1. Work patterns

54.75 % of ophthalmologists reported that they work more than 8 hours a day on an average. Majority of respondents (87.33%) reported that they sleep at least 6 hours per day. On the question on whether they get at least one off day per week, 78.65% of the respondents said yes.

### 3.2. Fitness activity patterns

65.01 % of Ophthalmologists reported that they are health conscious with at least 70 % confidence. However, only 49.16% of the respondents exercise regularly. Men are found to be more health conscious than women ( $p=0.001$ ); consultants more than residents ( $p=0.001$ ). This is supported by the finding that more percentage of Male

ophthalmologists (70.16%) exercise regularly than females (42.86%) ( $p=0.000$ ), whereas 68.03% consultants exercise regularly as opposed to 37.77% residents ( $p=0.000$ ). Females (70.94%) find it more difficult to allot time for fitness than males (56.45%) ( $p=0.002$ ). Out of the respondents who exercise regularly, 51.77 % exercise for at least 30 mins per day. Walking, yoga and working out at the gym are the most preferred physical fitness activities of ophthalmologists. Alarming, 67.59 % of respondents reported that they find it difficult to allot time for fitness activities mainly due to lack of motivation (49.24%), work pressure (29.92%) and familial reasons (11.95%).

### 3.3. Food habits

A significant 44.13% of the respondents reported that they often skip their meals because of work schedule. Majority of ophthalmologists (62.56%) get home cooked food for meals. Fair-share of the respondents make active efforts in inculcating healthy dietary habits by adding more fruits and vegetables to diet, and reducing intake of carbs, oil and salt.

### 3.4. Occupational health hazards

More than half of the ophthalmologists (57.16%) suffered from occupation related neck and back pain, which significantly affected their quality of life. Females (60.77%) suffer more from occupation related neck and back pain compared to males (45.16%) ( $p=0.002$ ). There is no statistically significant relationship between consultants (60.73%) and residents (55.55%) on the basis of prevalence of occupation-related neck or back pain. ( $p=0.249$ ). 37.03% of them resort to analgesics to relieve themselves from the pain.

57.21% of the respondents reported that they got infected from their patients during the course of their career. Out of them, 44.80% with COVID-19, 43.46% got infected with conjunctivitis and 21.20% with other respiratory ailments. Tuberculosis, a highly lethal disease, is contracted by a minor proportion (4.59%) of the respondents. Even though majority (65.16%) of the ophthalmologists reported that they are cautious in protecting themselves from occupational hazards with 70% confidence, almost everyone has gone through one or the other form of occupational hazard. Psychosocial stress, injury from sharps and verbal abuse are the most common occupational hazards reported. There is no significant relationship between people who exercise regularly and the prevalence of neck and back pain ( $p=0.96$ ).

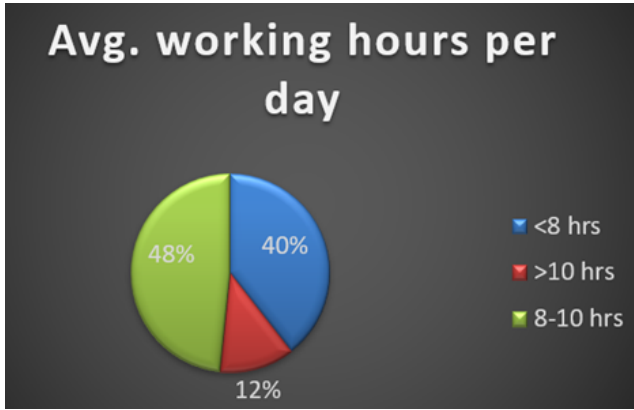


Fig. 1: Average working hours of ophthalmologists

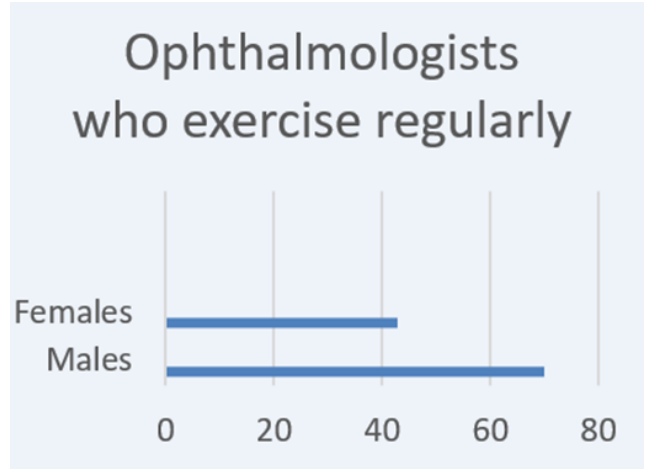


Fig. 4: Gender disparity in exercise habits.

