

# Impact of COVID-19 pandemic on income and opportunities of ophthalmologists in India: Ophthalmologists' Workplace Expectations and Satisfaction Survey (OWESS) Report 1

Sreeni Edakhlon, Prashob Mohan<sup>1</sup>, Gopal S Pillai<sup>2</sup>, Lalit Verma<sup>3</sup>, Santosh G Honavar<sup>4</sup>, Namrata Sharma<sup>5</sup>, Ambily Nadaraj<sup>2</sup>

**Purpose:** To evaluate the impact of COVID-19 pandemic on the income and surgical training opportunities among the ophthalmologists in India and their opinion on salary reduction during this period. **Methods:** A questionnaire in the form of a Google survey was sent to ophthalmologists across India on May 1, 2021. The data collected until May 11, 2021 was analyzed. **Results:** A total of 1057 ophthalmologists all over India participated in the survey. Of the respondents, 559 (52.9%) were women and 730 (69.1%) were young ophthalmologists (below the age of 40 years). Salary reduction was reported by 569 (53.8%) of the respondents. The categories suffering the maximum salary reduction were – young ophthalmologists (407, 55.8%) ( $P < 0.001$ ), women (304, 54.4%) ( $P < 0.001$ ), and private sector employees (457, 67%) ( $P < 0.001$ ). More women ophthalmologists (438, 78.4%) felt it was unfair to reduce the salary during the pandemic, as compared to men (330, 66.3%) ( $P < 0.001$ ). A reduction in surgical training opportunities was reported by 689 (65.2%) of ophthalmologists. The categories who suffered the maximum loss of surgical training opportunities were young ophthalmologists (565, 77.4%) ( $P < 0.001$ ), women ophthalmologists (415, 74.2%) ( $P < 0.001$ ), and ophthalmologists in the government sector (147, 82.6%) ( $P < 0.001$ ). **Conclusion:** Ophthalmologists in India, especially women and the younger professionals, had to face salary reduction and loss of surgical training opportunities during the COVID-19 pandemic. Most ophthalmologists in India do not favor a reduction in salary. There is a need to formulate policies to safeguard ophthalmologists, especially women and younger generation from future crises in training, employment, and income.

**Key words:** COVID-19 pandemic, doctor, salary, surgical training, woman ophthalmologist

The lock down and other restrictions which were imposed to bring under control the COVID-19 pandemic caused a reduction in income in all sectors including hospitals throughout the year 2020 excepting parts of the first and the last quarters. This resulted in salary reduction for the hospital employees and doctors. The salary reduction happened despite the advice from central and state governments to both public and private enterprises not to lay off staff or reduce their salaries.<sup>[1]</sup>

As many as 39% of the 3,074 respondents who participated in the online survey conducted by the EconomicTimes.com on the economic impact of COVID-19 reported a salary reduction.<sup>[2]</sup> The Mood of the Nation poll conducted by market research agency, Karvy Insights, and India Today, between January 3, 2021 and January 13, 2021, revealed that 66% of those polled had a significant reduction in income due to the pandemic.<sup>[3]</sup> Global labor income is estimated to have declined by 8.3% in 2020. This amounts to 3.7 trillion US\$ or 4.4% of the global gross

domestic product.<sup>[4]</sup> There is little data available on the impact of COVID-19 on the lives of Indian ophthalmologists during the first wave of the COVID-19 pandemic. Such information is extremely important since India has been hit hard by the second wave of the pandemic and its economic impact could be fiercer than the first wave. Discontent has been brewing among ophthalmologists, especially the younger generation regarding the salary reduction imposed on them during the last financial year even though the ophthalmic health care industry bounced back strongly in the second half of the financial year.<sup>[5]</sup> We conducted this survey to evaluate the impact of COVID-19 pandemic on the income and training opportunities of Indian ophthalmologists.

