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Analysis of the Year 2 Questionnaire: Predictions of Increased Burnout Raise Concern for the Health of Medical Students

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ANALYSIS OF THE YEAR 2 QUESTIONNAIRE: PREDICTIONS OF INCREASED BURNOUT
RAISE CONCERN FOR THE HEALTH OF MEDICAL STUDENTS

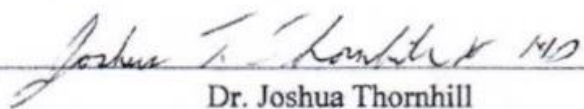
By

Marco Garcia

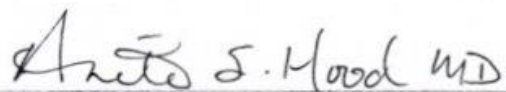
Submitted in Partial Fulfillment
of the Requirements for
Graduation with Honors from the
South Carolina Honors College

May 2021

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Thesis Summary

Well-being of medical doctors is essential for physicians, the healthcare environment, and treatment of patients. Unfortunately, burnout in this demanding profession has become a prevalent issue. This psychological phenomenon presents as three components: emotional exhaustion, depersonalization, and reduced personal accomplishment. Burnout can diminish professionalism and health care quality, promote medical error, and contribute negatively to physician's personal lives. Past studies implicate that burnout in physicians is most likely rooted before they even start practicing medicine. Specifically, feelings of burnout start appearing while they are in medical school. This project explores this proposition via statistical analysis of the relatively new Year 2 Questionnaire (Y2Q). Administered nationally by the Association of American Medical Colleges (AAMC), this questionnaire surveys second year medical students (M2) about their levels of stress, fatigue, exhaustion, disengagement, and factors that may be contributing to these issues. This study focuses on students at the University of South Carolina School of Medicine – Columbia who completed the Y2Q between 2014 - 2018. Trends demonstrated that the overall quality of life of medical students is slowly decreasing at University of South Carolina School of Medicine – Columbia along with expected increase in feelings of disengagement for medical students of all medical schools. However, the analyses demonstrate consistent middle range scores for financial concern, perceived stress, and exhaustion, as there is not enough evidence to claim that there will be a change in these components of the Y2Q. Additionally, the level of support from family and friends is consistently high and expected to increase over time for all medical schools. Although more research needs to be done to support this evidence, these findings raise concern, as medical schools try to identify and address issues that may be contributing to burnout. To confirm these

new findings, a focus group of medical students from the University of South Carolina School of Medicine - Columbia were interviewed. In addition, literature research on the factors and implications of medical student burnout were executed. Many proposed solutions from the literature emphasize the importance of community within the medical school, consistency between what is taught in the classroom and what happens in the hospital, and that the practice of proper stress coping mechanisms is vital to the health of medical students and for combatting burnout.

Introduction

Stress is essential and inevitable to life. Stress is defined as the importance, significance, or emphasis placed on something (Bruce, 2009). Although stress tends to be viewed generally as a negative feeling, it is important for preventing boredom and frustration. There are three kinds of stress: positive, neutral, and negative. Positive stress, or eustress, may be an effect of an exciting new change in life, such as having a new baby, starting a new job, or moving to a new city. An example of neutral stress, also known as neustress, would be sympathizing for someone else's misfortunes, such as a bad test grade or financial troubles. Negative stress, or distress, is caused by unfortunate circumstances, such as death of a loved one, intense exchanges at work, or relationship difficulties. While society tends to focus on the effects of negative stress, all forms of stress can present itself in many different ways. Some of these signs of stress include tiredness, irritability, distraction, indecisiveness, poor concentration, hopelessness, and other hindering emotions. These signs of stress are manifested in a person's life as arriving late, calling in sick, leaving early, lack of motivation, emotional detachment, poor sleep, substance abuse, carelessness, overspending, and more (Bruce, 2009). Clearly, when someone experiences too much stress, daily routines become inefficient. Stress also has a strong correlation with burnout.

Burnout is "an experience of physical, emotional, and mental exhaustion caused by long-term involvement in situations that are emotionally demanding" (Kuremyr, et al., 1994). It is presented as three components: emotional exhaustion, depersonalization, and reduced personal accomplishment. Emotional exhaustion is characterized by a lack of energy (Maslach, 2008). Depersonalization reflects a cynical attitude, indifference, and detachment from one's goals and the goals of the company or organization he or she works for (Maslach, 2008). If one were to

achieve goals despite depersonalization, he or she still experiences reduced personal accomplishment, which is the tendency to evaluate oneself or one's competences indifferently or negatively (Maslach, 2008). Burnout and stress negatively impact a person, as someone who experiences these psychological phenomena cannot function properly in their work or personal lives.

Too much stress and burnout in a physician's life poses a large threat not only to the physician but also to the multitude of patients that the physician treats. In the health care field, the insurmountable amount of stress is inevitable. The general public does not realize the high demands of this job and that physician burnout subsequently diminishes health care quality (Moutinho, et al., 2016). This high amount of stress causes decreased attention and memory, reduced problem-solving, and reduced ability to establish strong doctor-patient relationships (Salam, 2019). These skills are crucial in the medical field, and without these, these hindrances can erode professionalism, encourage medical error, and increase thoughts of suicide.

Unfortunately, physician burnout has become a prevalent problem, and many researchers are trying to find the root of this issue and discover tactics to fight this mental health epidemic.

While mental health experts emphasize and advocate self-care and reduce the stigma of getting help for burnout and stress, availability of these services along with precious time are limited for physicians. Furthermore, the high demands and constant tasks normalize the stresses of this medical career. This perception of stress reinforces the idea that the physician must simply keep working, as others view pausing or completely stopping would express a lack of commitment to the career and his or her patients. Many studies are finding data implicating that feelings of too much stress and burnout are occurring before physicians even begin practicing medicine following residency and fellowship (Dyrbye, 2014). Moreover, research shows that burnout is

already evident and residency, further implying that feelings of burnout are initiated during medical school or possibly before this training period (Dyrbye, 2014).

There is not much research on medical student burnout, as this project aims to explore this topic and find potential causes of this to prevent further feelings of stress and ensure quality health care. Studies have shown that medical students experience more fatigue and burnout than the general population (Moutinho, et al., 2016). Additionally, the medical school education is much more rigorous compared to other graduate and professional degrees, such as dentistry and law school (Salam, 2019). Furthermore, research studies claim that the top three major stress sources of medical students are the academic pressures of the education, social issues within the medical school, family, and friends, and financial worries. While many of these studies, however, only observe medical schools individually, the finding and trends of stress and burnout are similar.

To find more consistencies in these findings, the Association of American Medical Colleges created the Year 2 Questionnaire, a survey administered to second-year medical students (M2) to self-report their well-being and express their level of satisfaction with their medical education (Association of American Medical Colleges, 2019). This information is critical for AAMC, medical schools, and other organizations so that issues are identified, addressed, and handled to ensure the best possible health for these potential physicians and their future patients. This survey is still relatively new, as it was created in 2014. Because this questionnaire is still young, many of its results have not been analyzed to find trends in the data. This project aims to accomplish this and compare the national averages of medical schools and the averages of the University of South Carolina Medical School – Columbia.

Administered by the Association of American Medical Colleges (AAMC), The Medical School Year Two Questionnaire (Y2Q) is given to all second year medical students, as this survey seeks information from this group to improve medical education by addressing strong points and issues within the medical education experience and the feelings of burnout of the students (See Appendix A [Association of American Medical Colleges, 2019]). The Y2Q is separated into eight parts: medical education experiences, curriculum, educational environment (part 1), personal characteristics, career plans and interests, well-being, education environment (part 2), and background education. Demographic information, such as gender, marital status, age, and race were collected each year also (See Appendix B [Association of American Medical Colleges, 2019]). Students can elect to take this survey. Additionally, the survey itself is thorough when asking students questions. The Y2Q provides response options that include “never”, “almost never,” “sometimes,” “fairly often,” and “very often.” Other questions, such as questions pertaining to well-being, include responses like “strongly disagree,” “disagree,” “agree,” and “strongly agree.”

Responses to the survey are used to calculate scores for the Perceived Stress Scale (PSS-4), Oldenburg Burnout Inventory for Medical Students (OLBI-MS: Disengagement and OLBI-MS: Exhaustion), and Quality of Life (QOL) and its subcategories. These subcategories include Level of Fatigue, Level of Financial Concerns, and Level of Support from Family and Friends. The Perceived Stress Scale is exactly what it is named: students report how much stress they believe experience (Perera, et al., 2017). The overall Quality of Life is the general well-being of the students, considering both positive and negative features (Burckhardt & Anderson, 2003). Its subcategories, Level of Support from Family and Friends and Level of Financial Concerns, are self-reported feelings, as students are asked directly in the Y2Q to rank how much of each

component they experience (See Appendix A [Association of American Medical Colleges, 2019]). It is notable to realize the difference between QOL – Level of Fatigue and OLBI-MS: Exhaustion. QOL – Level of Fatigue pertains to physical tiredness while OLBI-MS: Exhaustion has to do with emotional and mental tiredness (Donders, et al., 2007). Furthermore, OLBI-MS: Disengagement measures feelings of satisfaction with one’s work and emotional dissociation. The AAMC clearly expresses how these scores are calculated; this method of scoring is not shared with medical students to prevent biased responses (See Appendix A [Association of American Medical Colleges, 2019]). The AAMC reported the mean scores for each component for the University of South Carolina School of Medicine and all medical schools (See Appendix C and D [Association of American Medical Colleges, 2019]).

This information contributes to bettering medical education research, national benchmarking such as the STEP1 and STEP 2 exams, and the improvement of programs within the medical school (Association of American Medical Colleges, 2019). At the end of the survey, there is also a free response for students to identify medical school strengths and areas for improvement along with survey feedback (See Appendix A [Association of American Medical Colleges, 2019]). Using the responses to these questions, the AAMC reported important selected findings. These selected findings include overall satisfaction with medical school education, in-person versus virtual classroom attendance, student mistreatment policy awareness, observation of student and faculty behavior, and career plans and work/life balance. To ensure privacy of each individual report, only group averages were reported for the national data and the University of South Carolina School of Medicine – Columbia.

This project aims to seek any significant findings or changes in the health of second-year medical students in the years 2014-2018.

Methods

The average scores of Quality of Life, QOL subcategories, PSS-4, OLBI-MS: Disengagement, and OLBI-MS: Exhaustion were used to generate linear regression models and bar graphs via and Statistical Analysis System Studio (SAS Studio) and Microsoft Excel. These scores can be found in Appendices C and D (Association of American Medical Colleges, 2019). These statistical models were created for all medical schools and UofSC SOM. The models include the years 2014-2018 for UofSC SOM, and the national data include the years 2015-2018, as 2014 was not reported by the AAMC. Furthermore, the linear regression models were used to predict trends for medical schools nationally and the local medical school. The bar graphs were used to compare the average scores visually for UofSC SOM and all medical schools. Using this new material, connections between the trends and the selected findings reported by the AAMC were inferred.

To compare these connections and trends, the literary research pertaining to the feelings and actions of medical students along with the effects of burnout in health care was executed. Additionally, focus group of six individuals of medical students from the first, second, third, and fourth years provided valuable personal insight into the data and brought individual perspectives of the satisfaction of medical education and their subsequent feelings. This information further confirmed or rejected the data and selected findings.

Using the information discovered and gathered, this was used to further address and identify strengths and weaknesses in medical education that medical schools can improve. By recognizing patterns of stress and burnout in medical students, these bright individuals can implement steps to prevent any further stress. In the long-term, this will improve health care and ensure its quality.

