Supplemental Table 1. The Response Rate with Number of Survey Responses by Cohort-year

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 2013 | 2014 | 2015 | 2016 |
| 2013 cohort | CA-1  (33%,  342 of 1,044) | CA-2  (35%,  571 of 1,628) | CA-3  (43%,  682 of 1,586) | PGY-5 fellows  (46%, 334 of 728) |
| PGY-5 practicing anesthesiologists  (29%, 254 of 890) |
| 2014 cohort |  | CA-1  (31%,  261 of 831) | CA-2  (30%,  470 of 1,575) | CA-3  (37%, 600 of 1,626) |
| 2015 cohort |  |  | CA-1  (44%,  567 of 1,286) | CA-2  (38%, 625 of 1,666) |
| 2016 cohort |  |  |  | CA-1  (35%, 589 of 1,687) |

Supplemental Table 2a. The Percentage and Number of Survey Respondents Identified as Having Burnout by the Maslach Burnout Inventory by Cohort-year

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 2013 | 2014 | 2015 | 2016 |
| 2013 cohort | CA-1  43% (143 of 330) | CA-2  52% (287 of 547) | CA-3  52% (335 of 645) | PGY-5 – fellows  42% (136 of 327) |
| PGY-5 – practicing anesthesiologists  37% (91 of 248) |
| 2014 cohort |  | CA-1  45% (108 of 242) | CA-2  56% (247 of 438) | CA-3  57% (315 of 550) |
| 2015 cohort |  |  | CA-1  51% (263 of 513) | CA-2  55% (328 of 591) |
| 2016 cohort |  |  |  | CA-1  52% (278 of 535) |

Supplemental Table 2b. The Percentage and Number of Survey Respondents Identified as being in Distress by the Physician Well-being Index by Cohort-year

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 2013 | 2014 | 2015 | 2016 |
| 2013 cohort | CA-1  28% (94 of 335) | CA-2  33% (181 of 554) | CA-3  32% (204 of 639) | PGY-5 – fellows  26% (83 of 318) |
| PGY-5 – practicing anesthesiologists  17% (41 of 240) |
| 2014 cohort |  | CA-1  24% (59 of 243) | CA-2  34% (145 of 425) | CA-3  37% (203 of 549) |
| 2015 cohort |  |  | CA-1  34% (173 of 513) | CA-2  36% (208 of 582) |
| 2016 cohort |  |  |  | CA-1  34% (184 of 543) |

Supplemental Table 2c. The Percentage and Number of Survey Respondents Screening Positive for Depression by the Harvard Department of Psychiatry/National Depression Screening Day Scale by Cohort-year

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 2013 | 2014 | 2015 | 2016 |
| 2013 cohort | CA-1  11% (36 of 322) | CA-2  11% (61 of 542) | CA-3  11% (68 of 630) | PGY-5 – fellows  11% (35 of 310) |
| PGY-5 – practicing anesthesiologists  11% (24 of 225) |
| 2014 cohort |  | CA-1  9% (22 of 243) | CA-2  11% (46 of 419) | CA-3  12% (64 of 539) |
| 2015 cohort |  |  | CA-1  11% (54 of 502) | CA-2  15% (85 of 571) |
| 2016 cohort |  |  |  | CA-1  13% (70 of 537) |

Supplemental Table 3. Correlations between the subscales of Maslach Burnout Inventory, the Physician Well-being Index and the Harvard Department of Psychiatry/National Depression Screening Day Scale.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Personal  Accomplishment | Emotional  Exhaustion | Depersonalization | PWBI | HANDS |
| Personal  Accomplishment | 1 |  |  |  |  |
| Emotional  Exhaustion | (-0.46, -0.10) | 1 |  |  |  |
| Depersonalization | (-0.46, -0.14) | (0.48, 0.62)\*\*\* | 1 |  |  |
| PWBI | (-0.39, -0.13) | **(0.60, 0.67)\*\*\*** | (0.40, 0.55)\*\*\* | 1 |  |
| HANDS | (-0.43, -0.18)\*\* | **(0.60, 0.67)\*\*\*** | (0.40, 0.53)\*\*\* | **(0.61,0.71)\*\*\*** | 1 |

Significance level was reported based on the highest p value among the cohort-years: \*\*p <0.01 \*\*\*p <0.001

Supplemental Table 4. Demographics and Burnout, Distress, and Depression by Cohort-year

Supplemental Table 4a. Sex and Correlations with Burnout, Distress, and Depression by Cohort-year

