

Original Article

An eye center–wide burnout intervention: resilience program and burnout survey

Jullia A. Rosdahl, MD, PhD, and Karen Kingsolver, PhD

Author affiliations: Department of Ophthalmology, Duke University, Durham, North Carolina

Abstract

Purpose—Burnout affects half of doctors in the United States. Programs to decrease burnout and foster resilience are needed to prevent loss of doctors in the workforce and maintain quality care. To ameliorate burnout at our eye center, we developed a resilience program and used a survey to identify additional groups with higher burnout for future interventions.

Methods—The eye center–wide resilience program consisted of the baseline burnout survey, short email wellness tips, a grand rounds presentation, short wellness presentations at faculty meetings, and a small group discussion series with clinical faculty. The anonymous burnout survey was performed prospectively online at the beginning of this program. The survey participants consisted of respondents at the Duke Eye Center, including all doctors, scientists, clinical and research staff, trainees, and administrative and educational staff, in June and July of 2017. The short, anonymous electronic survey consisted of 10 demographic questions, 2 validated burnout questions, and 1 validated work-life balance question.

Results—A total of 593 individuals were invited to participate, of whom 252 completed the survey. Overall, 37% of the respondents reported being emotionally exhausted, and 17% had experienced depersonalization. With regard to work-life balance, 43% of the respondents were satisfied and 34% were dissatisfied. Burnout was higher in respondents who participated in clinical care ($P = 0.001$), particularly among ophthalmic technicians ($P = 0.044$). Feedback from the doctors participating in the “Doctors Lounge” suggested perceived benefits, including enhanced collegiality, life skills, and improved self-management.

Conclusions—Our baseline burnout survey showed higher burnout in our clinical workers, particularly in our ophthalmic technicians. Planning for next year will include the providers identified in the survey.

“Burnout” is characterized by emotional exhaustion, depersonalization, and decreased sense of personal accomplishment¹; in the health-care profession, it negatively affects not only the individuals experiencing burnout but also patients and colleagues. A large study of doctors showed that about half are experiencing burnout and struggle with work-life balance.² Burnout results from a mismatch between workload and control and between resources and support within an organizational culture³; factors at the national, state, and regional levels contribute to burnout, as do those related to the medical system and to the individual.⁴

Ophthalmology as a specialty is not immune to burnout, and the issue is being recognized by leaders interested in

developing programs to decrease and prevent burnout and to foster resilience. Mindfulness-based programs can decrease burnout in doctors.⁵ Mindfulness is a meditation practice based on focusing one’s attention on the present moment.⁶ Practicing mindfulness improves attention, memory, and executive function.⁷ Mindfulness-based interventions include small-group interventions,⁸ mindfulness-based stress reduction courses,⁽⁶⁾ and health coaching.⁹

We describe the resilience program that we have developed and implemented at our academic eye center, including doctors as well as nonclinical faculty, support staff, and administrative staff, with the recognition that doctors work within a community of caregivers, all of

Published March 24, 2019.

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doi:10.5693/djo.01.2019.02.001

Correspondence: Jullia A. Rosdahl, MD, PhD, Duke Eye Center, 2351 Erwin Road, DUMC 3802, Durham, North Carolina 27710 (email: Jullia.Rosdahl@duke.edu).

Table 1. Resilience plan with timeline

Time	Event
Spring 2017	Resilience plan presented to chairman and approved
June-July 2017	Eye center-wide burnout survey
July 2017 to present	Monthly wellness email
August 2017	Grand rounds on burnout (faculty and trainees only)
September 2017 to May 2018	Small group discussion series: "Doctors Lounge" (faculty only)
February 2018	Resident journal club on burnout (trainees only)
Spring 2018	Resilience plan year 2 presented to chairman and approved

whom may be subject to symptoms of burnout. In addition, we present the results of an eye center-wide burnout survey, which was carried out using validated questions to help understand who, besides the doctors, may benefit from targeted interventions. To our knowledge, this is the first burnout survey involving an entire academic eye center.

Methods

This prospective survey study was reviewed by the Duke Institutional Review Board and exempted from approval. The research adhered to the tenets of the Declaration of Helsinki.