Table of Contents for Results

	UofSC School of Medicine- Columbia	All Medical Schools	Comparison of UofSC SOM and All Medical Schools
Quality of Life	Figures 1a, 1b (p. 12)	Figures 2a, 2b (p. 13)	Figure A (p. 14)
QOL: Level of Fatigue	Figures 3a, 3b (p. 15)	Figures 4a, 4b (p. 16)	Figure B (p. 17)
QOL: Level of Financial Concerns	Figures 5a, 5b (p. 18)	Figures 6a, 6b (p. 19)	Figure C (p.20)
QOL: Level of Support from Family and Friends	Figures 7a, 7b (p. 21)	Figures 8a, 8b (p. 22)	Figure D (p. 23)
Perceived Stress Scale (PSS-4)	Figures 9a, 9b (p. 24)	Figures 10a, 10b (p. 25)	Figure E (p. 26)
OLBI-MS: Disengagement	Figures 11a, 11b (p. 27)	Figures 12a, 12b (p. 28)	Figure F (p. 29)
OLBI-MS: Exhaustion	Figures 13a, 13b (p. 30)	Figures 14a, 14b (p. 31)	Figure G (p. 32)

Note: All “a” figures are linear regression models, and all “b” figures are parameter estimates.

Results

Quality of Life (QOL)

University of South Carolina School of Medicine – Columbia

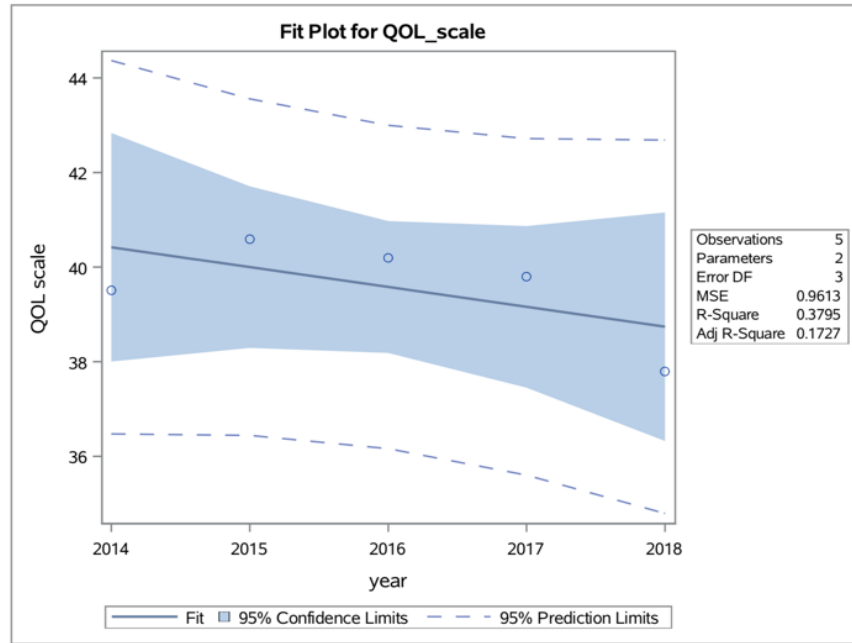


Figure 1a: A linear regression for the Quality of Life (QOL) scale for UofSC SOM was generated. The possible range of scores is 0 to 60; higher scores are correlated with higher quality of life. It is expected that Quality of Life will slowly diminish. The R-square value is 0.3795.

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	886.30000	625.06853	1.42	0.2512
year	year	1	-0.42000	0.31005	-1.35	0.2685

Figure 1b: Parameter estimates were generated to witness the expected decrease in Quality of Life score for the UofSC SOM per year; this shows that if this prediction were to be realized, the score would decrease 0.42 per year. Nevertheless, the p-value is 0.2512 for the year parameter estimate.

All Medical Schools

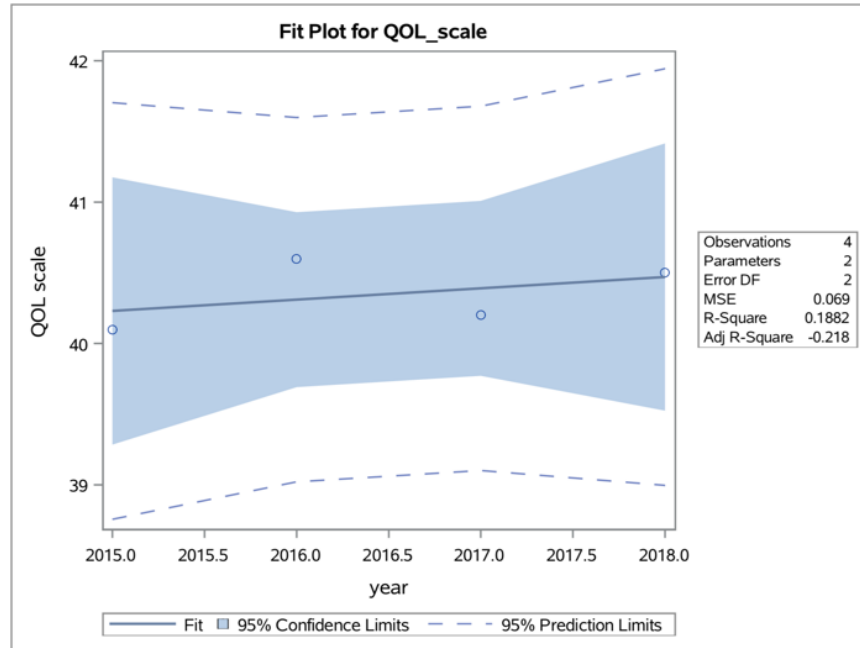


Figure 2a: A linear regression for the Quality of Life (QOL) scale for all US medical schools was generated. The possible range of scores is 0 to 60; higher scores are correlated with higher quality of life. It is expected that Quality of Life will slowly increase. However, the R-square value, 0.1882, is not high enough to consider this prediction significant.

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	-120.97000	236.88515	-0.51	0.6604
year	year	1	0.08000	0.11747	0.68	0.5661

Figure 2b: Parameter estimates were generated to witness the expected decrease in Quality of Life score for all medical schools per year; this shows that if this prediction were to be realized, the score would increase 0.08 per year. The p-value is 0.5661 for the year parameter estimate.

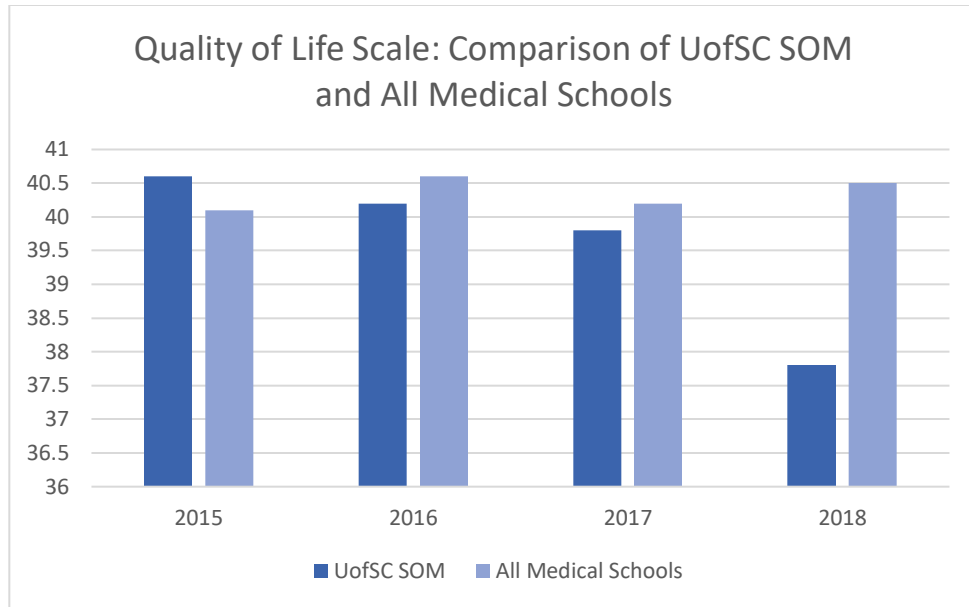


Figure A: This is a comparison of the University of South Carolina School of Medicine – Columbia (UofSC SOM) and all medical schools for the overall Quality of Life scale.

QOL- Level of Fatigue

University of South Carolina School of Medicine – Columbia

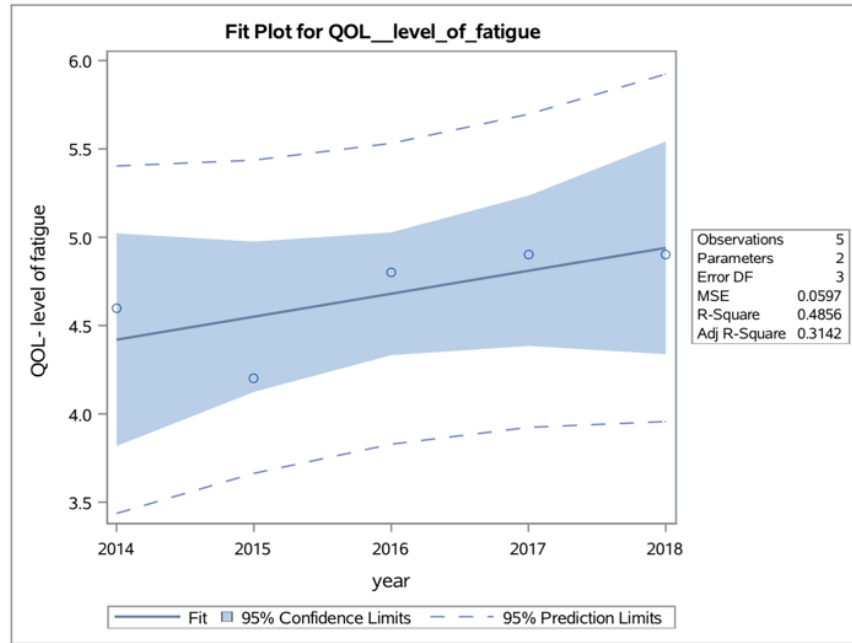


Figure 3a: A linear regression for the QOL- Level of Fatigue scale for UofSC SOM was generated. The possible range of scores is 0 to 10. The score 0 denotes constant tiredness, and the score 10 denotes no fatigue. It is expected that level of fatigue will improve. However, the R-square value is 0.4856.

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	-257.40000	155.72435	-1.65	0.1969
year	year	1	0.13000	0.07724	1.68	0.1910

Figure 3b: Parameter estimates were generated to witness the expected improvement in QOL – Level of Fatigue score for UofSC SOM per year. This shows that if this prediction were to be realized, the score would increase 0.13 per year, denoting a diminishment of feelings of fatigue. The p-value for the and year parameter estimate is 0.1910 respectively.