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Cohort | Year | N (Female%) | Correlation with Burnout (MBI) | Correlation with In distress (PWBI) | Correlation with Significant Depression (HANDS) |
| 2013cohort – CA-1 | 2013 | 334 (39%) | 0.013 (p=0.814) | 0.161\*\* (p=0.003) | 0.087 (p=0.121) |
| 2014cohort – CA-1 | 2014 | 258 (35%) | 0.142 (p=0.029) | 0.103 (p=0.112) | 0.164 (p=0.011) |
| 2013cohort – CA-2 | 2014 | 569 (39%) | 0.069 (p=0.106) | 0.158\*\*\* (p<0.001) | 0.111 (p=0.010) |
| 2015cohort – CA-1 | 2015 | 535 (35%) | -0.048 (p=0.284) | 0.148\*\*\* (p<0.001) | 0.015 (p=0.733) |
| 2014cohort – CA-2 | 2015 | 457 (39%) | 0.065 (p=0.177) | 0.165\*\*\* (p<0.001) | 0.171\*\*\* (p<0.001) |
| 2013cohort – CA-3 | 2015 | 675 (36%) | 0.059 (p=0.137) | 0.127\*\* (p=0.001) | 0.053 (p=0.184) |
| 2016cohort – CA-1 | 2016 | 541 (35%) | 0.091 (p=0.037) | 0.157\*\*\* (p<0.001) | 0.034 (p=0.438) |
| 2015cohort – CA-2 | 2016 | 570 (36%) | 0.020 (p=0.634) | 0.092 (p=0.030) | 0.040 (p=0.348) |
| 2014cohort – CA-3 | 2016 | 532 (40%) | 0.003 (p=0.939) | 0.103 (p=0.019) | 0.055 (p=0.213) |
| 2013cohort – PGY-5  fellows | 2016 | 312 (40%) | 0.050 (p=0.383) | 0.123 (p=0.032) | 0.118 (p=0.042) |
| 2013cohort – PGY-5  practicing Anesthesiologists | 2016 | 227 (32%) | 0.055 (p=0.413) | -0.008 (p=0.910) | 0.019 (p=0.785) |

2013 cohort indicated by blue, 2014 cohort indicated by green, 2015 cohort indicated by yellow, and 2016 cohort indicated by white.

\*\*p <0.01 \*\*\*p <0.001

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Cohort | Year | N (International Medical School Graduates%) | Correlation with Burnout (MBI) | Correlation with In distress (PWBI) | Correlation with Significant Depression (HANDS) |
| 2013cohort – CA-1 | 2013 | 329 (13%) | -0.017 (p=0.757) | -0.038 (p=0.502) | -0.051 (p=0.372) |
| 2014cohort – CA-1 | 2014 | 259 (12%) | -0.124 (p=0.055) | -0.025 (p=0.700) | -0.072 (p=0.262) |
| 2013cohort – CA-2 | 2014 | 560 (11%) | -0.051 (p=0.237) | -0.012 (p=0.773) | -0.038 (p=0.386) |
| 2015cohort – CA-1 | 2015 | 565 (15%) | -0.099 (p=0.024) | -0.068 (p=0.125) | -0.048 (p=0.289) |
| 2014cohort – CA-2 | 2015 | 465 (9%) | -0.142\*\* (p=0.003) | -0.037 (p=0.446) | -0.074 (p=0.135) |
| 2013cohort – CA-3 | 2015 | 670 (11%) | -0.007 (p=0.865) | -0.047 (p=0.236) | 0.002 (p=0.969) |
| 2016cohort – CA-1 | 2016 | 587 (11%) | -0.090 (p=0.038) | -0.030 (p=0.488) | -0.004 (p=0.928) |
| 2015cohort – CA-2 | 2016 | 606 (12%) | -0.112\*\* (p=0.007) | -0.021 (p=0.611) | -0.058 (p=0.171) |
| 2014cohort – CA-3 | 2016 | 589 (11%) | -0.078 (p=0.070) | -0.017 (p=0.686) | -0.036 (p=0.402) |
| 2013cohort – PGY-5  fellows | 2016 | 331 (12%) | -0.063 (p=0.262) | -0.001 (p=0.991) | -0.061 (p=0.285) |
| 2013cohort – PGY-5  practicing Anesthesiologists | 2016 | 251 (10%) | -0.032 (p=0.617) | 0.069 (p=0.290) | -0.018 (p=0.791) |

Supplemental Table 4b. Medical School Country and Correlations with Burnout, Distress, and Depression by Cohort-year

2013 cohort indicated by blue, 2014 cohort indicated by green, 2015 cohort indicated by yellow, and 2016 cohort indicated by white.

