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Letters to the Editor

Mental health of surgeons during the COVID-19 pandemic: An urgent need for intervention



Letter to the Editor:

Surgeons working during the coronavirus disease 2019 (COVID-19) pandemic are facing unprecedented challenges, such as risk of infection, shortage of personal protective equipment, socioeconomic challenges, the decreased ability to obtain family support, and the cancellation of elective operations with redeployment of surgeons to other departments.^{1,2} In addition, surgeons working in Libya during the civil war conflict are at greater risk of physical and verbal abuse by the militias during the conflicts of the civil war; for example, when the relatives or friends of these militias are injured/diseased or even die in the hospital, they attack surgeons and physicians who were caring for that patient, especially in working settings that suffer from a shortage of equipment and resources during the COVID-19 pandemic.³ Thus, surgeons working in Libya are at greater risk of mental illness owing to the civil war, financial crisis, lack of training, shortage of personal protective equipment, and risk of COVID-19 infection. Therefore, we aim to provide an overview of the mental health status among surgeons during COVID-19.

An online, anonymous, cross-sectional survey was conducted using email and mobile messages among surgical staff and residents working in Libyan hospitals during May 2020 to measure their anxiety and depressive symptoms and to provide an overview of physical and verbal abuse. The survey included basic demographic characteristics, the incidence of physical and verbal abuse owing to the civil war conflict, and history of COVID-19 infection. The second part of the survey included a mental health assessment comprising a self-administered, 9-item Patient Health Questionnaire (PHQ-9)^{4,5} with ≥ 15 as the cutoff score for depressive symptoms and the 7-item, Generalized Anxiety Disorder scale (GAD-7)⁶ with ≥ 15 as the cutoff score for anxiety symptoms.

A total of 309 participant surgeons, 201 (65%) surgery residents and 108 (35%) surgical staff from Libyan hospitals, have completed the survey. The mean age of participants (SD) was 32.8 (7.1). Among study participants, 212 (68.6%) were men, and 97 (31.4%) were women. Table I illustrates the basic study characteristics of the participants along with association with depressive and anxiety symptoms. Based on the cutoff scores of the PHQ-9 and the GAD-7 to determine the presence of depressive and anxiety symptoms, 36 (11.7%) participants reached the cutoff score for a diagnosis of depressive

symptoms as determined by a PHQ-9 score ≥ 15 , while 47 (15.2%) reached the cutoff score for anxiety symptoms as determined by a GAD-7 score ≥ 15 . The mean (SD) score for the PHQ-9 was 11.1 (2.9), while the mean (SD) for the GAD-7 was 10.7 (3.5).

Among the study participants, 101 (32.7%) live in a conflict area, 167 (54%) have had an episode of verbal abuse by militia or armed forces during the civil war conflict, and 50 (16.2%) have encountered physical abuse by these militias or armed forces while treating injured militia patients, their relatives, or friends. Regarding abuse and threatening behavior, 21 (6.8%) reported being frightened and threatened with a weapon, 13 (4.2%) experienced a sharp object being thrown, and 18 (5.8%) experienced a blow from a hand and/or kicking. Sixteen (5.2%) reported severe, life-threatening injuries; indeed, their life was in endangered because of physical abuse. Among the participants, 91 (29.4%) reported an adverse consequence of abuse in terms of their family or quality of life. Only age and surgical specialty were associated with anxiety symptoms ($P < .05$). The sex of the responder, marital status, living arrangements, smoking, living in a conflict area, and verbal and physical abuse did not appear to be associated with depressive or anxiety symptoms.

Our study demonstrated a high prevalence of anxiety and depressive symptoms among surgical staff during COVID-19. In addition, we demonstrated a great number of abuse episodes among surgical staff in Libya. The working style of surgeons is another risk factor for increased psychological pressure. Surgical staff suffer from the risk of infection and cross-contamination, which increases the psychological burden that may result in more anxiety and depression. Additionally, as the COVID-19 pandemic has affected surgical training, there is a high burden of stress regarding their future career opportunities especially in the surgery trainees. It is therefore necessary to pay particular attention to the psychological status of surgical staff and to implement strategies aimed to provide psychological and socioeconomic support. Psychotherapy sessions have been proposed as a method to ensure that the mental health status of both the medical and especially surgical staff will not affect their performance.⁷

Conflict of interest/Disclosures

The authors declare that they have no competing interests.

Funding/Support

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Acknowledgments

We would like to thank those who participated in the study.

Ethics approval and consent to participate

The study was approved by the Bioethics Committee at the Biotechnology Research Center in Libya. All participants provided consent before participating in the study.

Authors' contributions

ME and AM analyzed and interpreted the patients' data. ME proposed the idea and wrote the first draft of the manuscript. All authors read and approved the final manuscript.

