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Original Research Article

Impact of second phase lockdown over Indian optometrists: a questionnaire based study

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ABSTRACT

Background: Optometrist all over India have faced various problems during this period of COVID-19. This study is to find out the challenges faced by Indian optometrists during the Second phase of COVID-19 lockdown.
Methods: A self-administrated, cross-sectional survey in English was distributed using Google forms through various professional bodies across optometrists in India. The questionnaire was circulated among optometrists practicing in India through social media, namely WhatsApp, Telegram, and Facebook. The survey aims to find out the challenges faced by Indian optometrists during the COVID-19 lockdown.
Results: In this study, a total of 107 optometrists from all over India were enrolled, among which 60 (56%) were males and 47 (44.0%) were females. Informed consent was taken online by all the participants who were included in the study. 102 optometrists (95.3%) approved to participate in the study whereas 5 optometrists (4.8%) did not approve to participate in the study. 70% of optometrists faced problems in approaching the patient considering social distancing. 56% of optometrists had difficulty in dispensing spectacles, whereas 44% of optometrists did not face any difficulty. 81% of optometrists responded to have difficulty in dispensing contact lens.
Conclusions: There are no doubt, due to COVID-19 optometrists have faced several challenges across the globe. The major challenge for optometrists was to dispense spectacle and contact lenses with maintaining their safety by maintaining social distancing with the patients. Maintaining social distancing is one of the best ways of reducing the further spread of the disease across the globe.

Keywords: Second phase lockdown, Optometrist, Challenges, Social distancing

INTRODUCTION

Worldwide, more than 6.5 million individuals are affected because of the COVID-19 and 387,155 deaths as of 06 June 2020; simultaneously, 220,421 individuals are confirmed to have COVID-19 and 6348 deaths in India.[1,2] The COVID-19 causes severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), transmitted through the

respiratory tract or direct contact with the contaminated surface or by hands, at that point of contact to mouth, nose, and nose eyes. The common symptoms of COVID-19 are fever, hack, and windedness with more uncommon manifestations like myalgia, loose bowels, and anosmia.[3,4]

Coronavirus has a great impact on the financial status, and this incorporates: loss of talented and experienced laborers, reduced supply of labor, loss of staff, it causes poverty, and it reduces profitability and negative impact on financial development.

The World Health Organization (WHO) had noticed that during the COVID-19 outbreak, human-to-human transmission occurred through droplets, surface contacts, contacts, and fomites. Across the globe, optometrists and other health care workers continue to be at high risk of getting in contact with COVID-19 throughout their duty towards their patients. One of them Dr. Wenliang, an ophthalmologist at Wuhan Central Hospital who had contracted COVID-19 from an asymptomatic glaucoma patient and succumbed to the disease later.[5] Optometrists are primary eye-care professionals involved in patient care and dispense optical devices such as spectacles, contact lenses, and low-vision devices. Many optometrists across India have closed their practice for non-essential services during the lockdown. Due to this pandemic, optometrists faced challenges with patient care, manufacturing and dispensing optical devices, maintaining business stability, and controlling infection control.[6]

In 2019, WHO and world report on vision suggested expanding access to eye care services to prevent the increase of visual impairment worldwide. Given the importance of optometry as a primary eye-care profession, this study finds out the challenges faced by Indian optometrists during the COVID-19 lockdown.[7]

METHODS

A prospective cross-sectional survey was done across India, engaging 107 optometrists (47 male and 60 female, with a male: female ratio of 1: 1.18), using a standardized self-administered questionnaire (Annexure 1) in the English language. The survey aims to find out the challenges faced by Indian optometrists during the second phase of COVID-19 lockdown. This study was conducted from May 2021 to July 2021.