\*\*p <0.01

Supplemental Table 4c. Age and Correlations with Burnout, Distress, and Depression by Cohort-year

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Cohort | Year | N | Median Age, (Mean ± SD) | Correlation with Burnout (MBI) | Correlation with In distress (PWBI) | Correlation with Significant Depression (HANDS) |
| 2013cohort – CA-1 | 2013 | 321 | 29 (29.9±3.6) | -0.112 (p=0.047) | 0.052 (p=0.357) | -0.066 (p=0.248) |
| 2014cohort – CA-1 | 2014 | 259 | 29 (29.6±3.1) | -0.219\*\*\* (p<0.001) | 0.025 (p=0.704) | -0.019 (p=0.772) |
| 2013cohort – CA-2 | 2014 | 558 | 30 (30.6±3.2) | -0.073 (p=0.091) | 0.002 (p=0.963) | -0.099 (p=0.022) |
| 2015cohort – CA-1 | 2015 | 532 | 30 (30.8±3.4) | -0.079 (p=0.077) | -0.014 (p=0.748) | 0.001 (p=0.980) |
| 2014cohort – CA-2 | 2015 | 452 | 31 (31.5±3.0) | -0.059 (p=0.224) | 0.007 (p=0.882) | -0.044 (p=0.369) |
| 2013cohort – CA-3 | 2015 | 661 | 33 (33.6±3.1) | -0.068 (p=0.087) | 0.084 (p=0.037) | 0.029 (p=0.476) |
| 2016cohort – CA-1 | 2016 | 531 | 30 (31.1±3.5) | -0.130\*\* (p=0.003) | 0.075 (p=0.088) | 0.066 (p=0.135) |
| 2015cohort – CA-2 | 2016 | 565 | 31 (31.8±3.1) | -0.123\*\* (p=0.004) | 0.035 (p=0.414) | -0.012 (p=0.771) |
| 2014cohort – CA-3 | 2016 | 520 | 32 (32.6±2.8) | -0.100 (p=0.024) | 0.020 (p=0.656) | 0.053 (p=0.233) |
| 2013cohort – PGY-5  fellows | 2016 | 305 | 32 (33.1±2.5) | -0.153\*\* (p=0.008) | -0.051 (p=0.384) | -0.109 (p=0.062) |
| 2013cohort – PGY-5  practicing Anesthesiologists | 2016 | 225 | 33 (34.0±3.3) | -0.074 (p=0.274) | -0.035 (p=0.611) | -0.087 (p=0.203) |

2013 cohort indicated by blue, 2014 cohort indicated by green, 2015 cohort indicated by yellow, and 2016 cohort indicated by white.

\*\*p <0.01 \*\*\*p <0.001

Supplemental Table 5. Professional Life and Burnout, Distress, and Depression by Cohort-year

Supplemental Table 5a. Hours Worked per Week and Correlations with Burnout, Distress and Depression By Cohort-year

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Cohort | Year | N | Median Hours Worked per Week  (Mean ± SD) | Correlation with Burnout (MBI) | Correlation with In distress (PWBI) | Correlation with Significant Depression (HANDS) |
| 2013cohort – CA-1 | 2013 | 337 | 60 (60.7±15.0) | 0.010 (p=0.854) | -0.046 (p=0.400) | 0.040 (p=0.473) |
| 2014cohort – CA-1 | 2014 | 259 | 65 (63.2±6.2) | 0.044 (p=0.495) | 0.144 (p=0.025) | 0.141 (p=0.028) |
| 2013cohort – CA-2 | 2014 | 567 | 65 (63.9±7.2) | 0.080 (p=0.061) | 0.166\*\*\* (p<0.001) | 0.161\*\*\* (p<0.001) |
| 2015cohort – CA-1 | 2015 | 532 | 62 (62.8±6.6) | 0.120\*\* (p=0.006) | 0.208\*\*\* (p<0.001) | 0.119\*\* (p=0.008) |
| 2014cohort – CA-2 | 2015 | 453 | 65 (63.9±7.0) | -0.021 (p=0.669) | 0.162\*\*\* (p<0.001) | 0.151\*\* (p=0.002) |
| 2013cohort – CA-3 | 2015 | 671 | 60 (60.7±7.0) | 0.059 (p=0.136) | 0.166\*\*\* (p<0.001) | 0.197\*\*\* (p<0.001) |
| 2016cohort – CA-1 | 2016 | 572 | 60 (62.6±7.8) | 0.105 (p=0.015) | 0.217\*\*\* (p<0.001) | 0.162\*\*\* (p<0.001) |
| 2015cohort – CA-2 | 2016 | 616 | 60 (62.0±7.6) | 0.140\*\*\* (p<0.001) | 0.183\*\*\* (p<0.001) | 0.192\*\*\* (p<0.001) |
| 2014cohort – CA-3 | 2016 | 588 | 60 (60.5±6.7) | 0.161\*\*\* (p<0.001) | 0.190\*\*\* (p<0.001) | 0.134\*\* (p=0.002) |
| 2013cohort – PGY-5  fellows | 2016 | 334 | 60 (57.4±10.6) | 0.111 (p=0.045) | 0.177\*\* (p=0.002) | 0.200\*\*\* (p<0.001) |
| 2013cohort – PGY-5 practicing Anesthesiologists | 2016 | 250 | 50 (51.7±10.2) | -0.066 (p=0.303) | 0.111 (p=0.089) | 0.067 (p=0.319) |

2013 cohort indicated by blue, 2014 cohort indicated by green, 2015 cohort indicated by yellow, and 2016 cohort indicated by white.