Table 1
Basic characteristics of study population and psychologic status association (N = 309)

Characteristics	n (%)	Depressive symptoms				Anxiety symptoms			
		PHQ-9 ≥ 15	PHQ-9 <15	χ^2	P value	GAD-7 ≥ 15	GAD-7 <15	χ^2	P value
Age (y)				1.807	.179			6.720	.01*
<35	229 (74.1)	30 (83)	199 (72.9)			42 (89)	187 (71.4)		
≥ 35	80 (25.9)	6 (17)	74 (27.1)			5 (11)	75 (28.6)		
Sex-male	212 (68.6)	22 (61)	190 (69.6)	1.063	.302	30 (64)	182 (69.5)	0.588	.443
Female	97 (31.4)	14 (39)	83 (30.4)			17 (36)	80 (30.5)		
Marital status n (%)				0.04	.841			0.855	.355
Single	185 (59.9)	21 (58)	164 (60.1)			31 (66)	154 (58.8)		
Married	124 (40.1)	15 (42)	109 (39.9)			16 (34)	108 (41.2)		
Living arrangement				0.327	.568			0.351	.553
Alone	44 (14.2)	32 (89)	40 (14.7)			8 (17)	36 (13.7)		
Within family	265 (85.8)	4 (11)	233 (85.3)			39 (83)	226 (86.3)		
Y of experience				1.775	.183			3.251	.071
<5	201 (65)	27 (75)	174 (63.7)			36 (77)	165 (63)		
≥ 5	108 (35)	9 (25)	99 (36.3)			11 (23)	97 (37)		
Surgical specialty				3.871	.869			15.965	.043*
General and GI surgery	74 (23.9)	8 (22)	66 (24.2)			4 (9)	70 (26.7)		
Trauma and emergency	100 (32.4)	10 (28)	90 (33)			20 (43)	80 (30.5)		
Orthopedic	40 (12.9)	6 (17)	34 (12.5)			9 (19)	31 (11.8)		
Urology	10 (3.2)	2 (6)	8 (2.9)			3 (6)	7 (2.7)		
Head and neck	9 (2.9)	2 (6)	7 (2.6)			3 (6)	6 (2.3)		
Cardiothoracic	6 (1.9)	1 (3)	5 (1.8)			0	6 (2.3)		
Plastic surgery	4 (1.3)	0	4 (1.5)			0	4 (1.5)		
Neurosurgery	6 (1.9)	0	6 (2.2)			0	6 (2.3)		
Other	60 (19.4)	7 (19)	53 (19.4)			8 (17)	52 (19.8)		
Smoking				0.802	.37			2.21	.145
Yes	79 (25.6)	7 (19)	72 (26.4)			8 (17)	71 (27.1)		
No	230 (74.4)	29 (81)	201 (73.6)			39 (83)	191 (72.9)		
Living in conflict area				2.560	.11			0.793	.373
Yes	101 (32.7)	16 (44)	85 (31.1)			18 (38)	83 (31.7)		
No	208 (67.3)	20 (56)	188 (68.9)			29 (62)	179 (68.3)		
Verbal abuse episode				0.302	.583			1.308	.253
Yes	167 (54)	21 (58)	146 (53.5)			29 (62)	138 (52.7)		
No	142 (46)	15 (42)	127 (46.5)			18 (38)	124 (47.3)		
Physical abuse episode				1.85	.174			0.029	.865
Yes	50 (16.2)	3 (8)	47 (17.2)			8 (17)	42 (16)		
No	259 (83.8)	33 (92)	226 (82.8)			39 (83)	220 (84)		

GI, gastrointestinal.

* Significant at ($P < .05$).

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Accepted 20 August 2020

<https://doi.org/10.1016/j.surg.2020.08.035>

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Comment on: “The management of surgical patients during the coronavirus disease 2019 (COVID-19) pandemic”



To the Editor:

We read with great interest the review by Spolverato et al¹ regarding the management of surgical patients during the coronavirus disease 2019 (COVID-19) pandemic. We want to congratulate the authors for this extensive and interesting review. However, we would like to introduce 2 considerations that we think could be interesting.

The management of cancer surgical patients remains one of the unsolved issues on this topic. Many societies suggest the reduction of surgical activity, including oncologic patients,² or tailoring every decision by a multidisciplinary team committee.^{3,4} This attitude could be appropriate or detrimental depending on the pandemic incidence and government policies. In Spain, the pandemic incidence was highly variable with rates in different areas ranging between 11.3% and 1.1%⁵; therefore, the effect on the health system resources were completely different. However, policies regarding cancellation of surgical activity, including oncologic patients, were generalized to prevention of a pandemic peak that never came in many regions.

The harm of delaying oncologic surgery results from the type of cancer and oncologic stage, the time added to the recommended optimal surgical treatment, and the increase in the waiting list of