The study depends upon the subjective response of the optometrists. The questionnaire sought participant's demographic characteristics, qualifications, and a series of 10 questions on challenges faced by optometrists during the lockdown. Optometrists both male and female included in the study from all over India. Optometrist from the foreign country were excluded in this study. The questionnaire contained close-ended questions. The questionnaire was circulated among optometrists practicing in India through social media, namely WhatsApp, Telegram, and Facebook. All participants are guaranteed anonymity and confidentiality of the information obtained. The approval took before the study from the optometrists participating in the study. Informed consent was taken online by all the participants included in the study. Subjects were informed about the duration and procedures of the study. The research was approved by the Institutional ethical committee of Uttar Pradesh University of Medical Sciences Saifai, Etawah.

The questionnaire is the major instrument for the collection of data in the study. The survey included optometrists from hospitals, clinics, private sector, optical, colleges, private sectors, etc. All the data was obtained through the study; statistical analysis was done using Microsoft excel. The result articulated through the survey was denoting in percentile format.

Data analysis

Statistical analysis was performed by WinPepi software. Data analysis was done using Google form, excel sheets, and graphs.

RESULTS

In this study, 107 optometrists from all over India were enrolled, among which 60 (56%) were males and 47 (44.0%) were females. Informed consent was taken online by all the participants who were included in the study. 102 optometrists (95.3%) approved to participate in the study whereas 5 optometrists (4.8%) did not approve to participate in the study (Tables 1-3 and Figure 1).

Table 1: Willingness to participate in the study.

Gender	N (%)
Male	47 (44)
Female	60 (56)

Qualification

The optometrists were distributed under 4 different sections. 70 optometrists (65%) had the highest qualification of bachelor of optometry followed my master of optometry 19%, diploma in optometry 14%, and PhD in optometry 2% (Table 3 and Figure 2).

Sample distribution

The total sample was distributed under 6 different sectors, and most of the optometrist that participated in this study were working in the hospital sector (Tables 2 and 3 and Figure 3).

Dispensing spectacles

The dispensing spectacle was a concern for the majority of the optometrist 56% of optometrists had difficulty in dispensing spectacles, whereas 44% of optometrists did not face any difficulty (Figure 4).

Dispensing contact lens

Optometrists who were currently practicing contact lens were as if they had difficulty in practicing and dispensing contact lens. 81% of optometrists responded to have difficulty in dispensing contact lens (Figure 5).

Maintaining social distancing

Maintaining social distancing with the patient was a major challenge for optometrists during their eye care duties in this lockdown. Maintaining social distancing is the best way of maintaining safety. 70% of optometrists faced problems in approaching the patient and 93% of optometrists were not able to maintain their safety considering social distancing (Figure 6).

Flow of patients

There was a reduction in patient flow during this COVID-19 lockdown (Figure 7).

Finding jobs and reduction of salary

Finding jobs and reduction of salary had also become a major challenge for Indian optometrists during this period of lockdown.

An ocular condition is seen during the lockdown

Optometrists who were currently involved in consulting patients were asked to mention the type of patient or the conditions they were consulting. The ocular condition was distributed under 5 conditions, where the dry eye was majorly seen in patients during this lockdown (Figure 8).

Table 2: Sample distribution.

Clinics	College	Hospital	Optical	Own business	Private sector
5 (5%)	15 (14%)	43 (40%)	22 (21%)	11 (10%)	11 (10%)

Table 3: Sociodemographic variables and questionnaire response rate.

Sociodemographic variables (n=107)	Percentage
Sex	
Male	47 (44)
Female	60 (56)
Prefer not to say	0
Questionnaire response rate n=107	
Qualification	
Diploma in optometry	15 (14)
Bachelor of optometry	70 (65.4)
Master of optometry	20 (18.7)
PhD in optometry	2 (1.9)
Working profile	
Hospital	43 (40.2)
Optical	22 (20.6)
College	15 (14)
Private sector	11 (10.3)
Clinics	5 (4.7)
Own business	11 (10.3)
Questionnaire	**Response rate (%)**
Are you facing difficulty in dispensing spectacles?	
Yes	60 (56.1)
No	47 (43.9)
Do you face problem in approaching the patients considering social distancing?	
Yes	75 (70.1)
No	32 (29.9)
Reduction in patient flow?	
Yes	93 (86.9)
No	14 (13.1)

Continued.