The short, online survey consisted of 10 demographic questions, 2 burnout questions,¹⁰ and 1 work-life balance question,² and used the RedCAP electronic data capture tool.¹¹ See Appendix. The Duke Office of Clinical Research disseminated the survey and collected the responses, serving as an intermediary to ensure anonymity of the participants. The survey was emailed to 593 individuals at the Duke Eye Center, including all clinicians, scientists, clinical and research staff, trainees, administrative and educational staff, in June and July of 2017. The survey responses were analyzed with descriptive statistics: means and standard deviations for age and frequencies and proportions for categorical variables. To assess the significance of differences among the demographic groups' scores, the χ^2 test or the Fisher exact test was used for categorical variables and *t* test of difference between means for age, using SAS software version 9.4.

The resilience program was developed by the authors based on literature review and their extensive prior work in coaching and training doctors (KK) and residents (KK, JAR). The baseline survey, as described above, was implemented as the initial step of this plan, in preparation for future interventions. The resilience plan for 2017–2018 (Table 1) consisted of multiple parts: (1) wellness emails, (2) grand rounds presentation, (3) wellness presentations for faculty, and (4) "Doctors Lounge"

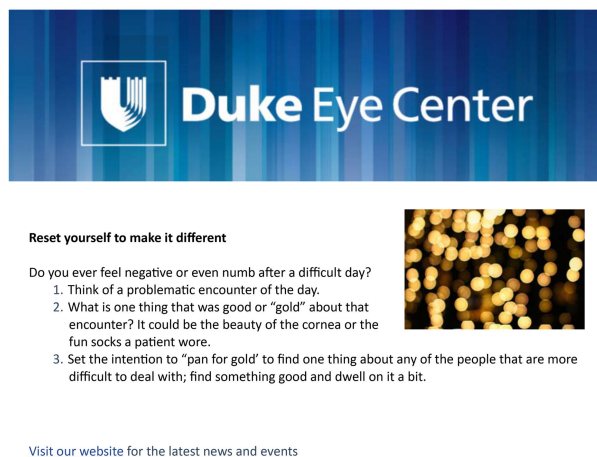


Figure 1. Example of wellness tips emailed monthly to the entire eye center.

discussion series. Clinical faculty were primarily targeted during this initial year based on literature showing increasing burnout in this group,² with plans to target groups identified by the survey in the future.

Short texts (about 50–100 words) with wellness tips were formatted for monthly email distribution to the entire eye center (approximately 600 people). The short size optimized viewing on a mobile device. Tips included easy and practical strategies for individuals to use in their daily lives. Topics included mindfulness, stress and anxiety, and transitioning between work and home. Techniques included mindful breathing, appreciative inquiry, guided imagery, and positivity. See Figure 1.

At the beginning of the academic year (August 2017), a grand rounds presentation was made to the department (approximately 60 faculty and trainees attended), given by the authors and an additional university wellness expert (Sharon Hull, MD, MPH, Director of Duke University School of Medicine Executive Coaching Program). The presentation was prefaced with an outline of the 2017–18 resilience plan. An overview of the prob-



Figure 2. Wheel of skills for physician well-being. This diagram summarizes the 8 skills for well-being. The core skill is mindfulness, or being present. “Boundaries” refers to the skill of creating and maintaining healthy boundaries. “Strengths” refers to skills for identifying and working from one’s strengths. “Activation” refers to the skill of assessing one’s own level of activation to see one’s patterns of stress and resiliency. “Reality” refers to the skill of letting go of what cannot be controlled in one’s life. “Positivity” refers to the skills based on positive psychology, such as appreciation and gratitude. “Effectiveness” is the skill of assessing one’s own effectiveness, of one’s vulnerabilities and triggers, to help promote positive behaviors. “Commitment” refers to making a commitment to one’s own personal and professional growth to enhance well-being. Each of these “wedges” of our wheel is explored with interactive and self-reflective exercises, during the “Doctors Lounge” sessions.

lem of burnout in doctors was presented and followed by potential solutions,¹² which included 8 practical skills for well-being (Figure 2). A question-and-answer discussion followed.

To follow-up on the grand rounds, the resilience plan included short presentations at faculty meetings further exploring the 8 practical skills: mindfulness, boundaries, strengths, activation, reality, positivity, effectiveness, and commitment.