\*\*p <0.01 \*\*\*p <0.001

Supplemental Table 5b. Night Calls per Month and Correlations with Burnout, Distress and Depression By Cohort-year

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Cohort | Year | N | Median Night Calls per Month (Mean ± SD) | Correlation with Burnout (MBI) | Correlation with In distress (PWBI) | Correlation with Significant Depression (HANDS) |
| 2013cohort – CA-1 | 2013 | 337 | 4 (3.8±2.0) | 0.041 (p=0.458) | 0.066 (p=0.231) | 0.025 (p=0.652) |
| 2014cohort – CA-1 | 2014 | 256 | 4 (4.4±2.5) | -0.067 (p=0.303) | 0.086 (p=0.182) | 0.093 (p=0.149) |
| 2013cohort – CA-2 | 2014 | 569 | 5 (5.2±2.5) | 0.071 (p=0.097) | 0.101 (p=0.017) | 0.095 (p=0.027) |
| 2015cohort – CA-1 | 2015 | 530 | 4 (4.3±2.3) | 0.027 (p=0.546) | 0.071 (p=0.110) | 0.041 (p=0.360) |
| 2014cohort – CA-2 | 2015 | 450 | 5 (5.1±2.8) | 0.075 (p=0.117) | 0.108 (p=0.026) | 0.196\*\*\* (p<0.001) |
| 2013cohort – CA-3 | 2015 | 667 | 4 (4.7±2.5) | 0.049 (p=0.217) | 0.132\*\*\* (p<0.001) | 0.085 (p=0.034) |
| 2016cohort – CA-1 | 2016 | 568 | 4 (4.8±2.9) | 0.063 (p=0.145) | 0.069 (p=0.110) | 0.164\*\*\* (p<0.001) |
| 2015cohort – CA-2 | 2016 | 612 | 5 (5.3±3.0) | 0.089 (p=0.030) | 0.086 (p=0.038) | 0.065 (p=0.120) |
| 2014cohort – CA-3 | 2016 | 589 | 4 (4.8±2.4) | 0.071 (p=0.094) | 0.072 (p=0.093) | 0.075 (p=0.083) |
| 2013cohort – PGY-5 fellows | 2016 | 332 | 4 (4.6±4.4) | 0.111 (p=0.045) | 0.120 (p=0.033) | 0.166\*\* (p=0.003) |
| 2013cohort –  PGY-5 practicing Anesthesiologists | 2016 | 250 | 3 (3.8±2.9) | -0.108 (p=0.093) | -0.018 (p=0.783) | 0.019 (p=0.778) |

2013 cohort indicated by blue, 2014 cohort indicated by green, 2015 cohort indicated by yellow, and 2016 cohort indicated by white.

\*\*p <0.01 \*\*\*p <0.001

Supplemental Table 5c. Working Place Having Enough Resources and Correlations with Burnout, Distress and Depression By Cohort-year

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cohort | Year | N | Percentage of Each Answer Option | | | | Correlation with Burnout (MBI) | Correlation with In distress (PWBI) | Correlation with Significant Depression (HANDS) |
| Yes, and comfortable to use | Yes, and not comfortable to use | No | Not Sure |
| 2013cohort – CA-1 | 2013 |  | Did not ask | | | | | | |
| 2014cohort – CA-1 | 2014 | 251 | 53.4% | 8.8% | 10.0% | 27.9% | -0.131  (p=0.089) | -0.415\*\*\*  (p<0.001) | -0.289\*\*\*  (p<0.001) |
| 2013cohort – CA-2 | 2014 | 554 | 48.9% | 12.1% | 14.1% | 24.9% | -0.232\*\*\*  (p<0.001) | -0.356\*\*\*  (p<0.001) | -0.251\*\*\*  (p<0.001) |
| 2015cohort – CA-1 | 2015 | 520 | 57.7% | 12.3% | 10.4% | 19.6% | -0.359\*\*\*  (p<0.001) | -0.306\*\*\*  (p<0.001) | -0.254\*\*\*  (p<0.001) |
| 2014cohort – CA-2 | 2015 | 434 | 50.9% | 9.4% | 13.8% | 25.8% | -0.261\*\*\*  (p<0.001) | -0.431\*\*\*  (p<0.001) | -0.376\*\*\*  (p<0.001) |
| 2013cohort – CA-3 | 2015 | 648 | 54.3% | 12.0 | 16.7% | 17.0% | -0.309\*\*\*  (p<0.001) | -0.365\*\*\*  (p<0.001) | -0.250\*\*\*  (p<0.001) |
| 2016cohort – CA-1 | 2016 | 547 | 52.3% | 13.5% | 12.1% | 22.1% | -0.344\*\*\*  (p<0.001) | -0.442\*\*\*  (p<0.001) | -0.464\*\*\*  (p<0.001) |
| 2015cohort – CA-2 | 2016 | 585 | 49.6% | 15.4% | 14.2% | 20.9% | -0.325 \*\*\*  (p<0.001) | -0.386\*\*\*  (p<0.001) | -0.240\*\*\*  (p<0.001) |
| 2014cohort – CA-3 | 2016 | 553 | 52.3% | 15.0% | 14.8% | 17.9% | -0.291\*\*\*  (p<0.001) | -0.291\*\*\*  (p<0.001) | -0.309\*\*\*  (p<0.001) |
| 2013cohort – PGY-5 fellows | 2016 | 321 | 65.1% | 9.0% | 7.8% | 18.1% | -0.245\*\*\*  (p<0.001) | -0.357\*\*\*  (p<0.001) | -0.254\*\*\*  (p<0.001) |
| 2013cohort –  PGY-5 practicing Anesthesiologists | 2016 | 234 | 39.7% | 10.7% | 15.4% | 34.2% | -0.412\*\*\*  (p<0.001) | -0.216\*\*\*  (p=0.008) | -0.176  (p=0.033) |