Sociodemographic variables (n=107)	Percentage
Difficulty in finding jobs?	
Yes	93 (86.9)
No	14 (13.1)
Reduction in salary?	
Yes	86 (80.4)
No	21 (19.6)
Maintaining safety is a concern?	
Yes	99 (92.5)
No	8 (7.5)
Ocular condition seen during lockdown	
Myopia	33 (30.8)
Amblyopia	1 (0.9)
Low vision	4 (3.7)
Dry eye	46 (43)
Mucormycosis	23 (21.5)
Ocular complains during lockdown?	
Redness	21 (19.6)
Eye strain	38 (35.5)
Nausea	1 (0.9)
Dryness in eye	17 (15.9)
Headache	30 (28)
Use of teleconsultation	
Yes	64 (59.8)
No	43 (40.2)
Difficulty in contact lens practice	
Yes	88 (82.2)
No	19 (17.8)

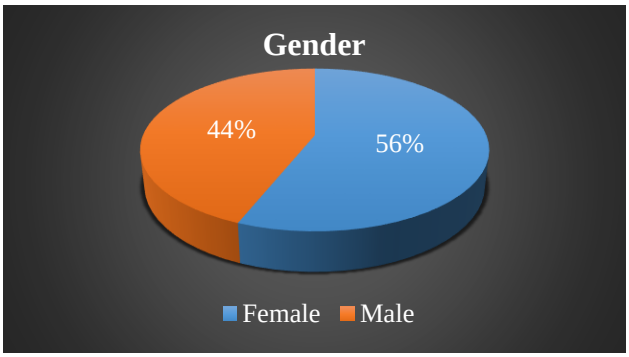

Figure 1: Gender distribution.

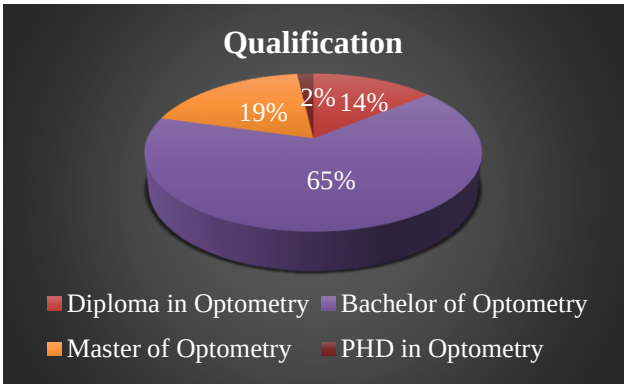

Figure 2: Participants qualification.

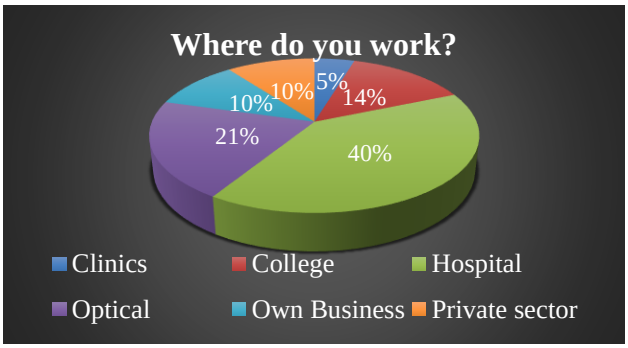

Figure 3: Participants job status.

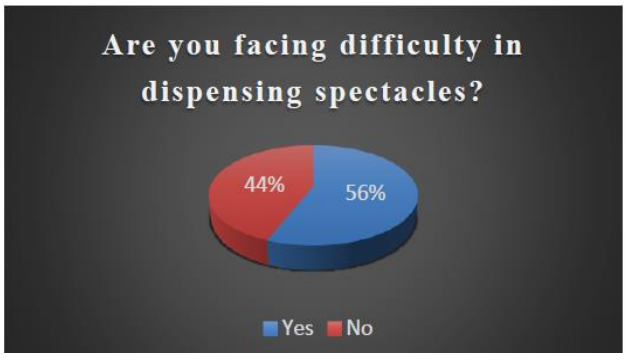

Figure 4: Questionnaire response (facing difficulty in dispensing).