## Methods

A preformatted questionnaire in the form of a google survey link was sent to ophthalmologists pan-India through e-mail and WhatsApp from May 1 to 10, 2021. The responses were collected from May 1 to 11, 2021. The data on age, gender,

Comtrust Charitable Trust Eye Hospital, Thalassery, Kerala, <sup>1</sup>Chaithanya Eye Hospital and Research Institute, Thiruvananthapuram, Kerala, <sup>2</sup>Department of Ophthalmology, Amrita Institute of Medical Science, Kochi, Kerala, India, <sup>3</sup>Centre for Sight, New Delhi, <sup>4</sup>Centre for Sight, Hyderabad, Telengana, India, <sup>5</sup>Dr RP Centre for Ophthalmic Sciences, AIIMS, New Delhi, India

**Correspondence to:** Dr. Gopal S Pillai, Amrita Institute of Medical Science, Amrita Vishwa Vidyapeetham, Kochi, Kerala, India. E-mail: gopalspillai@gmail.com

Received: 30-May-2021

Revision: 28-Jun-2021

Accepted: 05-Jul-2021

Published: 23-Jul-2021

### Access this article online

**Website:**  
www.ijo.in

**DOI:**  
10.4103/ijo.IJO\_1491\_21

**PMID:**  
34304208

### Quick Response Code:



This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

**For reprints contact:** WKHLRPMedknow\_reprints@wolterskluwer.com

**Cite this article as:** Edakhlon S, Mohan P, Pillai GS, Verma L, Honavar SG, Sharma N, *et al.* Impact of COVID-19 pandemic on income and opportunities of ophthalmologists in India: Ophthalmologists' Workplace Expectations and Satisfaction Survey (OWESS) Report 1. Indian J Ophthalmol 2021;69:2189-94.

geographic location, qualification, speciality training, and whether they are employed in government sector, private sector, or whether they are self-employed was collected. The key questions included were:

1. Was your salary reduced during the COVID-19 pandemic?
2. Do you approve of the salary reduction citing COVID-19 pandemic? and
3. Was your surgical training affected during the pandemic?

### Statistical methods

All demographic, work, and salary-related questions were presented as frequency with percentages. The association and comparison of the different questions with the demography, work, and salary related variables were provided by Chi-Square test. The comparisons were illustrated with tables and bar graphs with Chi-square *P* values.

## Results

In all, 1057 ophthalmologists across India participated in the survey, of which 498 (47.1%) were men and 559 (52.9%) women. The average age of the ophthalmologists who participated in the survey was  $38.29 \pm 9.82$  years. Out of the respondents, 730 (69.1%) were less than 40 years of age (young ophthalmologists) and 327 (30.9%) were more than 40 years of age. In all, 283 (26.8%) had Diplomate of the National Board (DNB) as their qualification, 112 (10.6%) had Diploma in Ophthalmology (DO) as their sole qualification, and 662 (62.6%) had Masters (MD or MS) as their qualification. Most of the respondents (632, 59.8%) had undergone or were undergoing subspecialty training. Majority of the respondents (682, 64.5%) worked in the private sector. One hundred and seventy-eight (16.8%) of the respondents worked in the government sector, 188 (17.8%) were self-employed, and 9 (0.9%) worked abroad. Among the participants of the survey, 443 (42.2%) were working in metropolitan cities and 607 (57.8%) in nonmetropolitan areas.

It was seen that 569 (53.8%) of the ophthalmologists who participated in this survey faced salary reduction during the first wave of the COVID-19 pandemic [Table 1a and Fig. 1a]. A significantly higher percentage of female ophthalmologists (304, 54.4%), compared to their male counterparts [Table 1b and Fig. 2], had to face drop in salary. Also, a significantly greater proportion of young ophthalmologists (407, 55.8%) had to face salary reduction during the pandemic as compared to those >40 years of age [Table 1c and Fig. 2].

The proportion of those whose salary was reduced during the pandemic was significantly lower in those with MD/MS (327, 49.4%) as their highest qualification compared to those with DO (64, 57.1%) and DNB (178, 62.9%) [Table 1d]. A higher percentage of ophthalmologists employed in the private sector had to face salary reduction (457, 67%) [Table 1e and Fig. 3].

Majority of the respondents felt that it was unfair to reduce the salary during the pandemic (768, 72.7%) [Table 2a and Fig. 1b]. A higher percentage of women ophthalmologists (438, 78.4%) felt that it is unfair to reduce the salary during the pandemic [Table 2b and Fig. 4]. Young ophthalmologists had a higher degree of dissatisfaction regarding salary reduction, with 565 (77.4%) expressing their opinion against it [Table 2c and Fig. 4]. A higher percentage of the ophthalmologists working in the government sector (157, 88.2%) felt that it is unfair to reduce the salary

during the COVID-19 pandemic, when compared to those working in private sector (502, 73.6%), while 101 (53.7%) of the ophthalmologists owning their practice also felt that it is unfair to reduce salary [Table 2e and Fig. 5]. Although a significantly higher proportion of ophthalmologists who had not undergone subspecialty training were spared salary reduction (168, 39.5%) [Table 1f], a sizable number of them (336, 79.1%) also felt that it is unfair in any case to reduce salary during the pandemic [Table 2f]. A higher proportion of those with MD/MS (226, 34.1%) as their highest qualification felt that it was unfair to cut salary when compared to those with DO (33, 29.5%) and DNB (75, 26.5%) [Table 2d]. Again, location of work didn't significantly affect the opinion regarding salary cut during the pandemic [Table 2g].

