Prospective and observational study of COVID-19’s impact on mental health and training of young surgeons in France

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Prospective and observational study of COVID-19's impact on mental health and training of young surgeons in France

Editor

The COVID-19 pandemic is an unprecedented situation that puts healthcare professionals across the world under extreme pressure. Indeed, health care workers on the frontline who are directly involved in the diagnosis, treatment, and care of patients with COVID-19 are at risk of developing psychological distress and other mental health symptoms which may indirectly impact patients. Several authors alerted regarding the mental health of healthcare workers in this critical situation but none about mental health of young surgeons except in small cohorts. The availability of a personal Protective equipment was also a big challenge especially in our country. Our aim was to evaluate how COVID-19 impacts on surgical training, workload and mental health of residents and fellows of surgery in France and to determine risk factors of mental health disorders to prevent their consequences.

This study was a national survey, collecting demographic and mental health data from 1001 participants throughout 18 regions from 10th of April to May 7th of May 2020, in France; only residents and fellows of surgery were eligible. The severity of symptoms of depression, anxiety and insomnia, was assessed by the French version of the PHQ-9, the GAD-7 and the ISI, respectively. We performed a multivariable logistic regression analysis to identify risk factors associated with mental health disorders.

In this survey, among the 1450 young surgeons asked to participate, we obtained 1001 full answers (69.0%). Responders were equally distributed according to their position in their department: 364 (36.4%) were young residents, 332 (33.2%) were senior residents, 305 (30.5%) were fellows, 484 were males (48.4%) and 517 were females (51.6%). At the time of the survey, 42.2% had a positive test of COVID-19. The personal protective equipment provided by the hospital were considered insufficient by 42.8%. 47.9% felt that their hospital had not adequately trained them to manage COVID-19 patients.

93.5% estimated that COVID-19...
outbreak had a negative impact on their training. Several risk factors were studied (*Table 1*). Symptoms of anxiety, depression and insomnia were present in 359 (35.9%), 408 (40.8%) and 431 (43.1%) participants respectively and multivariate logistic regression identified 4 risk factors associated with them. Women had more risk to have anxiety: aOR, 1.86; 95 CI, 1.41-2.44; \( p < 0.001 \); depression: aOR, 2; 95 CI, 1.53-2.62 \( p < 0.001 \); insomnia: 1.61; 95 CI, 1.24-2.08; \( p < 0.001 \). Increased consumption of alcohol or tobacco was more likely to induce anxiety, depression and insomnia: aOR, 2.06; 95 CI, 1.53-2.79; \( p < 0.001 \); aOR, 1.79; 95 CI, 1.33-2.42; \( p < 0.001 \); aOR, 1.58; 95 CI, 1.18-2.12; \( p = 0.002 \).

On the other hand, sufficient training was associated with a decreasing of mental disrupting. For these two parameters, the risk of anxiety was decreased by 31% and 36% respectively (aOR, 0.69; 95 CI, 0.52-0.91; \( p = 0.008 \); aOR, 0.64; 95 CI, 0.48-0.84; \( p = 0.002 \)). The risk of depression was decreased by 25% and 46% respectively (aOR, 0.75; 95 CI, 0.57-0.99; \( p = 0.04 \); aOR, 0.54; 95 CI, 0.41-0.71; \( p < 0.001 \)). Only sufficient training was associated with a decrease in of the risk of insomnia by 37% (aOR, 0.69; 95 CI, 0.49-0.83; \( p < 0.001 \)).

Residents and fellows reported a high rate of mental health disorders. Female gender and alcohol and/or tobacco consumption were significant risk factors. Optimal individual protection and training about COVID-19 are both variables which influence on that risk.

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