All Medical Schools

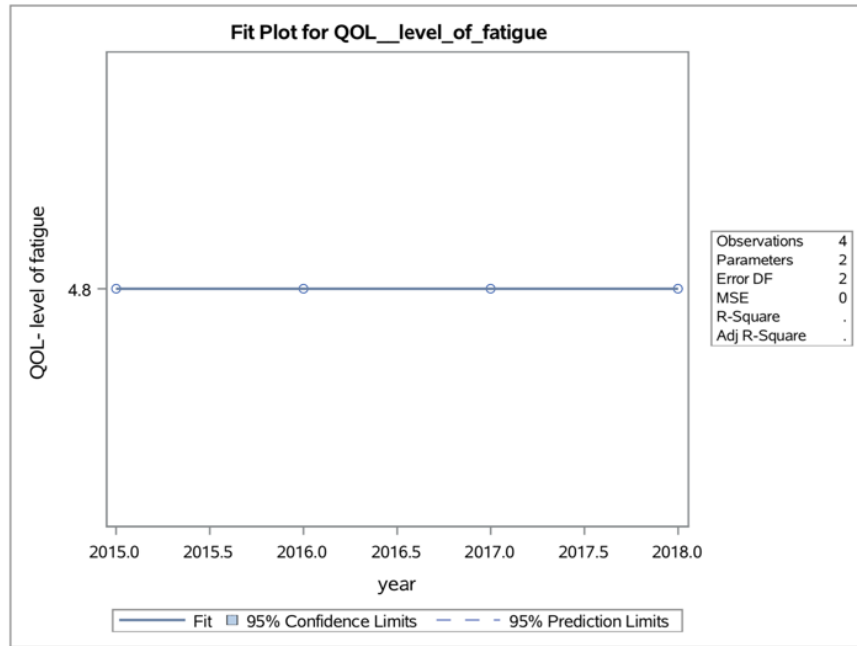


Figure 4a: A linear regression for the QOL – Level of Fatigue scale was generated for all medical schools. The possible range of scores is 0 to 10. The score 0 denotes constant tiredness, and the score 10 denotes no fatigue. QOL – Level of Fatigue scores are the same for each year; no trend is predicted, as noted by an absent R-square value.

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	4.80000	0	Infty	<.0001
year	year	1	0	0	.	.

Figure 4b: No parameter estimates could be generated for the year variable because of the consistency in score for each year of the QOL – Level of Fatigue scale.

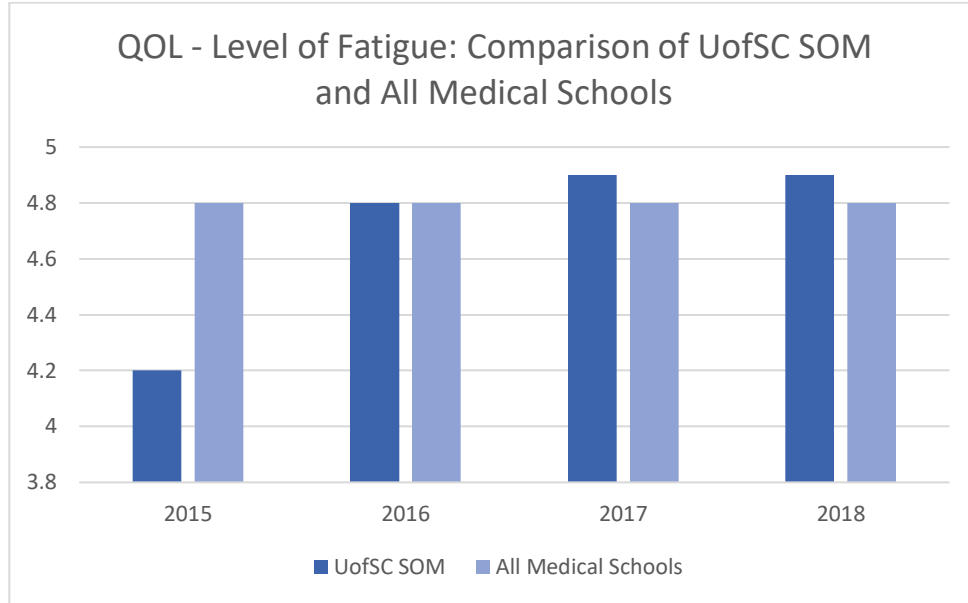


Figure B: This is a comparison of the University of South Carolina School of Medicine – Columbia (UofSC SOM) and all medical schools for the Quality of Life (QOL) – Level of Fatigue.

QOL – Level of Financial Concerns

University of South Carolina School of Medicine – Columbia

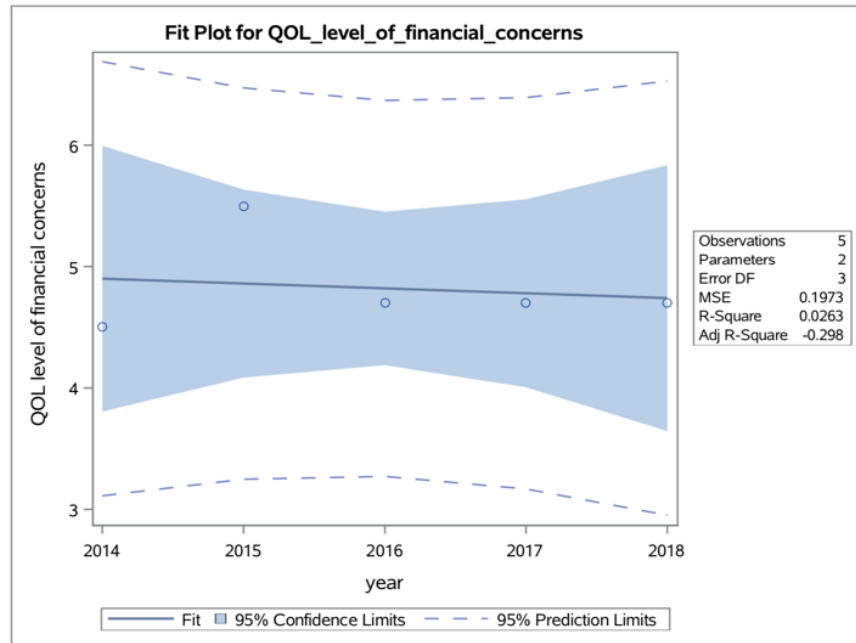


Figure 5a: A linear regression for the QOL – Level of Financial Concerns scale for UofSC SOM was generated. The possible range of scores is 0 to 10. The score 0 denotes constant concerns, and the score 10 denotes no concerns. The scores of QOL – Level of Financial Concerns is consistent; the R-square value is 0.0263.

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	85.46000	283.19844	0.30	0.7825
year	year	1	-0.04000	0.14048	-0.28	0.7944

Figure 5b: Parameter estimates were generated to predict score projections for each year for QOL – Level of Financial Concerns. Although the year parameter estimate is -0.04, the p-value is 0.7944.

All Medical Schools

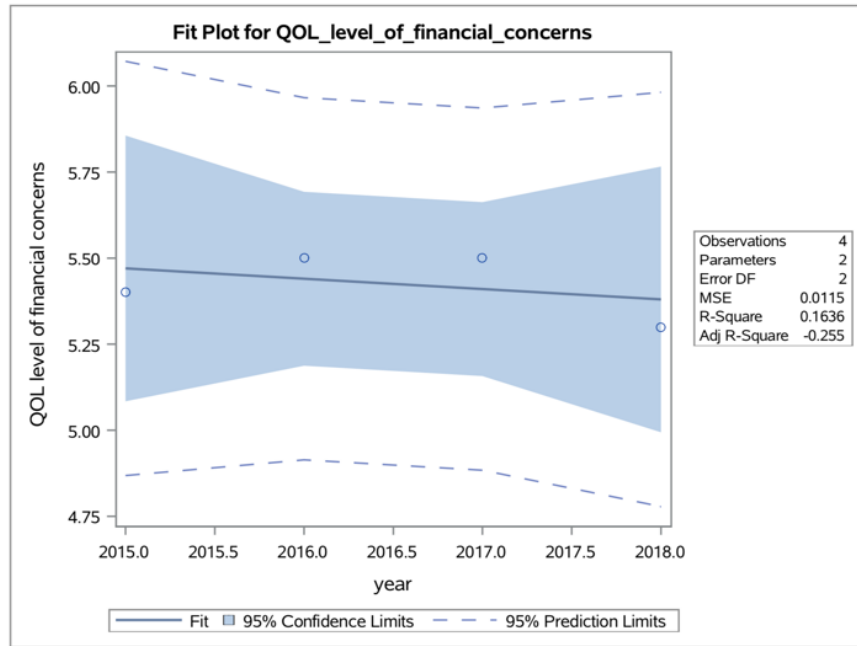


Figure 6a: A linear regression for the QOL – Level of Financial Concerns scale for all medical schools was generated. The possible range of scores is 0 to 10. The score 0 denotes constant concerns, and the score 10 denotes no concerns. The scores of QOL – Level of Financial Concerns is relatively consistent; the R-square value is 0.01636.

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	65.92000	96.70796	0.68	0.5658
year	year	1	-0.03000	0.04796	-0.63	0.5955

Figure 6b: Parameter estimates were generated to predict score projections for each year for QOL – Level of Financial Concerns. Although the year parameter estimate is -0.03, the p-value is 0.5955.

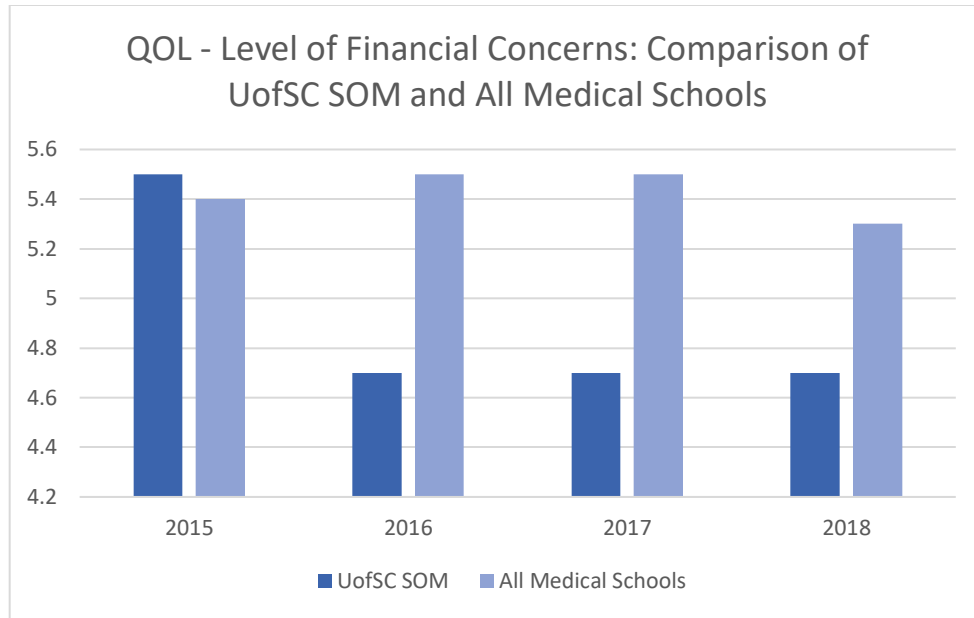


Figure C: This is a comparison of the University of South Carolina School of Medicine – Columbia (UofSC SOM) and all medical schools for the Quality of Life (QOL) – Level of Financial Concerns.