Finally, the resilience plan included a small group discussion series, “Doctors Lounge.” Individual email invitations were sent to all clinical faculty to identify a small group of participants; the initial goal was a group of 6–8 clinical faculty, which was increased in number and capped at 12 based on high interest. Eight group meetings were held with those 12 faculty members. Each meeting

included dinner (provided by departmental funds) and a facilitated discussion (led by KK and JAR) on one of the mindfulness-based physician wellness skills (Figure 1, additional materials available on request). The small group format was used to develop relationships between the participating doctors. Feedback was collected after the last session via anonymous paper surveys.

Results

The response rate to the survey was 42%. The demographics of the participants are summarized in Table 2.

Overall, 37% of the respondents reported being emotionally exhausted, and 17% reported suffering depersonalization (Table 3); burnout in subset who were physicians was similar: 39%, emotional exhaustion, and 17%, depersonalization. This rate is similar to the 33 percent burnout in our department reported in June 2016 on a work culture survey (Edward Buckley, MD, personal communication). Burnout (Table 4) was higher in respondents who participated in clinical care ($P = 0.001$). Differences in race and ethnicity were seen, with higher burnout in blacks and lower burnout in whites and Asians ($P = 0.030$) and higher burnout in Hispanics than non-Hispanics ($P = 0.005$). Respondents with master’s degrees ($P = 0.029$) and PhDs ($P = 0.025$) had lower burnout, whereas the certified ophthalmic assistants/technicians/medical technicians had higher burnout ($P = 0.044$). Among the trainees, fellows had higher burnout than the residents at the time of the survey ($P = 0.028$).

Overall, 43% of the respondents were satisfied with their work-life balance, and 34% were dissatisfied (Table 3); in the subset who were physicians, there was a high percentage who were dissatisfied, 43%, but this difference was not statistically significant ($P = 0.126$). A statistically significant difference was noted for relationship status: married or partnered respondents were more likely to be dissatisfied than single respondents ($P = 0.006$).

Our preliminary experience with the doctors participating in the “Doctors Lounge” has been extremely positive, with participants traveling 30–60 miles after long clinical days, on account of the benefits that they perceive regarding collegiality, life skills, and improved self-management.

Discussion

In our eye center-wide survey on burnout, we found that staff who are providing clinical care are more likely to

Table 2. Demographic characteristics of survey respondents

Characteristic	Respondents ^a (N = 253)
Age, years, mean ± SD	41 ± 11
Sex, n (%)	
Female	195 (77)
Male	53 (21)
Race, n (%)	
White	159 (63)
Black or African American	32 (13)
Asian	24 (10)
Native American or Alaskan Native	1 (<1)
Native Hawaiian or Pacific Islander	1 (<1)
More than one race	2 (1)
Unknown or not reported	13 (5)
Ethnicity, n (%)	
Not Hispanic nor Latino	202 (80)
Hispanic or Latino	8 (3)
Unknown or not reported	24 (10)
Relationship status, n (%)	
Single	65 (26)
Married	167 (67)
Partnered	14 (6)
Widowed/widower	4 (2)
Level of education, n (%)	
Associate's	33 (13)
Bachelor's	78 (31)
COA/COT/COMT	53 (21)
LPN	3 (1)
Master's	49 (19)
MD	49 (20)
OD	5 (2)
PhD	17 (7)
Other ^b	33 (13)
Type of work, n (%)	
Any Research	63 (25)
Clinical research	43 (17)
Basic science research	28 (11)
Translational research	8 (3)
Clinical care and research	21 (8)
Clinical care	155 (61)
Administrative	63 (25)
Education	26 (10)
Trainee, n (%)	28 (11)
Resident (% of trainees)	9 (32)
Fellow (% of trainees)	13 (46)
Op tech student (% of trainees)	2 (7)
Postdoctoral fellow (% of trainees)	3 (11)
Graduate student (% of trainees)	1 (4)

COA, certified ophthalmic assistant; COMT, certified ophthalmic medical technician; COT, certified ophthalmic technician; LPN, licensed practical nurse; OD, doctor of optometry; SD, standard deviation.

^aNot all respondents responded to all survey questions; for several questions, multiple responses were allowed.

^bWrite-ins included high school diploma, some college, technical school.