2013 cohort indicated by blue, 2014 cohort indicated by green, 2015 cohort indicated by yellow, and 2016 cohort indicated by white.

\*\*p <0.01 \*\*\*p <0.001

Supplemental Table 6. Social Support System and Burnout, Distress, and Depression by Cohort-year

Supplemental Table 6a. Whether in a Committed Relationship and Correlations with Burnout, Distress and Depression by Cohort-year

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Cohort | Year | N | In a Committed Relationship | | Correlation with Burnout (MBI) | Correlation with In distress (PWBI) | Correlation with Significant Depression (HANDS) |
| Yes | No |
| 2013cohort – CA-1 | 2013 | 335 | 79.7% | 20.3% | -0.022 (p=0.687) | -0.045 (p=0.419) | -0.037 (p=0.506) |
| 2014cohort – CA-1 | 2014 | 257 | 78.2% | 21.8% | -0.088 (p=0.175) | -0.148 (p=0.021) | -0.079 (p=0.222) |
| 2013cohort – CA-2 | 2014 | 567 | 80.1% | 19.9% | -0.014 (p=0.744) | -0.127\*\* (p=0.003) | -0.157\*\*\* (p<0.001) |
| 2015cohort – CA-1 | 2015 | 538 | 80.1% | 19.9% | -0.124\*\* (p=0.005) | -0.045 (p=0.313) | -0.114 (p=0.011) |
| 2014cohort – CA-2 | 2015 | 460 | 80.9% | 19.1% | -0.040 (p=0.400) | -0.013 (p=0.797) | -0.092 (p=0.062) |
| 2013cohort – CA-3 | 2015 | 677 | 84.8% | 15.2% | -0.023 (p=0.566) | -0.081 (p=0.040) | -0.093 (p=0.021) |
| 2016cohort – CA-1 | 2016 | 543 | 78.3% | 21.7% | -0.004 (p=0.934) | -0.064 (p=0.140) | -0.161\*\*\* (p<0.001) |
| 2015cohort – CA-2 | 2016 | 574 | 83.1% | 16.9% | -0.135\*\* (p=0.001) | -0.093 (p=0.027) | -0.099 (p=0.019) |
| 2014cohort – CA-3 | 2016 | 535 | 86.2% | 13.8% | -0.005 (p=0.910) | 0.020 (p=0.648) | 0.012 (p=0.784) |
| 2013cohort – PGY-5 fellows | 2016 | 313 | 82.4% | 17.6% | -0.079 (p=0.167) | 0.021 (p=0.714) | -0.031 (p=0.596) |
| 2013cohort – PGY-5 practicing Anesthesiologists | 2016 | 227 | 89.9% | 10.1% | -0.025 (p=0.709) | -0.102 (p=0.131) | -0.183\*\* (p=0.007) |

2013 cohort indicated by blue, 2014 cohort indicated by green, 2015 cohort indicated by yellow, and 2016 cohort indicated by white.

\*\*p <0.01 \*\*\*p <0.001

Supplemental Table 6b. Number of Children and Correlations with Burnout, Distress and Depression by Cohort-year