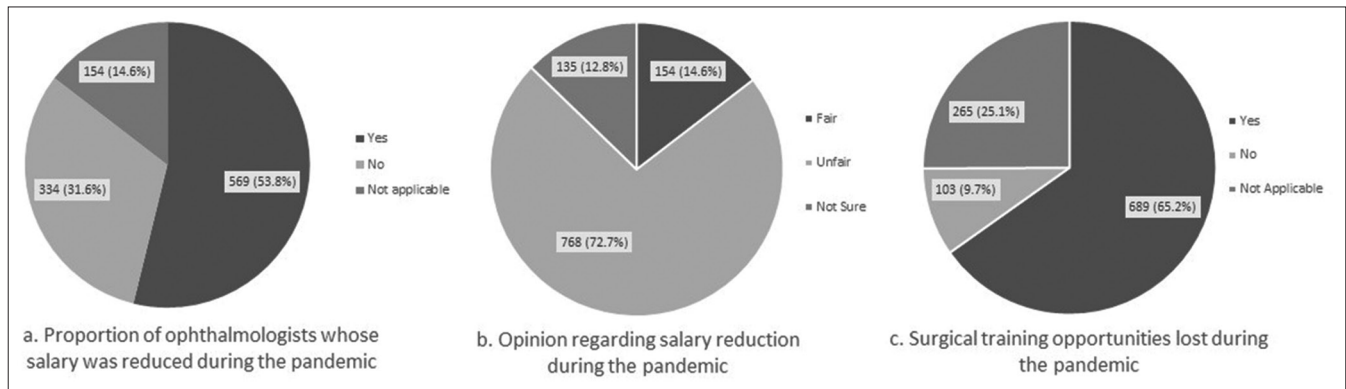
Surgical training opportunity was affected for 689 (65.2%) of the ophthalmologists who responded to the survey [Table 3a and Fig. 1c]. A significantly higher percentage of women ophthalmologists (415, 74.2%) lost the opportunity for surgical training as compared to men (274, 55.0%) [Table 3b and Fig. 6]. Most young ophthalmologists (565, 77.4%) lost opportunities for surgical training [Table 3c and Fig. 6]. The highest professional qualification did not significantly affect the surgical opportunity during the pandemic [Table 3d]. Government sector ophthalmologists lost surgical training opportunity to a higher extent (147, 82.6%) when compared to ophthalmologists working in private hospitals (455, 66.7%) [Table 3e and Fig. 7]. Those with no subspecialisation had a significantly higher loss of surgical training opportunity (332, 78.1%) when compared to those with specialisation (357, 56.5%) [Table 3f]. There was no remarkable difference discerned in either loss of opportunity of surgical training [Table 3g] or salary reduction [Table 1g] among ophthalmologists working in the metropolitan and non-metropolitan areas.

## Discussion

This survey has revealed that a significant number of ophthalmologists had to suffer salary reduction during the COVID-19 pandemic with female ophthalmologists and the young ophthalmologists being affected the most. As expected, those in the private sector were significantly more affected. A similar trend was observed by the International Labour Organization (ILO) in the ILO monitor reports.<sup>[6,7]</sup> The deplorable condition of women workers and the younger generation has been presented in a report on the impact of COVID-19 pandemic on jobs and income in G20 economies prepared by the ILO and the Organization for Economic Co-operation and Development, as part of the Third Employment Working Group of G20.<sup>[8]</sup> It was reported that loss of employment and income was particularly severe in the case of women. This paper exposed the higher risk of violence and harassment that women face in times of crisis. It also brought out the plight of the young generation during the pandemic with schools being closed and with limited opportunities in entry-level jobs in the labor market as well as internships and apprenticeships. The adverse impact of the pandemic on the lives of women and the young workers has been highlighted by other reports as well.<sup>[9-12]</sup> Our paper on the effect of COVID-19 pandemic on ophthalmologists in India brings to light a similar trend in income and training opportunities among women and young ophthalmologists in India.