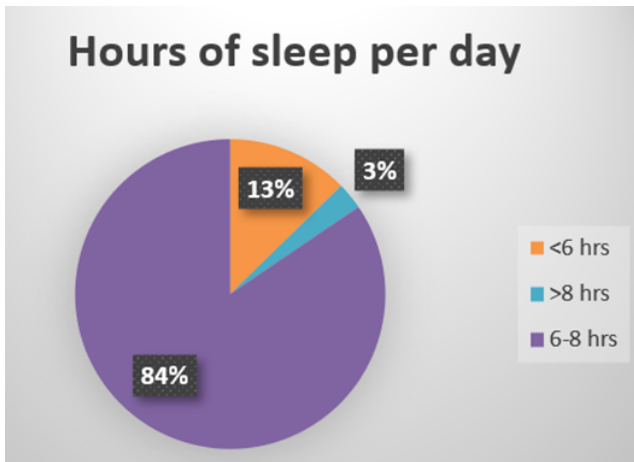


Fig. 2: Average hours of sleep of ophthalmologists

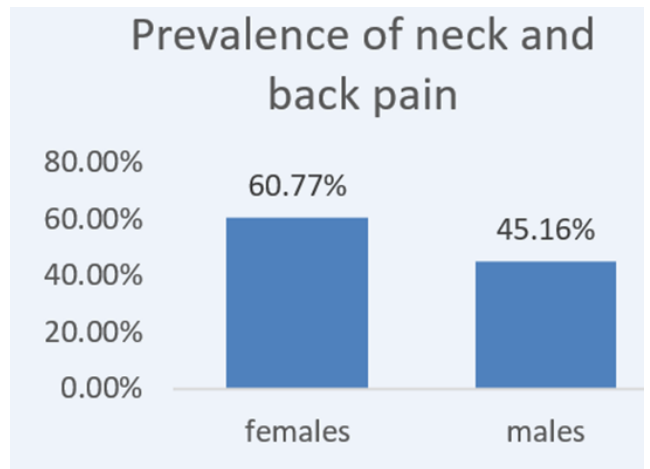


Fig. 5: Prevalence of neck and back pain among ophthalmologists

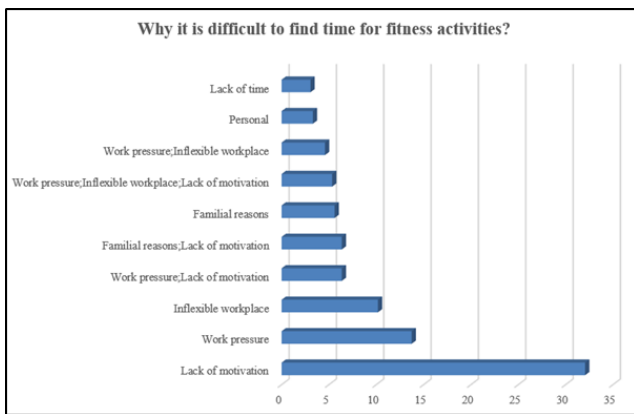


Fig. 3: Why is it difficult to allot time for fitness?

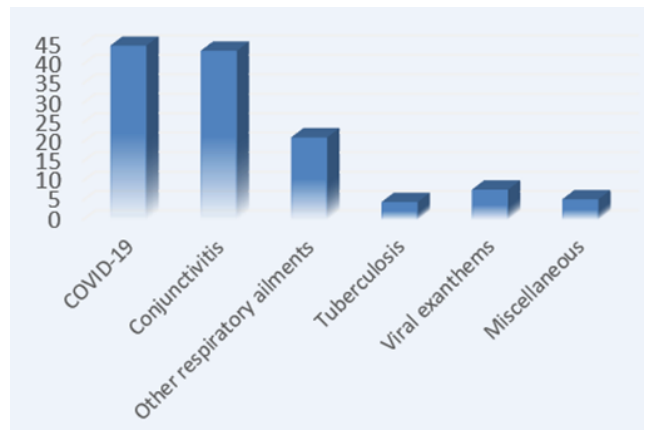


Fig. 6: Diseases contracted from patients.