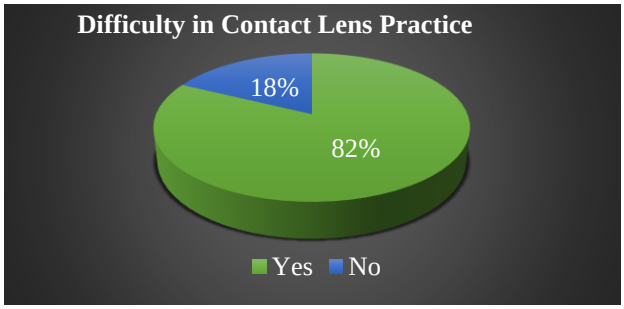

Figure 5: Questionnaire response (difficulty in practicing contact lens).

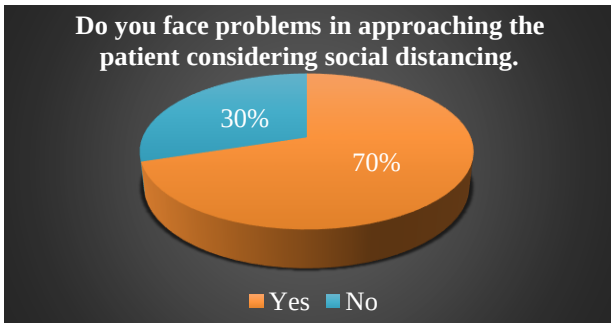

Figure 6: Questionnaire response (problem facing in social distancing).

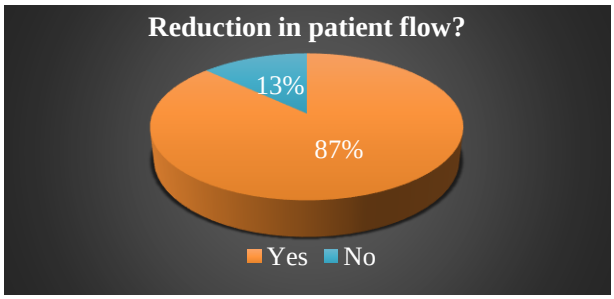

Figure 7: Questionnaire response (reduction in patient flow).

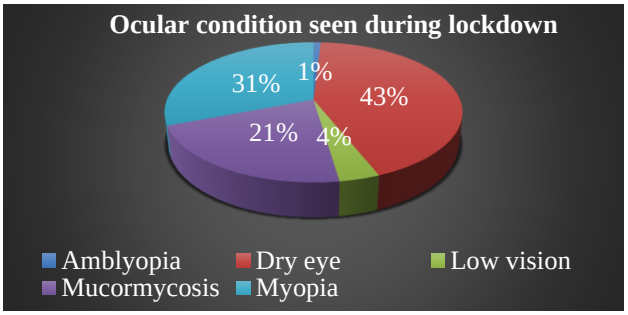

Figure 8: Questionnaire response (ocular condition seen during lockdown).

Patient's major complains

Optometrists who were currently involved in consulting patients were asked what the major complaint of the patients were visiting the clinics during this lockdown. Eye strain was the major complaint given to the patients during their visits to the clinics (Figure 9).

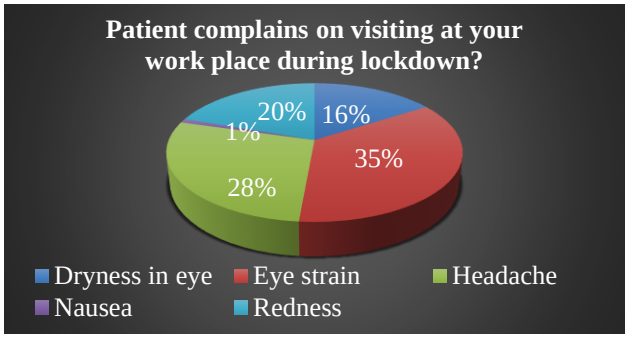

Figure 9: Questionnaire response (patient complaints).