**Table 1: Salary reduced during the pandemic**

	Yes, n (%)	No, n (%)	Not Applicable, n (%)	P
1a. Overall				
Overall	569 (53.8)	334 (31.6)	154 (4.6)	
1b. Gender distribution				
Male	265 (53.2)	137 (27.5)	96 (19.3)	<0.001
Female	304 (54.4)	197 (35.2)	58 (10.4)	
1c. Age distribution				
<40 years of age	407 (55.8)	252 (34.5)	71 (9.7)	<0.001
41-65 years of age	153 (50.7)	78 (25.8)	71 (23.5)	
> 65 years of age	9 (36.0)	4 (16.0)	12 (48.0)	
1d. Qualification				
DNB	178 (62.9)	75 (26.5)	30 (10.6)	0.004
DO	64 (57.1)	33 (29.5)	15 (13.4)	
MS/MD	327 (49.4)	226 (34.1)	109 (16.5)	
1e. Type of practice				
Government employee	29 (16.3)	135 (75.8)	14 (7.9)	<0.001
Private sector employee	457 (67.0)	180 (26.4)	45 (6.6)	
Own practice	78 (41.5)	16 (8.5)	94 (50.0)	
Work abroad	5 (55.6)	3 (33.3)	1 (11.1)	
1f. Subspecialization				
With subspecialization	366 (57.9)	166 (26.3)	100 (15.8)	<0.001
No subspecialization	203 (47.8)	168 (39.5)	54 (12.7)	
1g. Location				
Metro cities	253 (57.1)	126 (28.4)	64 (14.4)	0.184
Nonmetro locations	316 (52.1)	204 (33.6)	87 (14.3)	



**Figure 1: Effect of the pandemic on ophthalmologists in India**

Surgical training during the COVID-19 pandemic also suffered a significant setback with majority of ophthalmologists reporting a reduction in surgical training opportunities. This paper corroborates the findings of another study conducted by Mishra *et al.*, which came to a similar conclusion.<sup>[13]</sup> This was again significantly more in the case of younger ophthalmologists and women. It is also worth noting that a higher proportion ophthalmologists employed in the government sector suffered loss of surgical training opportunities. This may be explained by the conversion of large number of government-run hospitals into COVID-19 treatment centers and suspension of elective surgeries during the height of the pandemic. All these factors may significantly affect the mental health of ophthalmologists, especially of

the younger generation. A study conducted by Khanna *et al.* found that younger ophthalmologists are more likely to suffer from depression due to the cascading effects of the COVID-19 pandemic and lockdown.<sup>[14]</sup>

In our survey, although loss of opportunity and income shock were seen across the whole cross section of ophthalmologists during the first wave of COVID-19 pandemic, the young ophthalmologists and women were hit the hardest. With India reeling under the second wave of the pandemic, and many more expected during the next few years, there should be policies to protect ophthalmologists from the consequences of future crises in jobs and income. Since it was noted in our study that among the groups studied ophthalmologists who own their

**Table 2: Opinion regarding reduction of salary during the pandemic**

	Fair, <i>n</i> (%)	Unfair, <i>n</i> (%)	Not Sure, <i>n</i> (%)	<i>P</i>
2a. Overall				
Overall	154 (14.6)	768 (72.7)	135 (2.8)	
2b. Gender distribution				
Male	111 (22.3)	330 (66.3)	57 (11.4)	<0.001
Female	43 (7.7)	438 (78.4)	78 (14.0)	
2c. Age distribution				
<40 years	85 (11.6)	565 (77.4)	80 (11.0)	<0.001
41-65 years	66 (21.9)	188 (62.3)	48 (15.9)	
> 65 years	3 (12.0)	15 (60.0)	7 (28.0)	
2d. Qualification				
DNB	178 (62.9)	75 (26.5)	30 (10.6)	0.004
DO	64 (57.1)	33 (29.5)	15 (13.4)	
MS/MD	327 (49.4)	226 (34.1)	109 (6.5)	
2e. Type of practice				
Government employee	10 (5.6)	157 (88.2)	11 (6.2)	<0.001
Private sector employee	83 (12.2)	502 (73.6)	97 (14.2)	
Own practice	60 (31.9)	101 (53.7)	27 (14.4)	
Work abroad	1 (11.1)	8 (88.9)	0 (0)	
2f. Subspecialization				
With subspecialization	112 (17.7)	432 (68.4)	88 (13.9)	<0.001
No subspecialization	42 (9.9)	336 (79.1)	47 (11.1)	
2g. Location				
Metro cities	66 (14.9)	322 (72.7)	55 (12.4)	0.928
Nonmetro locations	88 (14.5)	439 (72.3)	80 (13.2)	

