

Has the COVID-19 Pandemic Adversely Affected Measure of Burnout and Empathy in Emergency Medicine Residents?

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Has the COVID-19 Pandemic Adversely Affected Measure of Burnout and Empathy in Emergency Medicine Residents?

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Study Objectives

To determine the levels of burnout and empathy amongst EM residents during a time of pandemic as compared to the previous year.

Methods

In June of 2020, three months into the COVID-19 pandemic and nearing the end of the academic year, EM residents in a suburban 4-year program were surveyed utilizing the Maslach Burnout Inventory (MBI) and the Jefferson Scale of Empathy (JSE). Surveys were presented online utilizing the Qualtrics® online platform. Anonymity was assured. At the time of this survey over 6000 patients had tested positive for COVID in the hospital network. In one of the two hospitals, EM residents run the Intensive Care service. Many participants had been required to work extra shifts and additional ICU months to cover the increased number of critical patients and to cover residents who could not work due to COVID illness or exposure. These metrics were compared with matched historical data from second and third year residents completing the survey one year previously.

Results

A total of 54 of 57 residents responded to the survey for a response rate of 95%, however 7 declined to have their data used for research, giving us an analyzable response rate of 83% (28 males and 19 females). A total of 13 1st yr, 9 2nd yr, 12 3rd yr and 13 4th year residents responded. The median age was 31 yrs (IQR 29-34). There was no difference by PGY year in the JSE score (range 20-140), average 108.0 (IQR: 99-117), $p > 0.05$. There was also no difference by PGY year in any of the MBI categories. Emotional exhaustion scores revealed 31.9% high, 29.8% moderate and 38.3% low levels. Depersonalization scores ranged from 38.3% high, 40.4% moderate and 21.3% low levels. Personal Accomplishment scores which are scored inversely (higher is better) ranged as follows: 19.2% high, 34% moderate and 46.8% low. Males were more likely than females (28.6% vs. 5.3%, $p = 0.01$) to have high levels of Personal Accomplishment. Females were more likely than males to have (57.9% vs. 17.9%, $p = 0.01$) moderate levels of Personal Accomplishment. Females [111 (IQR 103-123)] and males [106 (97-116)] had similar levels of empathy on the JSE; $p = 0.18$. No significant difference was found in any of the four metrics measured when matched with the 15 residents who took the same survey in 2019; $p > 0.1$. (see Table)

Conclusion

As measured by commonly utilized metrics, EM residents in all years showed concerningly high or moderate levels of Emotional Exhaustion and Depersonalization (61.7% and 78.7%). Females and males demonstrated similar levels of empathy but females were less likely than males to have high Personal Accomplishment scores. Although these results, indicating high rates of burnout in EM residents, remain a concern, there is no evidence that the current pandemic has negatively impacted these metrics.

Table: 2019 and 2020 matched data (n=15)

	2019	2020	p-value
Jefferson Scale of Empathy (JSE) (range 20 to 140) <i>median (IQR)</i>	109.0 (99.0-120.0)	110.0 (101.0-117.0)	0.6819 ^a
Maslach Burnout Inventory (MBI)			
Emotional Exhaustion (range 0 to 54) <i>median (IQR)</i>	23.0 (19.0-32.0)	20.0 (15.0-28.0)	0.1231 ^a
Depersonalization (range 0 to 30) <i>median (IQR)</i>	15.0 (6.0-16.0)	11.0 (7.0-14.0)	0.1309 ^a
Personal Accomplishment (range 0 to 48) <i>median (IQR)</i>	37.0 (34.0-42.0)	39.0 (34.0-43.0)	0.3607 ^a