QOL – Level of Support from Family and Friends

University of South Carolina School of Medicine – Columbia

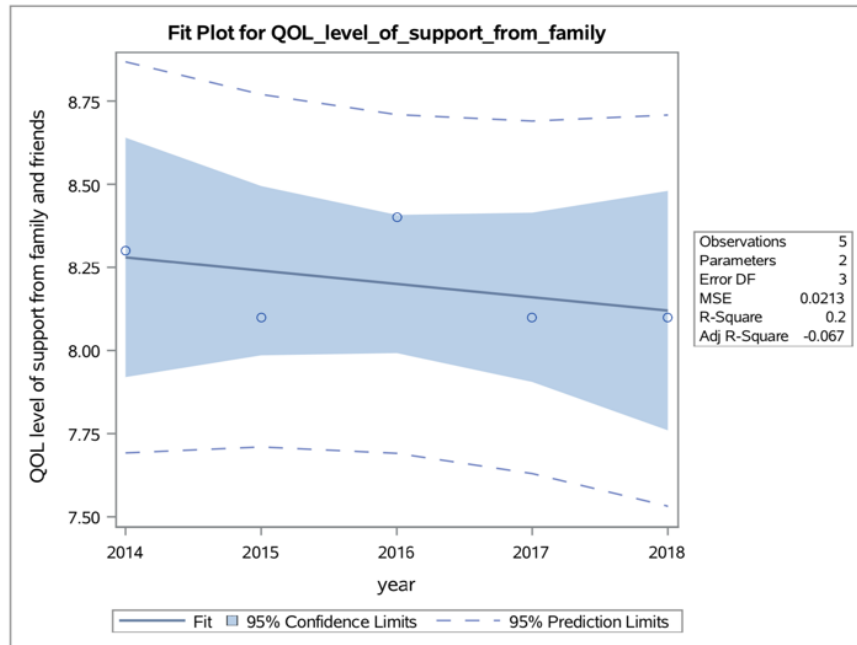


Figure 7a: A linear regression for the QOL – Level of Support from Family and Friends scale for UofSC SOM was generated. The possible range of scores is 0 to 10. The score 0 denotes no support, and the score 10 denotes highest level of support. The scores of QOL – Level of Support from Family and Friends is relatively consistent; the R-square value is 0.2.

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	88.84000	93.11507	0.95	0.4104
year	year	1	-0.04000	0.04619	-0.87	0.4502

Figure 7b: Parameter estimates were generated to predict the change in score of QOL – Level of Support from Family and Friends per year for UofSC SOM. The change is -0.04 per year; however, the p-value is 0.4502.

All Medical Schools

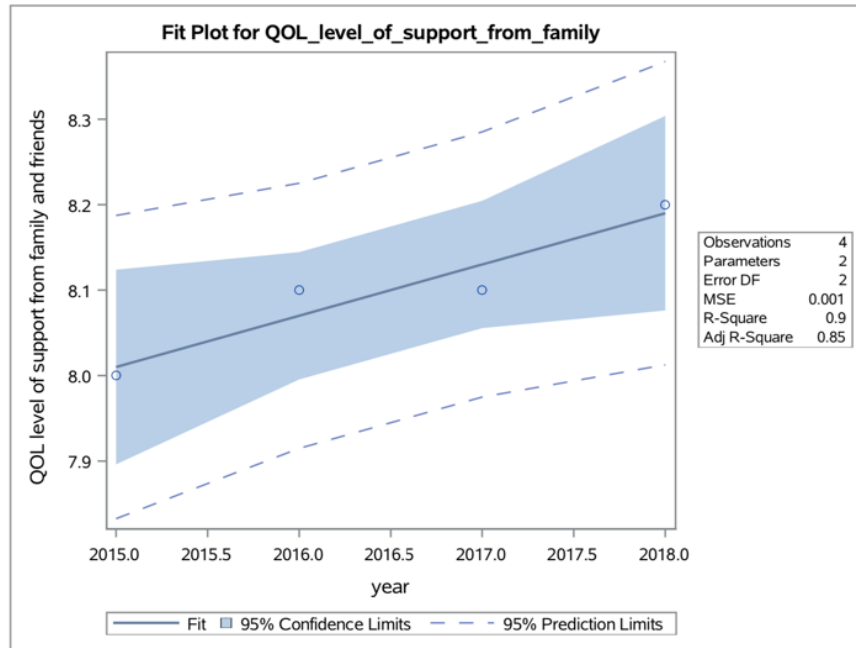


Figure 8a: A linear regression for the QOL – Level of Support from Family and Friends scale for all medical schools was generated. The possible range of scores is 0 to 10. The score 0 denotes no support, and the score 10 denotes highest level of support. The scores of QOL – Level of Support from Family and Friends is predicted to increase; the R-square value is 0.9.

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	-112.89000	28.51762	-3.96	0.0583
year	year	1	0.06000	0.01414	4.24	0.0513

Figure 8b: Parameter estimates were generated to predict the change in score of QOL – Level of Support from Family and Friends per year for all medical schools. The expected increase in support is 0.06 per year, and the p-value is 0.0513.

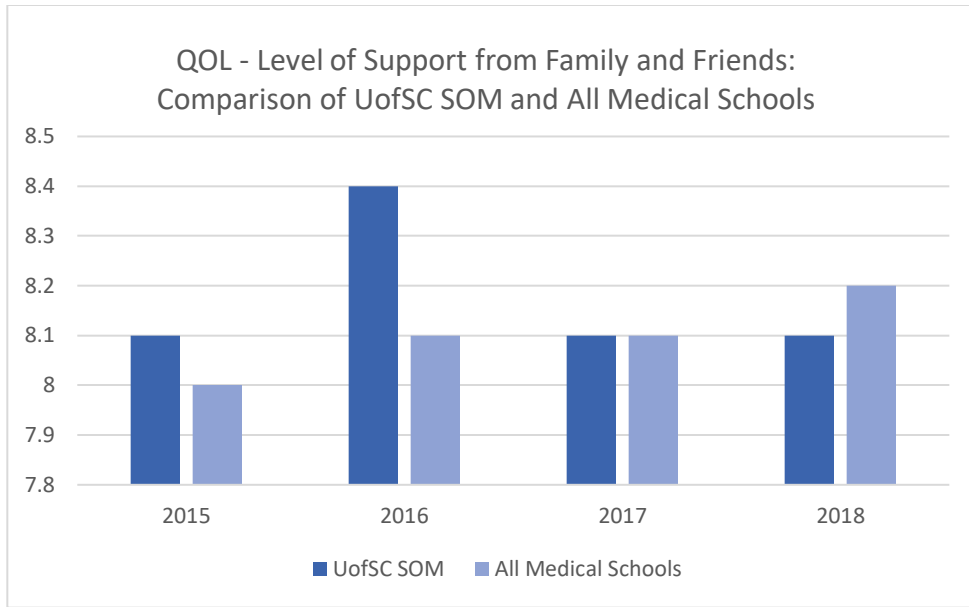


Figure D: This is a comparison of the University of South Carolina School of Medicine – Columbia (UofSC SOM) and all medical schools for the Quality of Life (QOL) – Level of Support from Family and Friends.

Perceived Stress Scale (PSS-4)

University of South Carolina School of Medicine – Columbia

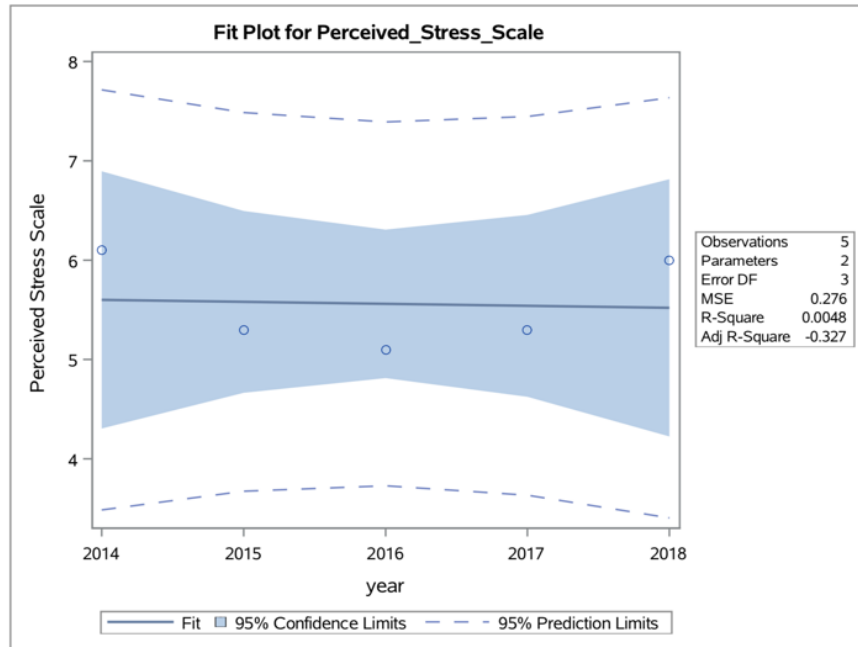


Figure 9a: A linear regression for the Perceived Stress Scale (PSS-4) for UofSC SOM was generated. The possible range of scores is 0 to 16; higher scores are correlated with higher perceived levels of stress. The scores each year for the school of medicine are constant; the R-square value is 0.0048.

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	45.88000	334.92316	0.14	0.8997
year	year	1	-0.02000	0.16613	-0.12	0.9118

Figure 9b: Parameter estimates were generated to see if there will be a change in the PSS-4 scores per year. The yearly parameter estimate is -0.02, but the p-value is 0.9118.

All Medical Schools

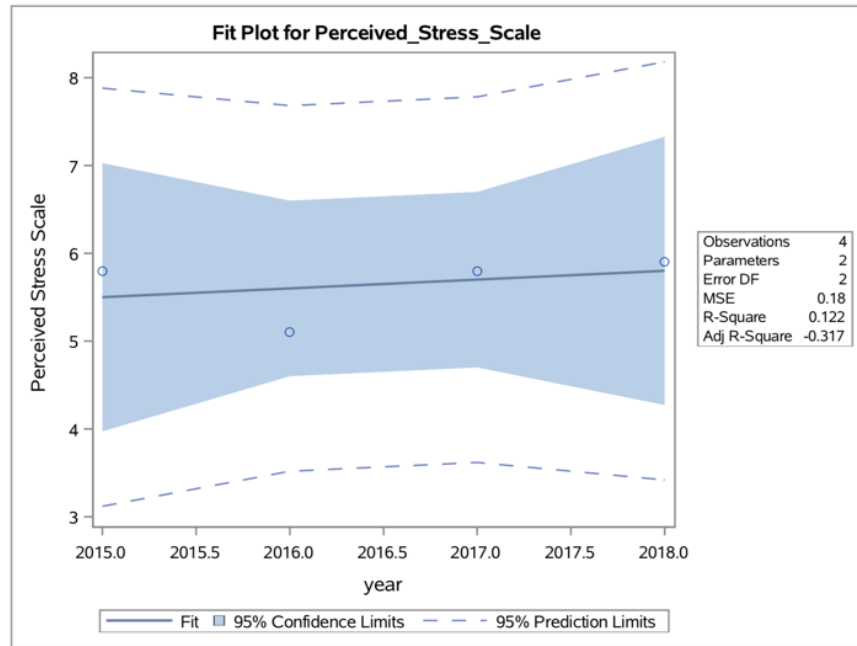


Figure 10a: A linear regression for the Perceived Stress Scale (PSS-4) for all medical schools was generated. The possible range of scores is 0 to 16; higher scores are correlated with higher perceived levels of stress. The scores each year for the school of medicine are constant; the R-square value is 0.122.

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	-196.00000	382.60403	-0.51	0.6594
year	year	1	0.10000	0.18974	0.53	0.6508

Figure 10b: Parameter estimates were generated to see if there will be a change in the PSS-4 scores per year. The yearly parameter estimate is 0.1, but the p-value is 0.6508.