**Table 3: Loss of surgical training opportunities during the pandemic**

	Yes, <i>n</i> (%)	No, <i>n</i> (%)	Not Applicable, <i>n</i> (%)	<i>P</i>
3a. Overall				
Overall	689 (65.2)	103 (9.7)	265 (5.1)	
3b. Gender distribution				
Male	274 (55.0)	63 (12.7)	161 (32.3)	<0.001
Female	415 (74.2)	40 (7.2)	104 (8.6)	
3c. Age distribution				
<40 years	565 (77.4)	62 (8.5)	103 (14.1)	<0.001
41-65 years	112 (37.1)	39 (12.9)	151 (50.0)	
> 65 years	12 (48.0)	2 (8.0)	11 (44.0)	
3d. Qualification				
DNB	176 (62.2)	29 (10.2)	78 (27.6)	0.746
DO	75 (67.0)	9 (8.0)	28 (25.0)	
MS/MD	438 (66.2)	65 (9.8)	159 (4.0)	
3e. Type of practice				
Government employee	147 (82.6)	10 (5.6)	21 (11.8)	<0.001
Private sector employee	455 (66.7)	72 (10.6)	155 (22.7)	
Own practice	82 (43.6)	19 (10.1)	87 (46.3)	
Work abroad	5 (55.6)	2 (22.2)	1 (22.2)	
3f. Subspecialization				
With subspecialization	357 (56.5)	86 (13.6)	189 (29.9)	<0.001
Without subspecialization	332 (78.1)	17 (4.0)	76 (17.9)	
3g. Location of practice				
Metro cities	295 (66.6)	43 (9.7)	105 (23.7)	0.703
Nonmetro locations	390 (64.3)	60 (9.9)	157 (25.9)	



