

## Wellness among Canadian ophthalmology resident physicians: a national survey



Residency is a particularly stressful and dynamic period during which learners must balance the demands of patient care, education, and personal responsibilities. Evidence of high levels of burnout among resident physicians has driven the development of initiatives and programs to help address this negative consequence of residency training. As a novel topic in the realm of medical education, more information is required to further characterize the sources of burnout and depression and the nuances of various specialities. Although surveys have been completed among resident physicians in Canada,<sup>1–3</sup> to the best of our knowledge, there have not been any ophthalmology-specific residency wellness surveys conducted on a national level.

Our study aimed to explore causes of stress and reduced wellness, incidences of depression and burnout, and resources available to Canadian ophthalmology residents through an online anonymous survey.

A 24-question survey was developed based on a similar U.S. national ophthalmology resident survey<sup>4</sup> as well as previous medical education studies on residency wellness.<sup>1–3</sup> Themes of the survey included causes of stress and reduced wellness, incidence of depression and burnout, and resources available. Definitions of both depression and burnout were presented to the respondent prior to the corresponding question. The survey was reviewed, modified, and validated by 2 ophthalmologists, 2 senior ophthalmology residents, and 1 senior psychiatry resident.

All ophthalmology residents in Canada (N = 217) were emailed a short anonymous survey (Google Forms) from May 6 to June 13, 2020. The survey was distributed via a resident physician mailing list of the Canadian Ophthalmological Society—Société canadienne d'ophtalmologie (COS-SCO) that included all 15 Canadian programs. Programs with a high resident response rate (>70.0%) were entered in a draw for a \$500 prize as an incentive to boost participation. The funding for this prize was provided by the COS-SCO. The survey was originally distributed on May 11, 2020, with biweekly reminder emails. The survey closed on June 13, 2020. This survey was the second part of a two-part survey; the first part investigated the impact of COVID-19 on residency training.<sup>5</sup> Survey data were exported to Microsoft Excel 2013 (Redmond, Wash). All descriptive statistics were performed using Microsoft Excel.

Of 217 residents across Canada, 102 completed the survey (47.0%), representing all 15 residency programs. Table 1 summarizes the survey questions and results. Respondents encompassed all years of residency similarly, and there was equal representation of male and female respondents. Participation in the survey was higher in the larger residency programs (>20 residents [37.3%]).

In total, 64.7% of respondents answered that they had access to free counselling services as part of their program. Of those who did have access, 73.2% of respondents knew how to access these services. In regard to emphasis placed on a culture of resident wellness, 35.3% of respondents believed there was minimal emphasis, whereas 4.9% stated that there was no emphasis at all. Obstacles to addressing residency wellness included lack of wellness programming (33.3%) and lack of time to attend such programming (48.4%). The top 3 scenarios that led to or caused stress and decreased wellness in residency programs included academic stressors (e.g., examinations, rounds, 17.6%), call-related stress (16.9%), and stress in finding postresidency fellowships and jobs (11.0%).

In the 12 months prior to completing the survey, 38.2% of respondents answered that they met the criteria for depression or burnout. Of those, 7.0% had to take time off clinical duties. Based on those who reported the emphasis placed on resident wellness as minimal or none, 51.2% met the criteria for burnout or depression. Conversely, 29.5% of those who reported moderate or extensive emphasis on resident wellness met the criteria for burnout or depression; 36.3% of respondents answered that their program did not have access to a formal wellness program intended to reduce resident stress, burnout, and depression, and 38.2% of respondents were unaware of whether such a program existed. Of the respondents who had formal wellness programs, the main components were a mentorship program (28.1%); debriefing or support-group sessions (15.7%); self-care, mindfulness, or meditation training (15.7%); and education in fatigue and stress management (12.4%). Current methods that residency programs use to promote wellbeing include social wellness (e.g., casual gatherings) (33.5%), professional wellness (mentorship pairs or groups that facilitate discussion about personal or work-related concerns, 27.1%), and adequate rest (e.g., postcall days, reasonable frequency of calls, 18.7%). In addition, 15.7% of respondents had been involved in a case where fatigue, burnout, or depression had adversely affected an outcome or judgement.

Some form of intimidation at work had been experienced by 42.2% of respondents, the cause of which was most often attending physicians (42.5%). Furthermore, 28.4% of respondents felt concerned about their safety while on call. The reasons for safety concerns included experience of physical assault or fear of physical assault by a patient (37.0%), verbal aggression by a patient (34.8%), and safety concerns walking to and from the clinic (26.1%).

Respondents believed that the Royal College of Physician and Surgeons of Canada and the COS-SCO could better promote resident wellness by mandating the inclusion of resident wellness programs within ophthalmology training programs (32.5%) and offering strategies for developing and continuously evaluating wellness programs (18.9%).

