



Anxiety, worry, and job satisfaction: effects of COVID-19 care on critical care anesthesiologists

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Received: 20 October 2021 / Revised: 15 December 2021 / Accepted: 17 December 2021 / Published online: 13 January 2022
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Keywords Covid · burnout · anxiety · job satisfaction · gender disparity · critical care

To the Editor,

There is increasing evidence that the COVID-19 pandemic has had a significant psychological impact on intensivists. A survey conducted by the European Society of Intensive Care Medicine in early 2020 revealed a 30–50% incidence of depression, anxiety, and severe burnout.¹ In late 2020, we conducted an observational cross-sectional survey to evaluate the impact of the pandemic on anxiety and job satisfaction among critical care anesthesiologists in the USA. We utilized an anonymous online survey that included questions on

demographic information, the Generalized Anxiety Disorder Questionnaire-IV² and open-ended questions asking respondents how they managed fear, anxiety, loss of control, and stress during the pandemic. A second section allowed participants to provide comments and recommendations for situational improvement. The survey was pretested by the American Society of Anesthesiologists (ASA) Committee on Critical Care Medicine and emailed to 1,400 members of the ASA, the Society of Critical Care Anesthesiologists, and the Anesthesiology Section of the Society of Critical Care Medicine.

The evaluable response rate was 21% (300/1,400). The median [interquartile range] age of respondents was 44 [37–55] yr; 51% (144/282) were < 45 yr, 31% (92/299) were female, 65% (195/298) practiced in an academic setting, and 20% (61/300) were foreign medical graduates. Criteria for generalized anxiety disorder were met by 42% of respondents (55% of females vs 37% of males; Chi

An American Society of Anesthesiologists Committee on Critical Care Medicine work project.

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Table Demographic factors and symptoms of anxiety (multivariate analysis)

Symptom	Practice setting (private vs academic) ^a	Gender (female vs male) ^b	Age (< 45 yr vs ≥ 45 yr) ^c	Foreign Medical Graduate status (US vs foreign) ^d
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
Restlessness or feeling keyed up or on edge	0.99 (0.56 to 1.75) (<i>N</i> = 262) <i>P</i> = 0.97	1.79 (1.03 to 3.13) (<i>N</i> = 262) <i>P</i> = 0.04	1.70 (0.98 to 2.95) (<i>N</i> = 262) <i>P</i> = 0.06	1.15 (0.59 to 2.22) (<i>N</i> = 263) <i>P</i> = 0.68
Irritability	1.05 (0.60 to 1.83) (<i>N</i> = 261) <i>P</i> = 0.87	1.37 (0.78 to 2.39) (<i>N</i> = 261) <i>P</i> = 0.27	1.95 (1.12 to 3.37) (<i>N</i> = 261) <i>P</i> = 0.02	0.76 (0.40 to 1.44) (<i>N</i> = 274) <i>P</i> = 0.40
Difficulty falling/staying asleep or restless/unsatisfying sleep	1.61 (0.91 to 2.84) (<i>N</i> = 260) <i>P</i> = 0.10	1.79 (1.02 to 3.16) (<i>N</i> = 260) <i>P</i> = 0.04	1.49 (0.85 to 2.62) (<i>N</i> = 260) <i>P</i> = 0.16	1.34 (0.69 to 2.61) (<i>N</i> = 273) <i>P</i> = 0.39
Being easily fatigued	1.21 (0.69 to 2.1) (<i>N</i> = 261) <i>P</i> = 0.51	2.50 (1.42 to 4.40) (<i>N</i> = 261) <i>P</i> = 0.002	1.27 (0.74 to 2.18) (<i>N</i> = 261) <i>P</i> = 0.39	1.25 (0.67 to 2.34) (<i>N</i> = 274) <i>P</i> = 0.49
Difficulty concentrating or mind going blank	0.95 (0.50 to 1.81) (<i>N</i> = 259) <i>P</i> = 0.87	1.72 (0.94 to 3.16) (<i>N</i> = 259) <i>P</i> = 0.08	2.16 (1.14 to 4.09) (<i>N</i> = 259) <i>P</i> = 0.02	0.79 (0.38 to 1.67) (<i>N</i> = 272) <i>P</i> = 0.54
Muscle tension	1.06 (0.60 to 1.88) (<i>N</i> = 257) <i>P</i> = 0.84	3.09 (1.74 to 5.5) (<i>N</i> = 257) <i>P</i> < 0.001	1.93 (1.10 to 3.40) (<i>N</i> = 257) <i>P</i> = 0.02	0.72 (0.38 to 1.37) (<i>N</i> = 270) <i>P</i> = 0.32
Worry and physical symptoms interfere with life, work, social activities, family, etc.	1.24 (0.68 to 2.26) (<i>N</i> = 262) <i>P</i> = 0.48	2.75 (1.55 to 4.87) (<i>N</i> = 262) <i>P</i> < 0.001	1.73 (0.95 to 3.12) (<i>N</i> = 262) <i>P</i> = 0.07	0.72 (0.37 to 1.41) (<i>N</i> = 275) <i>P</i> = 0.34

^a Adjusted to gender and age^b Adjusted to practice setting and age^c Adjusted to practice setting, gender, Foreign Medical Graduate Status^d Adjusted to age

CI = confidence interval; OR = odds ratio

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square test, *P* = 0.003). Overall, 32% reported moderate to severe symptoms of anxiety but these were significantly more common in females and younger respondents (Table). Seventy-three percent of female vs 58% of male respondents reported that working as an intensivist during the pandemic had increased their sense of burnout (*P* < 0.001), and 75% of all respondents considered that institutional wellness resources were unhelpful. During the pandemic, 64% of respondents considered their contribution towards critical care in their institution to be increased, 30% unchanged, and 7% stated that their contribution declined. A sense of enhanced achievement

and satisfaction with their professional life was reported by 44% of respondents; 28% reported no change and 28% reported a decline (38% of females vs 24% of males, $P = 0.04$). Responses to open-ended questions revealed concerns about shortages of personal protective equipment, inadequate staffing, and the safety of caregivers and their families, balanced by positive feelings of teamwork and support and a sense of sacrifice and care for others. Respondents considered that their expertise in airway management enhanced the perception of their value in pandemic care by other healthcare providers.

Broad applicability of our results is limited by the evaluable response rate of 21%, although this is similar to that of recent comparable surveys.^{1,3,4} Further, the survey was conducted prior to the wide availability of caregiver vaccination. Nonetheless, the findings indicate that the COVID-19 pandemic is associated with a high incidence of generalized anxiety disorder and an increased sense of burnout among critical care anesthesiologists, particularly in females and younger physicians. This is balanced by enhanced job satisfaction and a sense of being respected and valued for contributions during the pandemic. The significant gender difference in anxiety, burnout, and job satisfaction may in part be a consequence of the increased burden that female intensivists bear through their responsibilities outside the workplace. Our findings suggest that, particularly during the COVID-19 pandemic, improved institutional intervention is warranted to support wellness among critical care

anesthesiologists and to enhance workplace support for female intensivists.

Disclosures None.

Funding statement Support was provided solely from institutional and/or departmental sources.

Editorial responsibility This submission was handled by Dr. Stephan K.W. Schwarz, Editor-in-Chief, *Canadian Journal of Anesthesia/Journal canadien d'anesthésie*.

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