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cohort | Year | N | Number of Children | | | | | Correlation with Burnout (MBI) | Correlation with In distress (PWBI) | Correlation with Significant Depression (HANDS) |
| None | 1 | 2 | 3 | 4-6 |  |  |  |
| 2013cohort – CA-1 | 2013 | 324 | 75.9% | 9.6% | 8.3% | 4.0% | 2.2% | -0.055 (p=0.333) | 0.022 (p=0.701) | -0.056 (p=0.331) |
| 2014cohort – CA-1 | 2014 | 258 | 79.1% | 9.3% | 8.5% | 1.9% | 1.2% | -0.209\*\* (p=0.001) | -0.051 (p=0.429) | -0.100 (p=0.122) |
| 2013cohort – CA-2 | 2014 | 555 | 73.3% | 12.4% | 9.5% | 3.2% | 1.4% | -0.049 (p=0.263) | -0.017 (p=0.687) | -0.115\*\* (p=0.008) |
| 2015cohort – CA-1 | 2015 | 525 | 77.5% | 11.8% | 7.6% | 2.3% | 0.8% | -0.066 (p=0.138) | -0.046 (p=0.310) | -0.072 (p=0.112) |
| 2014cohort – CA-2 | 2015 | 434 | 75.8% | 12.4% | 7.8% | 2.5% | 1.4% | -0.087 (p=0.075) | -0.013 (p=0.790) | -0.020 (p=0.695) |
| 2013cohort – CA-3 | 2015 | 661 | 61.1% | 17.7% | 12.4% | 5.6% | 3.2% | -0.105\*\* (p=0.008) | 0.036 (p=0.374) | -0.090 (p=0.026) |
| 2016cohort – CA-1 | 2016 | 528 | 76.3% | 11.0% | 7.8% | 4.0% | 0.9% | -0.136\*\* (p=0.002) | -0.050 (p=0.261) | -0.033 (p=0.456) |
| 2015cohort – CA-2 | 2016 | 559 | 72.1% | 13.6% | 10.4% | 2.1% | 1.8% | -0.084 (p=0.051) | -0.036 (p=0.407) | -0.042 (p=0.332) |
| 2014cohort – CA-3 | 2016 | 510 | 65.9% | 18.2% | 9.6% | 4.3% | 2.0% | -0.182\*\*\* (p<0.001) | -0.023 (p=0.610) | -0.035 (p=0.435) |
| 2013cohort – PGY-5 fellows | 2016 | 302 | 63.6% | 18.5% | 11.9% | 4.6% | 1.3% | -0.130 (p=0.026) | -0.073 (p=0.212) | -0.151\*\* (p=0.010) |
| 2013cohort – PGY-5 practicing Anesthesiologists | 2016 | 224 | 51.3% | 18.8% | 13.8% | 7.6% | 8.5% | -0.130 (p=0.056) | -0.099 (p=0.145) | -0.155 (p=0.023) |

2013 cohort indicated by blue, 2014 cohort indicated by green, 2015 cohort indicated by yellow, and 2016 cohort indicated by white.

\*\*p <0.01 \*\*\*p <0.001

Supplemental Table 6c. Whether Speaking a Home Language Other Than English and Correlations with Burnout, Distress and Depression by Cohort-year

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Cohort | Year | N | Speaking a Home Language Other Than English | | Correlation with Burnout (MBI) | Correlation with In distress (PWBI) | Correlation with Significant Depression (HANDS) |
| Yes | No |
| 2013cohort – CA-1 | 2013 | 332 | 7.5% | 92.5% | -0.057 (p=0.305) | 0.102 (p=0.065) | 0.116 (p=0.039) |
| 2014cohort – CA-1 | 2014 | 259 | 8.5% | 91.5% | -0.056 (p=0.385) | 0.022(p=0.728) | -0.039 (p=0.547) |
| 2013cohort – CA-2 | 2014 | 563 | 7.1% | 92.9% | -0.050 (p=0.249) | 0.028 (p=0.509) | 0.074 (p=0.089) |
| 2015cohort – CA-1 | 2015 | 527 | 8.3% | 91.7% | -0.137\*\* (p=0.002) | -0.050 (p=0.264) | -0.031 (p=0.488) |
| 2014cohort – CA-2 | 2015 | 451 | 7.3% | 92.7% | -0.029 (p=0.553) | 0.001 (p=0.991) | -0.070 (p=0.157) |
| 2013cohort – CA-3 | 2015 | 666 | 8.0% | 92.0% | -0.053 (p=0.180) | -0.071 (p=0.076) | 0.004 (p=0.929) |
| 2016cohort – CA-1 | 2016 | 529 | 9.3% | 90.7% | -0.052 (p=0.239) | -0.038 (p=0.392) | -0.004 (p=0.929) |
| 2015cohort – CA-2 | 2016 | 565 | 6.0% | 94.0% | -0.043 (p=0.312) | -0.043 (p=0.312) | 0.025 (p=0.564) |
| 2014cohort – CA-3 | 2016 | 517 | 5.4% | 94.6% | -0.035 (p=0.433) | 0.020 (p=0.658) | 0.047 (p=0.292) |
| 2013cohort – PGY-5  fellows | 2016 | 306 | 6.5% | 93.5% | -0.059 (p=0.308) | -0.003 (p=0.965) | -0.092 (p=0.116) |
| 2013cohort – PGY-5 practicing Anesthesiologists | 2016 | 223 | 5.4% | 94.6% | -0.095 (p=0.160) | -0.101 (p=0.137) | -0.085 (p=0.218) |

2013 cohort indicated by blue, 2014 cohort indicated by green, 2015 cohort indicated by yellow, and 2016 cohort indicated by white.