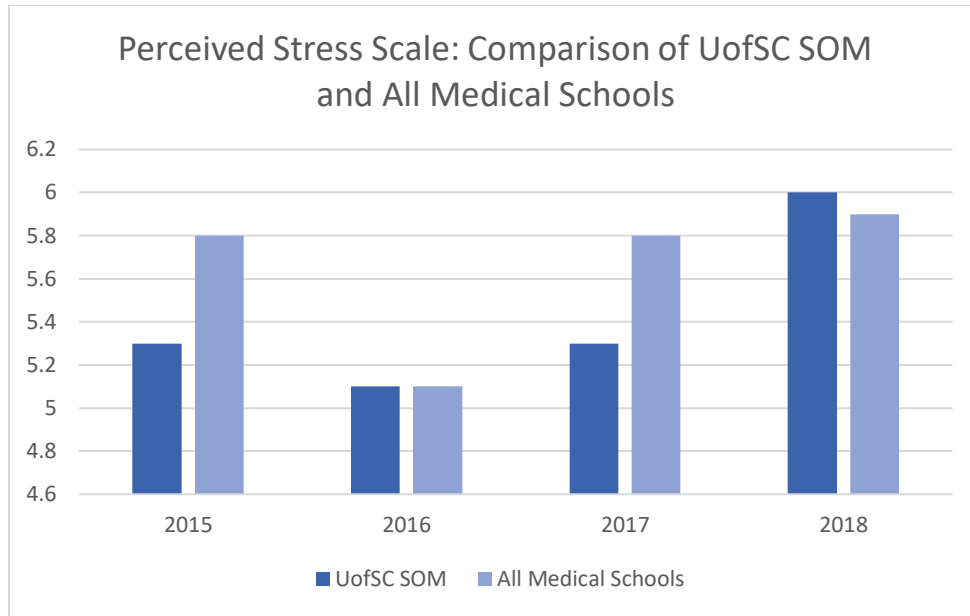


Figure E: This is a comparison of the University of South Carolina School of Medicine – Columbia (UofSC SOM) and all medical schools for the Perceived Stress Scale (PSS-4).

Oldenburg Burnout Inventory for Medical Students: Disengagement (OLBI-MS Disengagement)

University of South Carolina School of Medicine – Columbia

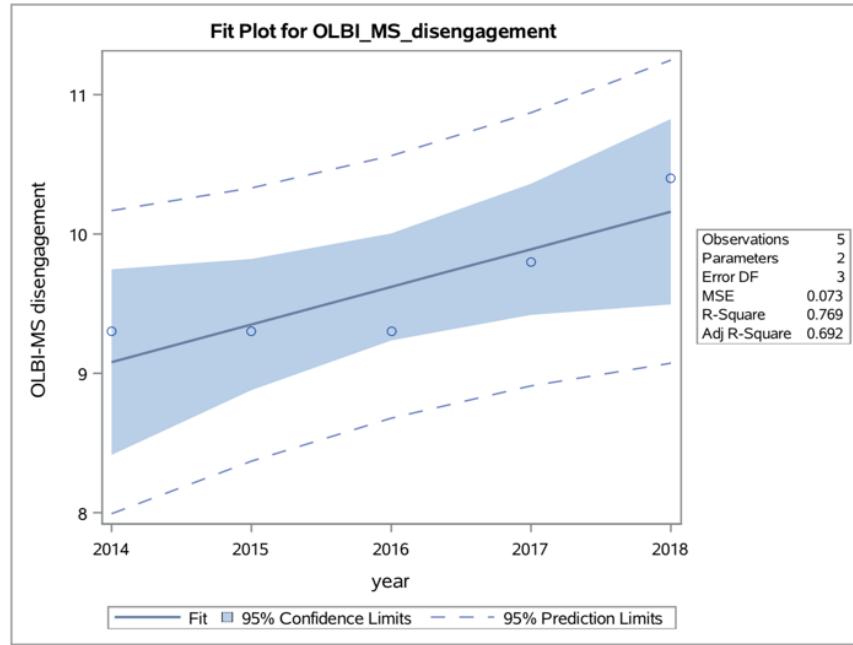


Figure 11a: A linear regression for the Oldenburg Burnout Inventory for Medical Students: Disengagement (OLBI-MS Disengagement) scale for UofSC SOM was generated. The possible range of scores is 0 to 24; higher scores are correlated with higher levels of disengagement. It is expected that disengagement levels will increase. The R-square value is 0.769.

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	-534.70000	172.24716	-3.10	0.0531
year	year	1	0.27000	0.08544	3.16	0.0509

Figure 11b: Parameter estimates were generated to witness the expected increase in OLBI-MS: Disengagement scores for UofSC SOM. There is an expected increase of 0.27 per year; the p-value is 0.0509.

All Medical Schools

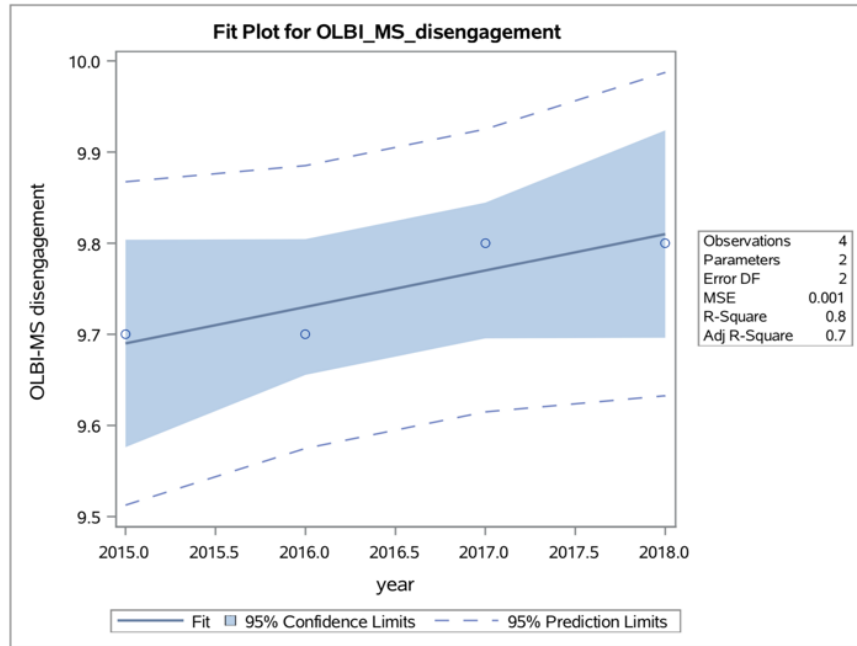


Figure 11a: A linear regression for the Oldenburg Burnout Inventory for Medical Students: Disengagement (OLBI-MS Disengagement) scale for all medical schools was generated. The possible range of scores is 0 to 24; higher scores are correlated with higher levels of disengagement. It is expected that disengagement levels will increase. The R-square value is 0.8.

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	-70.91000	28.51762	-2.49	0.1308
year	year	1	0.04000	0.01414	2.83	0.1056

Figure 11b: Parameter estimates were generated to witness the expected increase in OLBI-MS: Disengagement scores for all medical schools. There is an expected increase of 0.04 per year; the p-value is 0.1056.

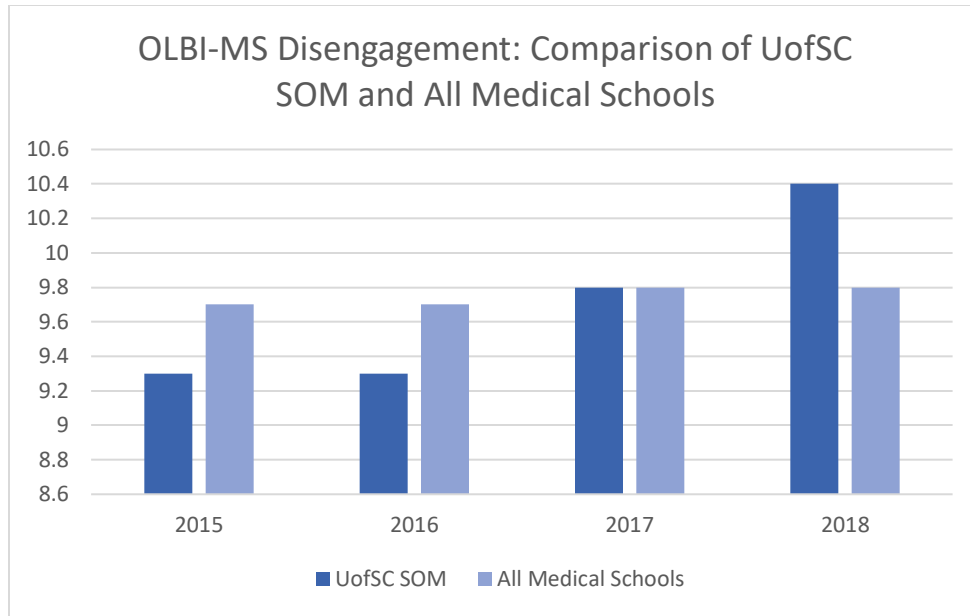


Figure F: This is a comparison of the University of South Carolina School of Medicine – Columbia (UofSC SOM) and all medical schools for the OLBI-MS Disengagement.

Oldenburg Burnout Inventory for Medical Students: Exhaustion (OLBI-MS Exhaustion)

University of South Carolina School of Medicine – Columbia

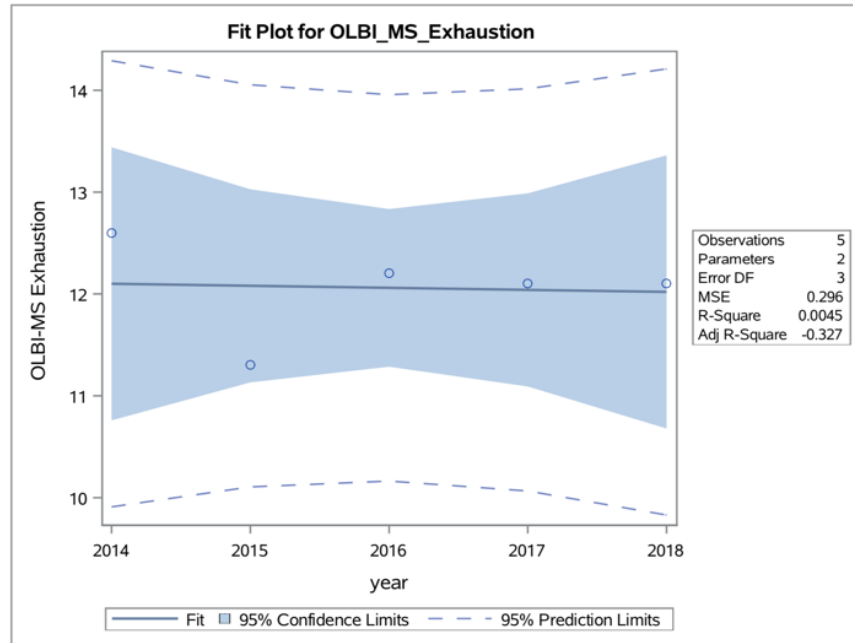


Figure 13a: A linear regression for the Oldenburg Burnout Inventory for Medical Students: Exhaustion (OLBI-MS Exhaustion) scale for UofSC SOM was generated. The possible range of scores is 0 to 24; higher scores are correlated with higher levels of exhaustion. Exhaustion scores have been consistent over these years; the R-square value is 0.0045.