Teleconsultation

The respondents were questioned for their experience of attending patients by using teleconsultation. 59% of Optometrists gave a positive response were as 41% gave a negative response (Figure 10).

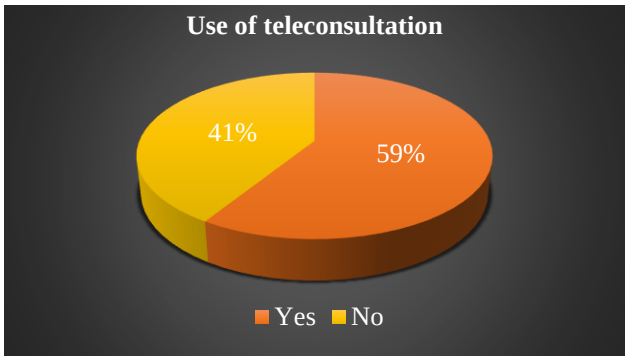

Figure 10: Questionnaire response (use of teleconsultation).

DISCUSSION

This is the small-scale descriptive questionnaire-based research study of Indian optometrist experiences during the second stage of the COVID-19 pandemic, highlighting the changes to both employment and working practices resulting from the pandemic. Most of the optometrist 40% were working in hospital. 87% of the optometrist currently working opted that it is difficult to switch jobs in the current pandemic situation. In South Africa, amidst the COVID-19 pandemic, 41% of all adults who had been employed before the COVID-19 crisis were still actively working and earning an income, and 17% were on paid leave.[8] Finding job in optometry was difficult in India as the reduction of patients in hospital/optical was very high. Dry eye cases were the most common condition that was being examined by 43% of optometrists followed by mucormycosis 21%. In a survey conducted in India, 59.04% (n=496) were

completely unaware of ocular morbidities associated with an increase in screen time.[9] In one of the hypothetical studies, there was likely to expect an increase in dry eye disease which is associated with an increase in visual display terminal (VDTs) usage for various purposes.[10] One of the studies reported a total of 388 proven/probable mucormycosis cases with overall mortality at 46.7% where the mortality rate in northern India was greater than in southern India, uncontrolled diabetes (n=172, 56.8%) and trauma (n=31, 10.2%) were the common risk factors associated with it.[11] Patients' complaints were mostly eye strain (35%) and headache (28%) with a history of using mobile phones/tablets/laptops for prolonged hours. The risk of getting infected is much more for eye care professionals, as during eye examination we have to approach a patient from a close distance. This is where telemedicine comes into play. In our study, 59% of the optometrist put the positive response in a telemedicine consultation. The American optometric association's 2020 position statement defines telemedicine in optometry as "the provision of eye, adnexa, visual system, and related systemic health care services (collectively 'eye, health, and vision services). Asynchronous and synchronous technologies can be used to provide this type of care, including videoconferencing, internet-based services, store-and-forward imaging, streaming media, and terrestrial and wireless communications."[12] One of the studies reported that 49.1% of employees from hospitals and 55.4% of independent practitioners were using teleconsultation in the lockdown.[13]

CONCLUSION

Coronavirus pandemic is a worldwide challenge that has spread across all sectors including humans. It applies to all sectors. In no doubt, due to COVID-19 optometrists have faced several challenges. Coronavirus's effect on the global economy cannot be neglected. Government should ensure that everyone is properly following the guidelines for control of COVID-19. The major challenge for optometrists was to dispense spectacle and contact lenses with maintaining their safety by maintaining social distancing with the patients. Maintaining social distancing is one of the best ways of reducing the further spread of the disease across the globe.

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Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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ANNEXURE

Questionnaire

S. no.	Questions
1	Are you facing difficulty in dispensing spectacles?
2	Do you face problems in approaching the patient considering social distancing?
3	Reduction in patient flow?
4	Difficulty in finding jobs?
5	Reduction in salary?
6	Maintaining safety is a concern?
7	Ocular condition seen during lockdown
8	Ocular complains during lockdown?
9	Use of teleconsultation
10	Difficulty in using PPE kits in practice