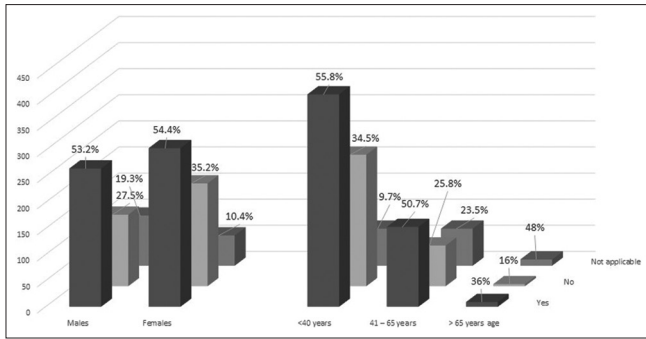


Figure 2: Salary reduction during the pandemic across sexes and age groups

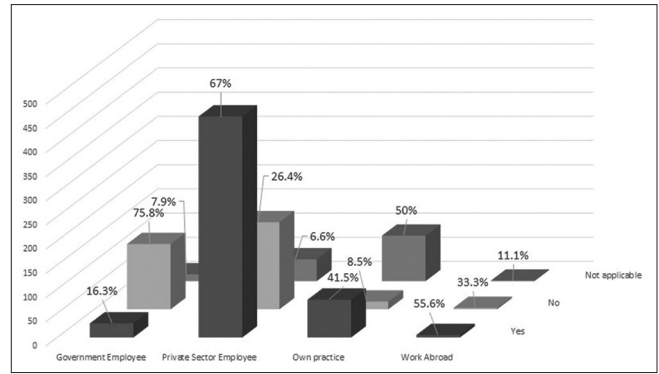


Figure 3: Salary reduction and current practice

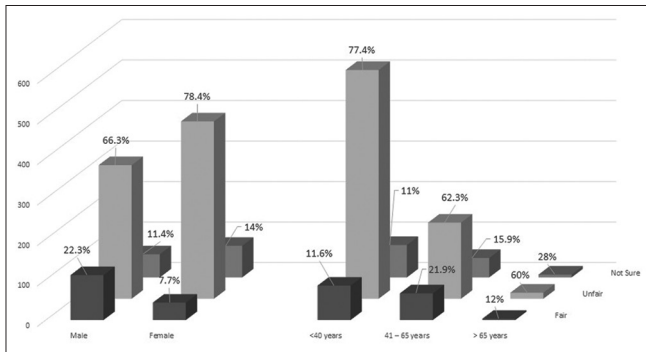


Figure 4: Opinion regarding reduction of salary across sexes and age groups

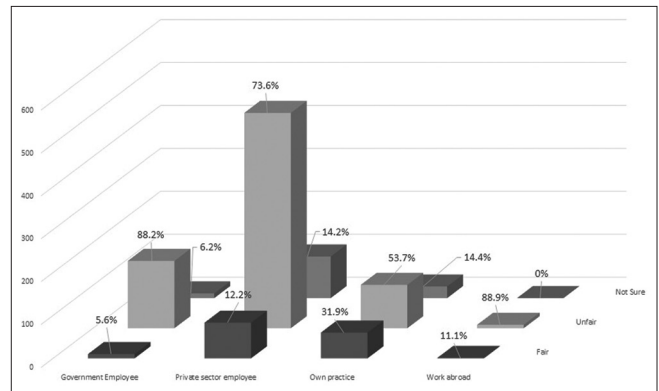


Figure 5: Opinion regarding salary reduction and current practice

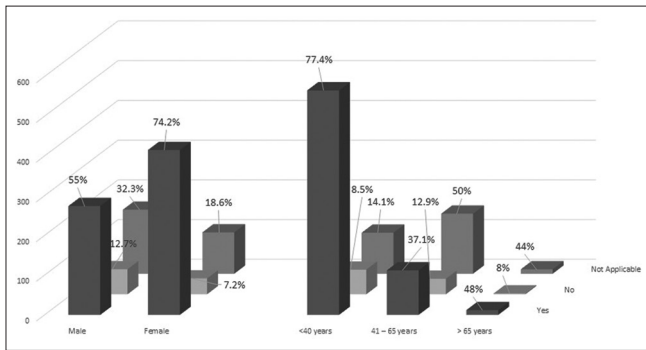


Figure 6: Loss of surgical training opportunities across sexes and age groups

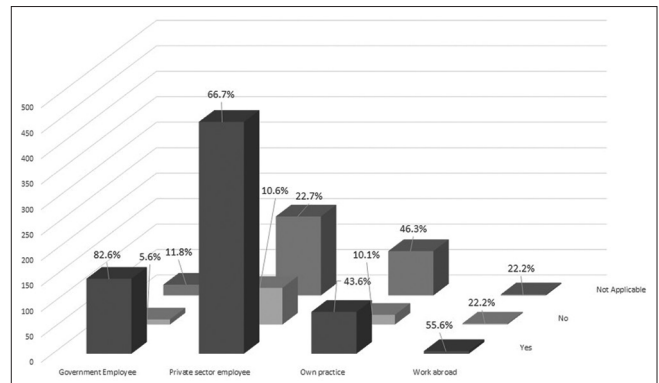


Figure 7: Loss of surgical training opportunities and current practice

practice were the least affected by the COVID-19 pandemic, policies and measures should be put in place to encourage women and the young ophthalmologists to start their own eye hospitals and clinics and to promote them in leadership roles. The system should evolve to provide income support to them during economic downturns. The employers could show their benevolence by voluntarily taking a hit in their profit margins to keep the salary of employees as optimal as possible during the pandemic. It would only be fair for the employers to compensate for the salary cut during the lean period by paying proportionately higher emoluments for the months when there is bounce-back in patient volume and income levels. It should be ensured that their training opportunities are not unduly affected. This could include surgical simulations

and wet lab training during the phase of active pandemic and augmentation of surgical opportunities during periods of normalcy. Continuation of existing fellowship programs and further strengthening them is essential to keep the channels of subspecialty training open.

### Conclusion

Our study has brought out the profound frailties in protecting the livelihood and professional training of ophthalmologists, and also gender and age-based imbalances in income and training opportunities during the pandemic across the ophthalmic health care sector in India. While it is of paramount importance to save lives and protect business,

all associated with this field must ensure that they safeguard the interests and livelihood of all ophthalmologists during the pandemic.