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	52.38000	346.84584	0.15	0.8895
year	year	1	-0.02000	0.17205	-0.12	0.9148

Figure 11b: Parameter estimates were generated to see predicted changes in OLBI-MS: Exhaustion scores for UofSC SOM. The yearly parameter estimate is -0.02, but the p-value is 0.9148.

All Medical Schools

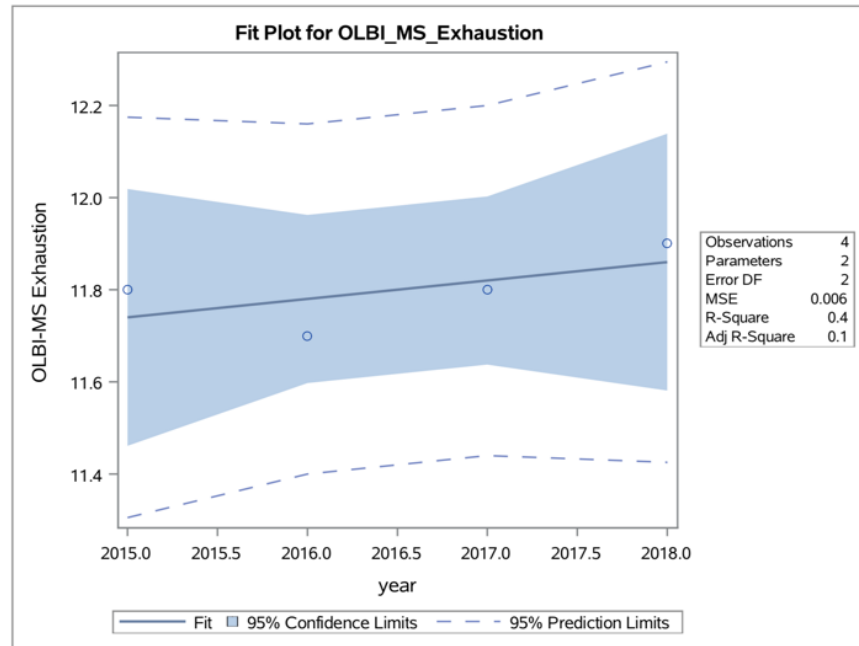


Figure 14a: A linear regression for the Oldenburg Burnout Inventory for Medical Students: Exhaustion (OLBI-MS Exhaustion) scale for all medical schools was generated. The possible range of scores is 0 to 24; higher scores are correlated with higher levels of exhaustion. Exhaustion scores have been slightly increasing every year; the R-square value is 0.4.

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	-68.86000	69.85362	-0.99	0.4282
year	year	1	0.04000	0.03464	1.15	0.3675

Figure 14b: Parameter estimates were generated to see predicted changes in OLBI-MS: Exhaustion scores for all medical schools. The exhaustion score is expected to increase 0.04 per year, and the p-value is 0.3675.

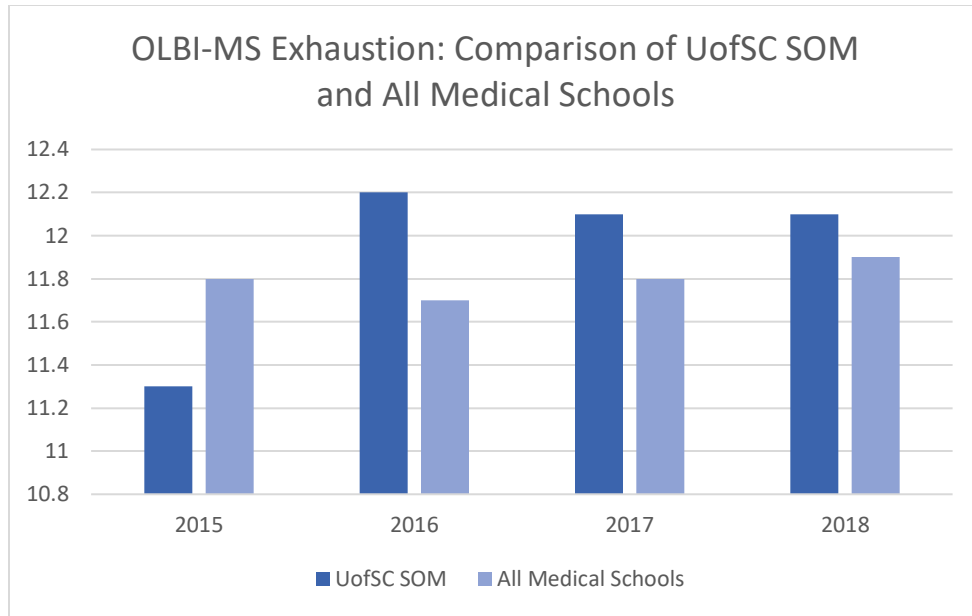


Figure G: This is a comparison of the University of South Carolina School of Medicine – Columbia (UofSC SOM) and all medical schools for the OLBI-MS Exhaustion.

Discussion

Linear Regression Analysis & Focus Group Insight

Through SAS Studio, linear regressions were successful in analysis of the Y2Q survey results. These results presented mixed results and predictions pertaining to medical students' health.

Unfortunately, many of the linear regression models did not generate enough evidence to declare the results are significant enough to claim changes in level of financial concerns, perceived stress, and exhaustion for both national data of all medical schools and UofSC SOM. This is because of low R-Square values and high p-values. To claim the results are significant, the p-value (noted as $Pr > |t|$) must be less than 0.3. The level of financial concerns is consistently in the middle range of scores, as they are between 4.6 and 5.6 (Fig. C). Data for financial concerns report low R-Square values and high p-values. Despite this inconclusive prediction, these scores are supported by the focus group: students remind themselves of their passion for the medical field, and this motivation often trumps any financial worries (University of South Carolina, personal communication, 2020). These are positive outlooks despite medical students' debt piling up and the lack of time to invest in a part-time job to relieve some of this debt (Association of American Medical Colleges, 2019). Additionally, the Perceived Stress Scale is consistently in slight lower half of scores, and the linear regression shows a low R-Square value and high p-value, showing no prediction of trends (Fig. 9a, 9b, 10a, 10b, E). As confirmed by the focus group, although medical students experience stress from the heavy curriculum, the amount of work is conquerable. Lastly, the OLBI-MS: Exhaustion also reports middle ranges of scores and is consistent (Fig. 13a, 13b, 14a, 14b, G). Medical students of the focus group reiterated the feasibility of accomplishing coursework as a hypothesis for these middle range

scores (University of South Carolina, personal communication, 2020). Despite these results not showing any significant data, there are still concerning trends that the AAMC and medical schools should consider.

Firstly, Quality of Life, though it is high, is expected to slowly worsen over time for UofSC SOM medical students (Fig. 1a). Although the R-square value is only 0.3795, this trend is concerning, as only the years 2014-2018 are reported. According to the analysis, it is expected that the score of overall quality of life will decrease 0.42 per year (Fig. 1b). Because the p-value is below 0.3 (p-value = 0.2685), there is enough evidence to say the results are significant (Fig. 1b). On the other hand, all medical schools collectively have high QOL scores, but one cannot confidently predict that it will get better or worse due to a low R-square value score of 0.1882 (Fig 2a). Furthermore, the p-value = 0.5661, so there is not enough evidence to claim the results for all medical schools are significant. Moreover, there is no predicted change in score of QOL for all medical schools. From a personal perspective, the focus group emphasized the importance of finding one's "groove," or natural routine, to succeed and manage stress in medical school (University of South Carolina, personal communication, 2020). Students in the group also discussed the necessity of balancing academic responsibilities and self-care, such as exercise, diet, and sleep. Studies support the importance of balancing school, social life, and self-care, especially for medical students (Shankar, et al., 2018). Furthermore, self-care factors varied among the individuals, but each student agreed that each got at least seven hours of sleep per night. This information concurs with the Y2Q data (Association of American Medical Colleges, 2019). In all, this can be evidence to the high scores of Quality of Life, but it is difficult to attribute what factors are causing this expected decline.

Secondly, the QOL – Level of Fatigue, which has scores between 4.0 and 5.0, is expected to get better over time for medical students at UofSC SOM (Fig. 3a). Specifically, it is predicted that students will experience less fatigue in the coming years. Although the R-Square value is lackluster (R-Square = 0.4856), there is enough evidence to prove the results are significant (p -value = 0.1910 < 0.3 [Fig. 3b]). This score for UofSC SOM is expected to increase 0.13 per year, demonstrating a lessening of fatigue. On the other hand, the national average shows that level of fatigue has consistently scored 4.8 for every year reported, demonstrating a middle amount of tiredness; because of this consistency, no trend can be predicted (Fig. 4a & Fig. 4b). Fatigue is defined as physical tiredness (Singh, et al., 2016). According to the focus group, this middle level fatigue could be attributed to the stressful preparation and taking of the STEP1 Exam, a pivotal point during medical school (University of South Carolina, personal communication, 2020). Nevertheless, it is unclear as to what factors are directly contributing to fatigue, but it is probable to claim the sheer, large amount of schoolwork as one of these. Furthermore, the conversion of the STEP1 Exam to a pass/fail examination was done in hopes to relieve stress and fatigue of medical students (Chaudhry, et al., 2019).

Thirdly, the OLBI-MS: Disengagement scale predicts a strong increase in disengagement for UofSC SOM medical students in the coming years. These results are convincing, as the R-square value is high with a value of 0.7336 (Fig. 11a). Additionally, the reported scores are consistently high already. The p -value is 0.0509, which is less than 0.3; therefore, there is enough evidence to claim the results are significant. Furthermore, the parameter estimate expects a 0.25 increase in score per year (Fig. 11b). This predicted increase of disengagement is concerning due to only a short period of time being reported and a high margin of increase for each year. The results for all medical schools collectively are similar, as there is also a predicted

increase in disengagement, and the R-Square value is 0.8 (Fig. 12a). The expected increase for all medical schools is 0.04, and the p-value is 0.1056. Because $0.1056 < 0.30$, there is enough evidence to say the results for all medical schools are significant. To add personal insight of this disengagement, medical students of the focus group addressed the pressures of maintaining high quality work and good test scores in medical school (University of South Carolina, personal communication, 2020). The students agreed that the heavy load of schoolwork was referenced as a possible cause for disengagement. Additionally, M3 and M4 students discussed how the simple dislike of certain clinical rotations or physicians can easily increase feelings of disengagement.

The issue of the expected increase in feelings of disengagement ought to be dealt with. This is the most concerning result of the analysis of the Y2Q and should be handled immediately. Disengagement, developing negative, cynical attitudes and impersonal feelings towards work or others, is poisonous in the health care field, as a spirit of compassion is necessary for proper treatment of patients and colleagues (Maslach, 2008). Furthermore, the students of the focus group added insight: students have witnessed occasional unprofessional behavior between professors and students and between faculty (University of South Carolina, personal communication, 2020). These voices reflect information provided on the Y2Q, which says that while medical students are satisfied overall with the medical education environment, there are few discrepancies pertaining to what is taught in the classroom and what is exemplified in the clinical setting (Association of American Medical Colleges, 2019). Nevertheless, students experience professionalism in most cases. Additionally, students are aware of mistreatment policies and exercise these powers following a challenging encounter. Nevertheless, the focus group says this could be contributing to this increasing disengagement. Psychiatrists and other

mental health experts propose mindfulness training, seeking peer support, guidance from professional coaches or counselors, and requiring medical boards and societies to report these feelings are good steps for preventing burnout entirely, as its two major components are disengagement and emotional exhaustion (Mohanty, 2019). Furthermore, many experts emphasize reducing stigma behind mental health. By doing these, this can help curb the expected trajectory of increased disengagement.