\*\*p <0.01

Supplemental Table 6d. Maintaining Work-life Balance and Correlations with Burnout, Distress and Depression by Cohort-year

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cohort | Year | N | Maintaining Work-life Balance | | | | | Correlation with Burnout (MBI) | Correlation with In distress (PWBI) | Correlation with Significant Depression (HANDS) |
| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
| 2013cohort – CA-1 | 2013 | 339 | 27.4% | 41.9% | 18.9% | 10.6% | 1.2% | -0.239\*\*\*  (p<0.001) | -0.307\*\*\*  (p<0.001) | -0.267\*\*\*  (p<0.001) |
| 2014cohort – CA-1 | 2014 | 260 | 35.8% | 46.2% | 10.0% | 7.3% | 0.8% | -0.180\*\*  (p=0.005) | -0.348\*\*\*  (p<0.001) | -0.189\*\*  (p=0.003) |
| 2013cohort – CA-2 | 2014 | 569 | 30.8% | 41.3% | 18.1% | 7.7% | 2.1% | -0.260\*\*\*  (p<0.001) | -0.369\*\*\*  (p<0.001) | -0.339\*\*\*  (p<0.001) |
| 2015cohort – CA-1 | 2015 | 529 | 32.7% | 41.6% | 16.4% | 6.4% | 2.8% | -0.251\*\*\*  (p<0.001) | -0.344\*\*\*  (p<0.001) | -0.313  (p<0.001) |
| 2014cohort – CA-2 | 2015 | 446 | 37.7% | 35.2% | 16.4% | 9.4% | 1.3% | -0.326\*\*\*  (p<0.001) | -0.412\*\*\*  (p<0.001) | -0.397\*\*\*  (p<0.001) |
| 2013cohort – CA-3 | 2015 | 673 | 39.5% | 38.3% | 13.4% | 7.3% | 1.5% | -0.287\*\*\*  (p<0.001) | -0.360\*\*\*  (p<0.001) | -0.284\*\*\*  (p<0.001) |
| 2016cohort – CA-1 | 2016 | 543 | 29.7% | 40.0% | 16.6% | 10.1% | 3.7% | -0.295\*\*\*  (p<0.001) | -0.445\*\*\*  (p<0.001) | -0.380\*\*\*  (p<0.001) |
| 2015cohort – CA-2 | 2016 | 572 | 29.0% | 42.0% | 13.8% | 11.5% | 3.7% | -0.260\*\*\*  (p<0.001) | -0.341\*\*\* (p<0.001) | -0.341\*\*\*  (p<0.001) |
| 2014cohort – CA-3 | 2016 | 532 | 29.9% | 40.4% | 16.4% | 10.3% | 3.0% | -0.332\*\*\*  (p<0.001) | -0.398\*\*\*  (p<0.001) | -0.339\*\*\*  (p<0.001) |
| 2013cohort – PGY-5 fellows | 2016 | 312 | 33.0% | 34.6% | 17.9% | 10.9% | 3.5% | -0.220\*\*\*  (p<0.001) | -0.365\*\*\*  (p<0.001) | -0.337\*\*\*  (p<0.001) |
| 2013cohort – PGY-5 practicing Anesthesiologists | 2016 | 225 | 37.3% | 44.9% | 12.9% | 4.9% | 0% | -0.226\*\*\*  (p<0.001) | -0.356\*\*\*  (p<0.001) | -0.258\*\*\*  (p<0.001) |

2013 cohort indicated by blue, 2014 cohort indicated by green, 2015 cohort indicated by yellow, and 2016 cohort indicated by white.

\*\*p <0.01 \*\*\*p <0.001

Supplemental Table 6e. Having a Strong Social System and Correlations with Burnout, Distress and Depression by Cohort-year