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

## References

1. Advisories on COVID-19 | Ministry of Labour and Employment [Internet]. Available from: <https://labour.gov.in/advisories-covid-19>. [Last accessed on 2021 May 22].
2. Salary cuts in India: Covid impact: 2 in 5 employees are facing salary cuts, finds survey - The Economic Times [Internet]. Available from: <https://economictimes.indiatimes.com/wealth/personal-finance-news/covid-impact-2-in-5-employees-are-facing-salary-cuts-finds-survey/articleshow/75502876.cms>. [Last accessed on 2021 May 22].
3. 66% reported salary cut, 19% lost jobs amid COVID-19, finds MOTN poll [Internet]. Available from: <https://www.businesstoday.in/current/economy-politics/66-percent-reported-salary-cut-19-percent-lost-jobs-amid-covid-19-finds-motn-poll/story/428721.html>. [Last accessed on 2021 May 22].
4. Youth and COVID-19: Impacts on jobs, education, rights, and mental well-being [Internet]. 2020 Aug. Available from: [http://www.ilo.org/global/topics/youth-employment/publications/WCMS\\_753026/lang-en/index.htm](http://www.ilo.org/global/topics/youth-employment/publications/WCMS_753026/lang-en/index.htm). [Last accessed on 2021 May 22].
5. Medscape Ophthalmologist Compensation Report 2021 [Internet]. Medscape. Available from: <https://www.medscape.com/slideshow/2021-compensation-ophthalmologist-6013856>. [Last accessed on 2021 May 22].
6. ILO Monitor: COVID-19 and the world of work. 4<sup>th</sup> edition [Internet]. 2020. Available from: [http://www.ilo.org/global/topics/coronavirus/impacts-and-responses/WCMS\\_745963/lang-en/index.htm](http://www.ilo.org/global/topics/coronavirus/impacts-and-responses/WCMS_745963/lang-en/index.htm). [Last accessed on 2021 May 22].
7. ILO Monitor: COVID-19 and the world of work. 5<sup>th</sup> edition [Internet]. 2020. Available from: [http://www.ilo.org/global/topics/coronavirus/impacts-and-responses/WCMS\\_749399/lang-en/index.htm](http://www.ilo.org/global/topics/coronavirus/impacts-and-responses/WCMS_749399/lang-en/index.htm). [Last accessed on 2021 May 22].
8. The impact of the COVID-19 pandemic on jobs and incomes in G20 economies [Internet]. 2020 Aug [cited 2021 May 22]. Available from: [http://www.ilo.org/global/about-the-ilo/how-the-ilo-works/multilateral-system/g20/reports/WCMS\\_756331/lang-en/index.htm](http://www.ilo.org/global/about-the-ilo/how-the-ilo-works/multilateral-system/g20/reports/WCMS_756331/lang-en/index.htm).
9. Tejaswi M. 'Women are hit hard by economic fallout of COVID-19.' The Hindu [Internet]. 2020 Oct 12. Available from: <https://www.thehindu.com/news/cities/bangalore/women-are-hit-hard-by-economic-fallout-of-covid-19/article32829908.ece>. [Last accessed on 2021 May 22].
10. Nations U. The Impact of COVID-19 on Women [Internet]. United Nations. United Nations. Available from: <https://www.un.org/en/un-chronicle/impact-covid-19-women>. [Last accessed on 2021 May 22].
11. Alon T, Doepke M, Olmstead-Rumsey J, Tertilt M. The impact of COVID-19 on Gender Equality Working Paper 26947 (Internet) National Bureau of Economic Research 1050 Massachusetts Avenue Cambridge, MA 02138, April 2020, Available from <http://www.nber.org/papers/w26947> [Last accessed on 2021 May 22].
12. Lee S, Schmidt-Klau D, Verick S. The labour market impacts of the COVID-19: A global perspective. *Ind J Labour Econ* 2020;63:11-5.
13. Mishra D, Nair AG, Gandhi RA, Gogate PJ, Mathur S, Bhushan P, *et al*. The impact of COVID-19 related lockdown on ophthalmology training programs in India - Outcomes of a survey. *Indian J Ophthalmol* 2020;68:999-1004.
14. Khanna RC, Honavar SG, Metla AL, Bhattacharya A, Maulik PK. Psychological impact of COVID-19 on ophthalmologists-in-training and practising ophthalmologists in India. *Indian J Ophthalmol* 2020;68:994-8.