**Table 1—Results of the national wellness survey of Canadian ophthalmology resident physicians**

Question	Count	%
Which postgraduate year (PGY) are you enrolled in?		
PGY4	27	26.5
PGY2	26	25.5
PGY1	18	17.6
PGY3	16	15.7
PGY5	15	14.7
How do you identify your gender?		
Male	51	50.0
Female	50	49.0
Prefer not to answer	1	1.0
How many residents are in your residency program?		
>20	38	37.3
11–15	29	28.4
6–10	17	16.7
≤5	13	12.7
16–20	5	4.9
As a resident, do you have access to free counselling and behavioural health services as part of your program?		
Yes	66	64.7
Don't know	32	31.4
No	4	3.9
If yes, do you know how to access counselling and behavioural health services?		
No	48	73.2
Yes	18	26.8
How much emphasis does your residency program place on promoting a culture of resident wellness?		
Moderate	56	54.9
Minimal	36	35.3
Extensive	5	4.9
None	5	4.9
What are the main obstacles to addressing resident wellness in your residency program? (Pick any that apply.)		
Lack of time to attend wellness programming	61	48.4
Lack of wellness programming	42	33.3
Lack of access to free and confidential counselling/behavioural health services	11	8.7
Other	8	6.3
Clinical duties	2	1.6
No obstacles	2	1.6
What are situations that lead to or cause stress and decreased wellness in your program?		
Academic stressors (e.g., exams, rounds)	72	17.6
Call-related stress	69	16.9
Stress in finding postresidency jobs and/or fellowships	45	11.0
Inadequate rest (e.g., lack of a postcall day)	38	9.2
Paperwork and administrative requirements	36	8.8
Lack of a culture wherein it is ok to seek assistance/help without being considered incompetent	36	8.8
Clinic time duration	33	8.1
Fear of making errors that result in patient injury	32	7.8
Understaffing at clinical sites (residents, support staff, or both)	27	6.6
Financial stress	11	2.7
Sexism or racism in the workplace	10	2.4
In the past 12 months, did you fit the above criteria for depression or burnout?		
Yes	57	55.9
No	39	38.2
Prefer not to say	6	5.9
If yes, did you have to take time off clinical duties?		
No	51	89.3
Yes	4	7.0
Prefer not to say	1	1.7
Does your ophthalmology program provide access to a formal wellness program intended to reduce resident stress, burnout, and depression?		
Don't know	39	38.2
No	37	36.3
Yes	26	25.5
If yes, what are the components of your resident wellness program? (Select all that apply.)		
Mentorship program	25	28.1
Debriefing or support group sessions	14	15.7
Self-care, mindfulness, or meditation training	14	15.7
Education in fatigue and stress management	11	12.4
Ability to give feedback to address systemic issues	9	10.1
Psychological therapy (web-based or in person)	8	9.0
Screening for burnout or depression	5	5.6
Tracking of burnout or depression prevalence	3	3.4
Which aspects of resident wellness programs do you think are most important? (Pick three most important to you.)		
Self-care, mindfulness, or meditation training	64	22.3
Screening for burnout or depression	59	20.6

(continued)