What is pleasant news is that the QOL – Level of Support from Family and Friends is consistently high for both UofSC SOM and all medical school students. These findings are confirmed by the focus group (University of South Carolina, personal communication, 2020). The range of scores reported are consistently between 8 and 9 (Fig. 7a & Fig. 8a). For the UofSC SOM, the R-Square value is 0.2, and the p-value is 0.4502 (Fig. 7a & Fig. 7b). Because there is not enough evidence to prove the results are significant, there is no expected change in the QOL Level of Support from Family and Friends. Comparatively, although medical schools collectively also report high scores for this category, its R-Square value is 0.9 and the p-value is 0.0513 (Fig. 8a and Fig. 8b). Therefore, there is enough evidence to say the results are significant. Fortunately, scores are expected to increase about 0.06 per year (Fig 8b). What is intriguing, however, is that the Y2Q reports the increase in virtual class attendance as replacement for in-person lectures (Association of American Medical Colleges, 2019). Concurring with this data, medical students in the focus group praised the accessibility of this technology, as many find it convenient and useful (University of South Carolina, personal communication, 2020). This would be a plausible conjecture for a report of low feelings of support from family and friends, as many studies show that the use of virtual classroom attendance can increase feelings of isolation and loneliness (Bruce, 2009). However, the results

from the Y2Q and the linear regression analysis demonstrate otherwise. The focus group added that each students' unique inner circle and friend groups along with communication with family allows an outlet for emotional coping to vent about the pressures of medical school. This would be a strong reason for the reported high level of support, as emotional coping is a healthy way not only to relieve some stress, but also to connect with others and deepen relationships (Salam, et al., 2019).

Overall, the most striking results are that feelings of disengagement are expected to worsen for all medical schools, not excluding the UofSC School of Medicine – Columbia. Additionally, it should raise concern that despite high scores for Quality of Life for medical students in Columbia, these scores are expected to slowly worsen over time. However, the linear regressions revealed optimistic results: consistently high level of support from family and friends and expected improvement of fatigue levels for UofSC School of Medicine – Columbia. It is also fortunate that there are relatively consistent middle range scores for financial concern, perceived stress, and exhaustion. Furthermore, because most results proved to be in the middle range with the exception of QOL – Level of Support from Family and Friends and the expected increase in OLBI-MS: Disengagement, these results could implicate that the feelings of burnout could be occurring later in the future medical doctor's career. Moreover, excess stress, disengagement, and emotional exhaustion could be occurring more frequently in the residency and fellowship phases of becoming a practicing physician. This proposition would need to be explored in further research.

Limitations of the Study

Although linear regressions were successfully generated and displayed useful trends, one of the biggest disadvantages of the study was the lack of individuals' data at the University of

South Carolina School of Medicine – Columbia. Accessibility to this information was restricted by the AAMC and the medical school to preserve anonymity. With this data, more analyses, such as One-Way ANOVAs, could have been executed to determine differences between M2 students of the years 2014-2018.

Secondly, the study is unable to determine the levels of stress and burnout throughout all four years, as the Y2Q is only administered to second-year medical students. These concerns were voiced by the focus group, as all the individuals agreed that the first and second years were the most stressful, and the third and fourth years decreased in stress overall each year (University of South Carolina, personal communication, 2020). This can be attributed to the higher volumes of informational material learned in the first half of medical school, while the third and fourth years are mostly clinical training (Fares, et al., 2016) . Had the questionnaire been administered to students of all years, more information would be gathered, subsequently providing more insight for this study, the AAMC, and the University of South Carolina School of Medicine – Columbia. Furthermore, students are not required to answer all questions to the survey; this is allowed by the AAMC to respect students' decisions to report what they choose. Nevertheless, this can lead to inconsistencies in the data due to the lack of information. Additionally, the mere fact that students self-report their feelings of stress and burnout can be misleading, as some may exaggerate or downplay their stress. It is difficult to determine the accuracy of each students' self-reported information.

Another limitation in the study is the difficulty of establishing causal relationships between the seven components of the Y2Q. It is not clear as to what factors directly contribute to each facet of burnout, but there are, nonetheless, a strong correlations and voiced opinions that the busy learning schedule and academic pressures to perform well are good hypotheses. It

would be helpful to see the difference between the differing workloads of a non-medical student and the demands of a medical student and how these can contribute to stress and burnout levels. Nevertheless, this project provides valuable information about the mental health of medical students.

It is also worth studying the demographics of each year. Every year the survey is administered, the AAMC collects background information, such as age, marital status, race, and gender. For both UofSC School of Medicine – Columbia and all medical schools, these percentages stay relatively the same each year (See Appendix B [Association of American Medical Colleges, 2019]). However, there are two notable differences between the two populations. First, the UofSC School of Medicine – Columbia lacks racial diversity in comparison to all medical schools. Second, this study is limited in seeing how each demographic category differs in responses of the Y2Q survey. Individual responses were not released to preserve the anonymity of the surveyed. For future studies, it would be insightful to see how different groups respond to the survey.

Finally, the time period in which the Y2Q is filled out could be a limitation. Specifically, the survey is administered in the middle of the first semester to second-year students. As reported by the focus group, the Y2Q is administered in the thick of the semester, filled with many exams and study sessions (University of South Carolina, personal interview, 2020). This could provide bias in the students' answers, as this may be a peak period of exams; this could also contribute to the lack of responses to the questionnaire. It is considerable to administer the survey at different points in the year. This would give a well-rounded overview of the M2 students stress levels and burnout throughout the year.

Overall, more research needs to be done in the coming years on the Y2Q, as there is only data starting in 2014. With more data collected over a period of time, it will be much easier to see trends in stress and burnout and make stronger predictions of these levels for medical students.

Criticisms of the Year 2 Questionnaire

There are many strengths and weaknesses in the Y2Q. Many of the survey's strengths pertain to its organization and ability to clearly ask questions without being too lengthy. However, the questionnaire has its share of weaknesses, having to do with inconsistencies in its scales. While the Y2Q is a great medium for medical students to share their experiences in medical school anonymously, there is still room for improvement within the survey.

There are discrepancies in the Y2Q that could potentially confuse the student taking the survey. The score scales are inconsistent for questions that require the M2 students to rank a level of the discussed feeling from a scale of 0 to 10. For example, when the student is asked to report his or her level of fatigue, the survey instructs the student to rank these feelings of tiredness from a scale of 0 to 10, with 0 being constant tiredness and 10 being without fatigue. Contrastingly, when the student is asked report level of support from family and friends, 0 denotes no support while 10 reports highest level of support. However, like the level of fatigue scale, the financial concern scale is ranked 0 to 10 with the low number reporting constant concerns and the high number reporting no concern. Despite the Y2Q explicitly stating which numbers represent the degree of the feeling, this can still be confusing to the student. The numbers 0 and 10 should be consistent as to which number represents an absolute absence of the component or the overwhelming presence of the component. For example, the number 0 should report no feelings of tiredness, support, and concerns and the number 10 should report constant

feelings of these. While this may be a small nuance in the self-reported data by the medical students, this can allow the student to take the survey more quickly and may also provide clearer results for data analysts.

There are also more ways to provide well-rounded data. The AAMC or the medical school could also consider providing incentives for these students to take the Y2Q. Additionally, the data may be more profound and well-rounded if all medical students, first through fourth years, took the same survey. This would allow researchers to witness the change in stress over time and provide consistent samples.

Conclusion

Despite mixed results and findings of the Y2Q, it is important for medical schools, faculty, and students to continue to create a safe, healthy, yet challenging environment that pushes these future physicians to strive for success. Preventing and combatting burnout is one of the most important steps to allowing the highest potential for students to achieve. In the coming years, it would be worthwhile to continue analyses of the Y2Q survey to see clearer trends and predictions. This will allow students and faculty to prepare themselves properly for the medical field and maintain mental health.

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Appendix A

2018 Medical School Year Two Questionnaire (Y2Q) Sample Survey



Tomorrow's Doctors, Tomorrow's Cures

2018 Medical School Year Two Questionnaire (Y2Q)**Please Verify Your Name and Medical School**

Please take a moment to verify the information below. This information does not affect the confidentiality of your responses but ensures that your responses will be correctly associated with your medical school.

FIRST NAME: _____

LAST NAME: _____

MEDICAL SCHOOL: _____

Is your name and medical school information above correct? _____

 Yes No

Important Information About The Medical School Year Two Questionnaire (Y2Q)

Please Read Carefully

The Medical School Year Two Questionnaire (Y2Q) is administered annually by the Association of American Medical Colleges (AAMC) to all second-year medical students. The Y2Q seeks information from second-year medical students to improve medical education. The survey will take approximately 15 to 25 minutes to complete.

Participation Is Voluntary

Participation in the Y2Q is voluntary. You have the right not to answer any question or set of questions. To help ensure participation is voluntary, the AAMC will not inform medical schools which students have started or completed the Y2Q. If you believe you are being coerced into participation, contact the AAMC Office of Human Subjects Research Protection by email (humansubjects@aamc.org).

Confidentiality Statement

The data collected in this survey are classified as confidential. Confidential data may not be released with individual identification, except with permission. (Your agreement to participate in the survey is not considered to be permission to release your identified responses.) The responses you provide on this survey are retained by the AAMC in a secure database to which only a small number of designated AAMC staff trained in human subjects protections and confidentiality procedures have access.

Benefits and Risks of Participation

Benefits of Participation: By participating, you will be contributing to medical education research, national benchmarking, and the improvement of medical education programs.

Risks of Participation: This data collection is considered to be minimal risk. If individually identified data were made public, it could prove embarrassing.

How the Data are Used

Medical schools receive Y2Q data in reports that aggregate responses at the national, medical school, and (where applicable) campus levels. On occasion, for the purpose of conducting further studies to improve their programs, schools may request a de-identified file of individual responses. The AAMC reduces the probability of connecting responses to specific individuals by not providing information where the small number of respondents in a specific category would allow individuals to be reasonably identified. Additionally, the AAMC may provide medical schools and AAMC or other medical education researchers a file of de-identified individual responses, in which your Y2Q responses may have been linked with information from other AAMC databases. Those receiving such de-identified files will be required to agree to terms that outline how the data may be used and for how long.

This data collection activity has been reviewed according to AAMC policies and procedures and its Institutional Review Board.

If you have any questions about your rights as a participant, contact the AAMC Office of Human Subjects Research Protection by email (humansubjects@aamc.org). If you have any technical questions about the Y2Q, contact Y2Q staff by email (Y2Q@aamc.org) or telephone (202-862-6151).

- I have read and understood this disclosure and agree to participate in the survey
- I have read and understood this disclosure and choose not to participate in the survey

2018 Y2Q Part I - Medical Education Experiences

Please indicate the extent to which you agree with the following statement:

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Overall, I am satisfied with the quality of my medical education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2018 Y2Q Part II - Curriculum

Please describe how often you attend:

	Almost Never (0% - 20%)	Occasionally (21% - 40%)	Somewhat Often (41% - 60%)	Often (61% - 80%)	Most of the Time (81% - 100%)
In-person pre-clerkship courses/lectures at YOUR medical school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Virtual pre-clerkship courses/lectures (e.g., podcast or video) at YOUR medical school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please describe how often you utilize the following online resources:

	Never	Less Than Once a Month	At Least Once a Month	At Least Once a Week	Daily
Online medical education courses/lectures from OTHER medical schools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online videos for medical education information (e.g., YouTube)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other online content for medical education information (e.g., Wikipedia)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please describe up to three online resources OUTSIDE your medical school that you find most valuable:

Online resource 1:

Online resource 2:

Online resource 3:

2018 Y2Q Part II - Curriculum

When did you take, or when do you expect to take, the USMLE Step 1 exam?