### 3.5. Impact of Covid-19 and career satisfaction

COVID-19 hurt ophthalmologists in the form of salary cut (48.29%) and job loss (3.18%). 53.11% of the respondents reported that they are content with the COVID-19 protective gears provided by their respective institutions. On the brighter side, majority (57.9%) of the ophthalmologists admitted that the COVID-19 scenario made them invest more time on fitness activities. Majority of ophthalmologists (64.04%) reported that they are content with their career with good confidence. There is no statistically significant difference in the career satisfaction between males and females ( $p=0.245$ ). 71.56% consultants reported that they suffered a salary cut due to COVID scenario.

## 4. Discussion

### 4.1. Work patterns

Previous studies in developed countries on the number of working hours of doctors indicated that they work around 48 hours per week.<sup>1-3</sup> However, in our study it is observed that 54.75 % of ophthalmologists work more than 8 hours per day indicating that the number of working hours in India may be more than other countries. Working for high number of hours on a weekly basis is found to have a negative effect on their health, with increased risk of hypertension, cardiovascular disease, chronic infection, diabetes, metabolic syndrome, sleep disturbance, anxiety and depression.<sup>4-6</sup>

Around 13% of the Ophthalmologists reported that they sleep for less than 6 hours per day. As per studies, it is reported that having a regular sleep duration below 6 hours has a high chance of hypertension.<sup>7,8</sup>

### 4.2. Fitness activity patterns

A previous study conducted by De Moor et al<sup>9</sup> performed in general population found that youngsters spend more time on exercise. However, our study shows that consultants are more health conscious and spend more time on fitness compared to resident ophthalmologists. Higher working hours amongst the residents may be a reason for this. Females tend to spend lesser time in fitness activities, may be due to the disproportionate domestic and parental responsibilities especially in a country like India.

### 4.3. Food habits

It is observed that almost half the respondents regularly skip their meals because of work schedule. Various studies on meal skipping reported that regular omission of meals is associated with poor diet quality, increased risk of central adiposity, insulin resistance and cardiometabolic risk.<sup>10-13</sup> Despite this trend, it is promising to note that majority of

respondents are trying to put conscious efforts to inculcate healthy dietary habits.

### 4.4. Occupational health hazards

As per the current study, more than half the ophthalmologists (57.16%) suffer from occupation related neck and back pain. This is supported by previous studies which observed that prevalence of neck and back pain among ophthalmologists are variable and ranges between 50-70%.<sup>14-17</sup>

Females reported more incidence of neck and back pain than males, which is consistent with some previous studies.<sup>14-16</sup> However, there is no statistically significant relationship observed between consultants and residents on this basis. This is contrary to the finding by Ramesh Venkatesh et al<sup>14</sup> that younger ophthalmologists are suffering from neck and back pain more than senior ophthalmologists as they cater to more patients, working long hours in OPD and spending more time during procedures like laser and indirect ophthalmoscopy.

It is saddening to note that almost every respondent has gone through verbal or physical violence in the course of their career. More than half of ophthalmologists responded that they got infected from patients.

### 4.5. Career satisfaction

In our current study majority of ophthalmologists (64.04%) reported that they are content with their career with good confidence and this is comparable with similar studies conducted in Canada<sup>18</sup> and Nigeria.<sup>19</sup> As evident from some of the previous studies.<sup>18-20</sup> We also observed that no gender bias exist in terms of career satisfaction.

Though our study is limited by the factors like inherent sampling errors of any survey. Due to the opt-in nature of the study, it may have caused non-response bias. Parameters like obesity and addiction are not assessed in this study. Despite of all this, we believe that the findings in the study can be utilised by the fraternity as well as the policy makers to enhance the quality of life of ophthalmologists.

## 5. Conclusion

The major conclusions of the survey based study are given below.

1. Majority of ophthalmologists suffer from occupational health hazards.
2. Even though there is a strong desire to spend time on fitness activities, the majority find it difficult.
3. COVID-19 hurt ophthalmologists due to salary cuts and contraction of the disease.

## 6. Conflict of Interest

None.

## 7. Source of Funding

None.

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