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cohort | Year | N | Having a Strong Social System | | | | | Correlation with Burnout (MBI) | Correlation with In distress (PWBI) | Correlation with Significant Depression (HANDS) |
| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
| 2013cohort – CA-1 | 2013 | 338 | 58.3% | 32.5% | 5.3% | 3.0% | 0.9% | -0.198\*\*\* (p<0.001) | -0.203\*\*\*  (p<0.001) | -0.266\*\*\*  (p<0.001) |
| 2014cohort – CA-1 | 2014 | 259 | 63.3% | 25.9% | 7.7% | 1.9% | 1.2% | -0.053 (p=0.417) | -0.128  (p=0.048) | -0.145  (p=0.024) |
| 2013cohort – CA-2 | 2014 | 568 | 62.5% | 31.0% | 4.6% | 1.6% | 0.4% | -0.145\*\*\* (p<0.001) | -0.148\*\*\* (p<0.001) | -0.198\*\*\* (p<0.001) |
| 2015cohort – CA-1 | 2015 | 530 | 60.8% | 30.0% | 6.0% | 2.3% | 0.9% | -0.236\*\*\* (p<0.001) | -0.273\*\*\*  (p<0.001) | -0.308\*\*\*  (p<0.001) |
| 2014cohort – CA-2 | 2015 | 446 | 63.9% | 28.0% | 4.7% | 2.7% | 0.7% | -0.188\*\*\* (p<0.001) | -0.185\*\*\* (p<0.001) | -0.231\*\*\*  (p<0.001) |
| 2013cohort – CA-3 | 2015 | 669 | 66.8% | 25.6% | 4.9% | 2.1% | 0.6% | -0.187\*\*\* (p<0.001) | -0.208\*\*\* (p<0.001) | -0.222\*\*\*  (p<0.001) |
| 2016cohort – CA-1 | 2016 | 545 | 57.8% | 29.4% | 9.9% | 2.2% | 0.7% | -0.211\*\*\* (p<0.001) | -0.305\*\*\* (p<0.001) | -0.338\*\*\* (p<0.001) |
| 2015cohort – CA-2 | 2016 | 575 | 55.5% | 35.1% | 6.3% | 2.3% | 0.9% | -0.184\*\*\* (p<0.001) | -0.287\*\*\* (p<0.001) | -0.285\*\*\* (p<0.001) |
| 2014cohort – CA-3 | 2016 | 530 | 57.9% | 31.1% | 6.8% | 3.4% | 0.8% | -0.201\*\*\* (p<0.001) | -0.276\*\*\*  (p<0.001) | -0.285\*\*\*  (p<0.001) |
| 2013cohort – PGY-5 fellows | 2016 | 311 | 58.2% | 30.9% | 7.7% | 2.6% | 0.6% | -0.155\*\* (p=0.006) | -0.205\*\*\* (p<0.001) | -0.173\*\* (p=0.003) |
| 2013cohort – PGY-5 practicing Anesthesiologists | 2016 | 224 | 62.1% | 30.8% | 5.8% | 0.9% | 0.4% | -0.201\*\* (p=0.003) | -0.259\*\*\* (p<0.001) | -0.257\*\*\* (p<0.001) |

2013 cohort indicated by blue, 2014 cohort indicated by green, 2015 cohort indicated by yellow, and 2016 cohort indicated by white.

\*\*p <0.01 \*\*\*p <0.001

Supplemental Table 6f. Student Loan and Correlations with Burnout, Distress and Depression by Cohort-year

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Cohort | Year | N | Percentage Owing Student Loan | Median Student Loan ($)  (Mean ± SD) | Correlation with Burnout (MBI) | Correlation with In distress (PWBI) | Correlation with Significant Depression (HANDS) |
| 2013cohort – CA-1 | 2013 | 326 | 72.7% | 200,000 (196,021±97,190) | 0.039  (p=0.492) | 0.021  (p=0.714) | 0.019  (p=0.735) |
| 2014cohort – CA-1 | 2014 | 243 | 77.0% | 201,000  (222,428±103,810) | -0.098  (p=0.135) | -0.068  (p=0.298) | -0.015  (p=0.817) |
| 2013cohort – CA-2 | 2014 | 542 | 80.6% | 200,000  (210,195±108,074) | -0.004  (p=0.924) | 0.081  (p=0.063) | 0.063  (p=0.153) |
| 2015cohort – CA-1 | 2015 | 503 | 78.7% | 210,000  (215,898±115,262) | 0.013  (p=0.781) | 0.054  (p=0.229) | 0.116  (p=0.010) |
| 2014cohort – CA-2 | 2015 | 416 | 78.8% | 220,000  (223,435±104,887) | -0.079  (p=0.109) | 0.086  (p=0.085) | 0.069  (p=0.169) |
| 2013cohort – CA-3 | 2015 | 637 | 78.8% | 220,000  (224,909±113,365) | -0.003  (p=0.939) | 0.099  (p=0.013) | 0.100  (p=0.013) |
| 2016cohort – CA-1 | 2016 | 529 | 76.9% | 250,000  (236,479±114,622) | -0.020  (p=0.649) | 0.023  (p=0.602) | 0.037  (p=0.404) |
| 2015cohort – CA-2 | 2016 | 557 | 81.1% | 235,000  (238,390±124,525) | 0.139\*\*  (p=0.001) | 0.060  (p=0.164) | 0.079  (p=0.067) |
| 2014cohort – CA-3 | 2016 | 517 | 80.5% | 250,000  (243,065±125,869) | 0.058  (p=0.194) | 0.093  (p=0.037) | 0.076  (p=0.088) |
| 2013cohort – PGY-5 fellows | 2016 | 300 | 74.3% | 250,000  (247,723±126,875) | 0.019  (p=0.747) | 0.160\*\*  (p=0.006) | 0.153\*\*  (p=0.010) |
| 2013cohort – PGY-5 practicing Anesthesiologists | 2016 | 226 | 78.3% | 230,000  (239,785±117,577) | -0.094  (p=0.164) | 0.046  (p=0.502) | -0.062  (p=0.364) |

2013 cohort indicated by blue, 2014 cohort indicated by green, 2015 cohort indicated by yellow, and 2016 cohort indicated by white.

\*\*p <0.01