Table 1—Continued

Question	Count	%
Debriefing or support-group sessions	53	18.5
Education in fatigue and stress management	43	15.0
Psychological therapy (web-based or in person)	34	11.8
Tracking of burnout or depression prevalence	28	9.8
Other	6	2.1
Which of the following does your resident program use to promote wellness? (Select all that apply.)		
Social wellness (e.g., casual gatherings that foster camaraderie)	52	33.5
Professional wellness (mentorship pairs or teams between junior and senior residents that facilitate open dialogue about personal or work-related concerns, training to improve doctor-patient relationships)	42	27.1
Adequate rest (e.g., postcall days, reasonable frequency of calls)	29	18.7
Psychological wellness (e.g., meetings with a professional who teaches skills that improve resilience)	14	9.0
Physical wellness (availability of healthy food, exercise as a part of the residence schedule)	7	4.5
None of the above	9	5.8
Not sure	2	1.3
Have you been involved in a case when your fatigue, burnout, or depression adversely affected a medical outcome or your judgement?		
No	86	84.3
Yes	16	15.7
Have you accessed personal counselling services?		
No	82	80.4
Yes	20	19.6
If yes, would use these services again?		
Yes	11	55.9
No	9	44.1
If you did not access personal counseling services, why not? (Please check all that apply.)		
No need	42	32.6
No time	38	29.5
Did not think it would be helpful	23	17.8
Fear of lack of confidentiality/stigma	14	10.9
Did access it	10	7.8
It was inaccessible	2	1.6
Have you experienced any form of intimidation or aggression at work?		
No	59	57.8
Yes	43	42.2
If yes, who was the cause of this stress?		
Attending physician(s)	31	42.5
Patient	17	23.3
Other resident(s)	13	17.8
Other hospital employee(s) (e.g., allied health)	11	15.1
Program director	1	1.4
Have you felt concern for your safety when on call?		
No	73	71.6
Yes	29	28.4
If yes, why were you concerned for your safety? (Select all that apply.)		
Experience of physical assault by a patient or fear of physical assault by a patient	17	37.0
Verbal aggression by a patient	16	34.8
Safety concerns walking to and from the clinic	12	26.1
Too tired to safely drive home	1	2.2
If structural changes could be made that could improve the wellness of you and your peers, which changes would you suggest should be made? (Pick any three.)		
Decreased demands on resident time (morning and nighttime lectures, after-hours responsibilities)	70	25.0
Provide additional time for wellness, arrange social or exercise activities	64	22.8
Shift attitudes toward mental health issues among residents	46	16.4
Improve shift/call schedules	40	14.2
Decreased administrative burden	36	12.8
Availability of free and confidential counselling and behavioural health services	14	5.0
Additional professional counselling	11	3.9
How can the Royal College of Physicians and Surgeons or the Canadian Ophthalmological Society better promote resident wellness? (Pick any three.)		
Mandate the inclusion of a resident wellness program in ophthalmology residency training programs	74	32.5
Offer strategies for developing and continuously evaluating wellness programs	43	18.9
Provide resources for training in resilience skills	40	17.5
Provide resources for burnout and depression screening	38	16.7
Fund research on wellness interventions	22	9.6
Mandate humane training/call hours, staff support, and learning culture	3	1.3
Other	8	3.5

To the best of our knowledge, this is the first national wellness survey among Canadian ophthalmology resident physicians. Our study revealed that a large proportion of resident physicians met the criteria for depression or burnout within a year prior to taking the survey. Unfortunately, some residents believed that their state of fatigue, burnout, or depression had adversely affected a medical outcome or judgement.

Coinciding with high levels of burnout and depression, many residents believed that there was minimal or no emphasis placed on promoting a culture of resident wellness within their respective training program. Furthermore, most residents did not have or were unaware of formal wellness programs intended to mitigate burnout. Moreover, aggression and intimidation at work was common, in addition to safety concerns while on call.

Based on the results of our study, more emphasis must be placed on Canadian resident physician wellness. One possible solution to better promote resident wellness would be to mandate the inclusion of wellness programming within ophthalmology training programs, with guidelines for development and continued evaluation. Increased promotion of resident wellness may allow for environments that are more conducive to learning and may reduce adverse patient outcomes secondary to resident physician stress and fatigue.

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## Footnotes and Disclosure

The authors have no proprietary or commercial interest in any materials discussed in this correspondence.

## Kodamea ohmeri keratitis



*Kodamea ohmeri* is a yeast-like fungus and a rare but emerging pathogen.<sup>1</sup> It has been identified as the causative organism in fungemia, funguria, endocarditis, cellulitis, and peritonitis, often with high fatality rates.<sup>1</sup> To the best of our knowledge, there is only 1 previous report of *K. ohmeri* keratitis in the literature.<sup>2</sup>

A 43-year-old man working in the agricultural industry presented following minor trauma to his left eye by a fingernail. He complained of progressive vision reduction, redness, photosensitivity, and pain. The right eye had a long-standing history of poor vision secondary to corneal scarring following presumed microbial keratitis in childhood. Past medical history included severe eczema requiring immunosuppression with azathioprine and topical corticosteroid. At presentation, visual acuity was count fingers at 3 feet and 20/60 in the right and left eyes, respectively. Dense stromal infiltrate involving the left inferior midperipheral cornea, with an overlying epithelial defect, anterior chamber cells,

and fibrin was noted (Fig. 1). The intraocular pressure and fundal examination were within normal limits. The right cornea had dense stromal scarring and neovascularization but showed no sign of active infection or inflammation. Scrapings of the left cornea demonstrated polymorphs, but no organisms were identified on microscopy or culture.

Empirical treatment with topical cefuroxime 5% and tobramycin 1.36% was commenced hourly. Topical prednisolone 1% administered 4 times daily was added 24 hours later. Initial symptomatic improvement was noted, but the epithelial defect and infiltrate failed to resolve. Owing to social circumstances, the patient missed follow-up appointments and re-presented 1 month later still using topical steroid with a reduction in visual acuity to 20/2000 OS. The corneal stromal infiltrate and epithelial defect had enlarged and were obscuring the visual axis. Further corneal scrapings showed no fungal elements, with only a light growth of *Staphylococcus aureus* on culture. Corticosteroid was discontinued and intensive fortified antibiotics resumed.