Table 3. Overall burnout and work-life balance

Burnout	N (%)
"I feel burned out from my work."	94 (37)
"I have become more callous toward people since I took this job."	41 (17)
High for both questions ^a	38 (15)
Work-life Balance	
Highly satisfied	109 (43)
Highly dissatisfied	85 (34)

^aResponses of "at least once per week" for both questions.

have burnout. Similar to national studies, the rate of burnout in doctors we surveyed was 39%. The respondents with master's degrees and PhDs had a lower burnout rate (17% and 12%, resp.); given the small numbers (24 with master's and 17 with PhDs) and lack of comparative data from other studies, the significance of these data is not clear.

We found that 49% of ophthalmic technicians had burnout at the time of the survey, higher than other groups, including medical doctors. The high burnout in this group may be due in part to administrative changes occurring when the survey was distributed; however, these workers are also "at the front lines" in patient care: answering phone calls, responding to electronic medication requests and queries, explaining delays in clinic flow, and navigating the needs of multiple ophthalmic specialties and providers. Although there is no comparative data from other studies to confirm this finding at other centers, these data suggest that this group of professionals may benefit from targeted resilience interventions at the individual level as well as participation at the system level to decrease burnout in health-care workers.

We anticipate that our next resilience plan will include a second "Doctors Lounge" small group for faculty, based on the initial high interest in this program and ongoing positive feedback from the current group; in addition, based on the survey results, the plan will include interventions targeted at our ophthalmic technicians. In order to assess the effectiveness of the resilience plan overall, a combination of qualitative feedback and quantitative survey data will be used annually.

In the case of our resilience program, we made several practical concessions (short but validated survey, targeted and center-wide implementation) in order to reach many of our workers via multiple modalities (email tips, electronic survey, departmental presentation, faculty meetings, small groups). As a result, rigorous scientific assessment of the plan's efficacy is difficult to assess. However, the combination of qualitative and quantita-

Table 4. Univariable analysis for burnouta

Variable	More burnout	Less burnout
Race	Black or African American	White; Asian
Ethnicity	Hispanic or Latino	Not Hispanic nor Latino
Level of education	COA/COT/COMT	Master's degree; PhD
Type of work	Clinical care	
Type of trainee	Fellows	

COA, certified ophthalmic assistant; COMT, certified ophthalmic medical technician; COT, certified ophthalmic technician.

^a*P* values <0.05, based on χ^2 test or Fisher exact test of difference in proportions.

tive data offers timely and practical guidance for the administration and continued development of a meaningful resilience program.

Acknowledgments

We gratefully acknowledge the financial support of Dr. Edward Buckley, the statistical support of Dr. Sandra Stinnett, and the survey administrative support Ms. Ebony Burns, as well as the Duke Eye Center doctors and staff who participated in the survey and resilience activities.

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Appendix

Duke Eye Center Burnout Survey

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DEC Burnout Survey 2017

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Please complete the survey below.

Thank you!

Age

Gender

Relationship Status

Hours worked per week

Number of nights on call per week

Race

Specify other

Ethnicity

Level of Education

Specify other

Female Male

- Single
 Married
 Partnered
 Widowed/Widower

- < 40
 40-49
 50-59
 60-69
 70-79
 >=80

- 1
 2
 3
 4
 5
 6
 7

- White
 Black or African American
 Asian
 Native American or Alaska Native
 Native Hawaiian or Pacific Islander
 More than one race
 Unknown or Not Reported

- Not Hispanic or Latino
 Hispanic or Latino
 Unknown or Not Reported

- Associate degree
 Bachelor's degree
 Master's degree (including MPH, MBA)
 MD
 DO
 OD
 PhD
 COA/COT/COMT
 PA
 LPN
 Other
 (Check all that apply)

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Type of work

- Clinical Research
 - Basic Science Research
 - Clinical Care
 - Translational Research
 - Administrative
 - Education
- (Check all that apply)

Are you a trainee?

- Yes No

What type

- Resident
- Fellow
- Op Tech student
- Post-Doc
- Grad student
- Other

Specify other _____

Do you provide direct patient care (for example, are you a doctor, nurse, technician)?

- Yes No

Location

- Clinic (Hudson/AERI/Wadsworth)
- Clinic (Satellite location)
- OR (including peri-operative care)
- Other (please specify)

Specify other _____

Does your job include interactions with patients (for example, front desk staff or clinical administrative assistants who may have face-to-face or phone interactions with patients)?

- Yes No

Burnout Questions

	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day
I feel burned out from my work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have become more callous toward people since I took this job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Work-Life Balance Satisfaction

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
My work schedule leaves me enough time for my personal/family life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>