- I have already taken Step 1.
- I will take Step 1 before the end of the calendar year 2018.
- I will take Step 1 sometime from January 2019 to March 2019.
- I will take Step 1 sometime after March of 2019.

Are you aware that your school has policies regarding the mistreatment of medical students?

- Yes
- No

Do you know the procedures at your school for reporting the mistreatment of medical students?

- Yes
- No

2018 Y2Q Part III - Educational Environment

Please indicate the extent to which you agree with the following statements about your medical school:

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
My medical school prepares students to effectively communicate with people across a broad spectrum of backgrounds.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often feel isolated at school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My teachers and mentors have told me that they have high standards for my performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often feel that my performance is being judged more closely than others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My teachers and mentors have told me that they feel sure that I can perform well against high standards.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I closely share the professional values and interests of most of my classmates.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often feel as if my performance is being judged as a member of the identity group that I belong to more than as an individual.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students learn effective tools for recognizing their own bias in interacting with people of different identity groups.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The medical school experience, to this point, contributes to students' ability to work in disadvantaged communities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2018 Y2Q Part III - Educational Environment

Think about HOW OFTEN you experience the following at your medical school. Determine your response by choosing one of the categories of frequency given below. Choose the category that best approximates your perceptions.

	Never	Almost never Always	Sometimes	Fairly often	Very often	
Faculty are helpful to students seeking advice not directly related to academic matter.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students in the school are distant with each other.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students in the school get to know each other well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When giving criticism or answering a question, faculty are genuinely interested in helping the student.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students spend time assisting each other.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students gather together in informal activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Never	Almost never	Sometimes	Fairly often	Very often	Always
Faculty and administrators give personal help to students having academic difficulty.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faculty are reserved and distant with students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The educational experience makes students value themselves.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The educational experience makes students feel a sense of achievement.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are disconnects between what I am taught about professional behaviors/attitudes and what I see being demonstrated by faculty.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The educational experience makes students feel confident of their academic abilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2018 Y2Q Part III - Educational Environment

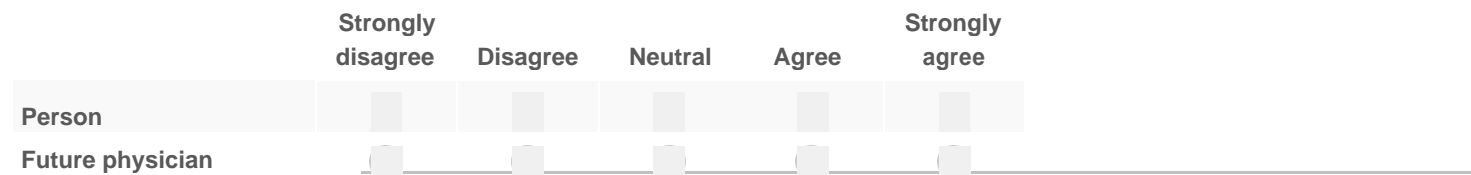
Please rate how often the following professional behaviors/attitudes are demonstrated by your medical school's faculty.

	Never	Almost never	Sometimes	Fairly often	Very often	Always
Respecting patient confidentiality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using professional language/avoiding derogatory language.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dressing in a professional manner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resolving conflicts in ways that respect the dignity of all involved.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being respectful of house staff and other physicians.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Respecting diversity.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Never	Almost never	Sometimes	Fairly often	Very often	Always
Being respectful of other health professions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being respectful of other specialties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being on time and managing a schedule well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing direction and constructive feedback.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Showing respectful interaction with students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Showing empathy and compassion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2018 Y2Q Part III - Educational Environment

Indicate whether you agree or disagree with the following statement:

My medical school has done a good job of fostering and nurturing my development as a:



2018 Y2Q Part IV - Personal Characteristics

Please indicate the extent to which you agree with the following statements:

	Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree
It really disturbs me when I am unable to follow another person's train of thought.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I am uncertain about the responsibilities involved in a particular task, I get very anxious.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Before any important task, I must know how long it will take.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't like to work on a problem unless there is a possibility of getting a clear-cut and unambiguous answer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The best part of working on a jigsaw puzzle is putting in that last piece.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am often uncomfortable with people unless I feel that I can understand their behavior.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A good task is one in which what is to be done and how it is to be done are always clear.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2018 Y2Q Part IV - Personal Characteristics

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate number on the scale: 1, 2, 3, 4, or 5. Read each item carefully before responding. Answer as honestly as you can.

	Does not describe me well = 1	2	3	4	Describes me very well = 5
I often have tender, concerned feelings for people less fortunate than me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I sometimes try to understand my friends better by imagining how things look from their perspective.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other people's misfortunes do not usually disturb me a great deal.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I'm upset at someone, I usually try to "put myself in their shoes" for a while.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am often quite touched by things that I see happen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to look at everybody's side of a disagreement before I make a decision.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Before criticizing somebody, I try to imagine how I would feel if I were in their place.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would describe myself as a pretty soft-hearted person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2018 Y2Q Part V - Career Plans and Interests

In which of the following activities do you plan to participate during your career? Select all that apply.

- Patient Care
- Research
- Teaching
- Medical School Faculty
- Administration (e.g., Department Chair, Dean)
- Military Service
- Public Health
- Other (please specify):

2018 Y2Q Part V - Career Plans and Interests

In which of the following activities do you plan to participate during your career? Select all that apply.

- Patient Care
- Research
- Teaching
- Medical School Faculty
- Administration (e.g., Department Chair, Dean)
- Military Service
- Public Health
- Other (please specify):

Do you anticipate providing patient care full-time or part-time?

- Full-time (at least 36 hours a week)
- Part-time (less than 36 hours a week)

How exclusively do you expect to be involved in research?

- Full-time
- Significantly involved
- Involved in a limited way

2018 Y2Q Part V - Career Plans and Interests

The following question is about your future career in medicine.

What general specialty are you considering?

Please select your MOST likely specialty from the list below:

- Anesthesiology or subspecialty
Dermatology or subspecialty
- Emergency Medicine or subspecialty
Family Medicine or subspecialty
- Internal Medicine or subspecialty
Internal Medicine/Pediatrics
- Medical Genetics or subspecialty
Neurological Surgery
- Neurology or subspecialty
- Neurology with Special Qualification in Child Neurology
- Nuclear Medicine
- Obstetrics and Gynecology or subspecialty
- Ophthalmology or subspecialty
Orthopaedic Surgery or subspecialty
- Otolaryngology or subspecialty
Pathology or subspecialty
- Pediatrics or subspecialty
- Physical Medicine and Rehabilitation or subspecialty

- Plastic Surgery or subspecialty
Preventive Medicine or subspecialty
- Psychiatry or subspecialty
- Radiation Oncology
- Radiology or subspecialty
- Surgery or subspecialty
- Thoracic Surgery or subspecialty
- Urology or subspecialty
- Vascular Surgery or subspecialty
- Undecided*
- I do not plan to practice medicine*

2018 Y2Q Part V - Career Plans and Interests

When thinking about your career path after medical school, how important are the following considerations?

	Not important	Somewhat important	Very important	Essential
Working for social change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High income potential	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social recognition or status	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stable, secure future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creativity and initiative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Expression of personal values	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of jobs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership potential	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work/life balance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to pay off debt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunity for innovation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2018 Y2Q Part V - Career Plans and Interests

If you could revisit your career choice, would you choose to attend medical school again?

- No
- Probably Not
- Neutral
- Probably Yes
- Yes

2018 Y2Q Part VI - Well-Being

Please select the number best reflecting your response to the following that describe your feelings during the past week, including today. How would you describe:

	As bad as it can be = 0	1	2	3	4	5	6	7	8	9	As good as it can be = 10
Your overall quality of life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your overall mental (intellectual) well-being?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your overall physical well-being?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your overall emotional well-being?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your level of social activity?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your spiritual well-being?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2018 Y2Q Part VI - Well-Being

Please select the number best reflecting your response to the following that describe your feelings during the past week, including today. How would you describe:

	Constant tiredness = 0	1	2	3	4	5	6	7	8	9	No fatigue = 10
Your level of fatigue, on the average?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	No support = 0	1	2	3	4	5	6	7	8	9	Highest level of support = 10
Your level of social support from friends and family?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Constant concerns = 0	1	2	3	4	5	6	7	8	9	No concerns = 10
Your financial concerns?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



2018 Y2Q Part VI - Well-Being

The following questions ask you about your feelings and thoughts during the last month. In each case, indicate how often you felt or thought a certain way.

	Never	Almost never	Sometimes	Fairly often	Very often
In the last month, how often have you felt that you were unable to control the important things in your life?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last month, how often have you felt confident about your ability to handle your personal problems?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last month, how often have you felt that things were going your way?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2018 Y2Q Part VI - Well-Being

Please indicate the extent to which you agree with the following statements:

	Strongly disagree	Disagree	Agree	Strongly agree
I always find new and interesting aspects in my medical school work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are days when I feel tired before I arrive at medical school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It happens more and more often that I talk about my medical school work in a negative way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After a day of medical school, I tend to need more time than in the past in order to relax and feel better.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can tolerate the pressure of my medical school work very well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lately, I tend to think less at medical school and do my medical school work almost mechanically.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find my medical school work to be a positive challenge.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During my medical school work, I often feel emotionally drained.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2018 Y2Q Part VI - Well-Being

Please indicate the extent to which you agree with the following statements:

	Strongly disagree	Disagree	Agree	Strongly agree
Over time, one can become disconnected from medical school work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After a day of medical school, I have enough energy for my leisure activities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sometimes I feel sickened by my medical school work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After a day of medical school, I usually feel worn out and weary.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The study of medicine is the only thing that I can imagine myself doing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Usually, I can manage the amount of my medical school work well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel more and more engaged in my medical school work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I am at medical school, I usually feel energized.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2018 Y2Q Part VI - Well-Being

In thinking about a typical week during your pre-clerkship education, please provide the average number of hours PER DAY that you spent doing the following activities. The total number of hours should be add to 24.0 (decimals are allowed).

Sleep:

Educational activities (e.g., attending class, studying):

Non-educational activities (e.g., being with friends/family, solitary recreation):

Paid work:

Exercise/sports:

Other:

Total (should add to 24.0 hours):

2018 Y2Q Part VII - Educational Environment

Your responses to the following questions about behaviors or experiences during medical school might be sensitive. These data may be reported at the national, school, or campus level; however, they would only be reported in aggregate and after review by AAMC staff to reduce the probability that you could be identified by your responses.

For each of the following behaviors, please indicate the frequency you personally experienced that behavior during medical school. Include in your response any behaviors performed by faculty, nurses, residents/interns, other institution employees or staff, and other students. Please **do not include behaviors performed by patients.**

During medical school, how frequently have you...

	Never	Once	Occasionally	Frequently
Been publicly embarrassed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been publicly humiliated?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been threatened with physical harm?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been physically harmed (e.g., hit, slapped, kicked)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been required to perform personal services (e.g., shopping, babysitting)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been subjected to unwanted sexual advances?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been asked to exchange sexual favors for grades or other rewards?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been denied opportunities for training or rewards based on gender?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been subjected to offensive sexist remarks/names?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Never	Once	Occasionally	Frequently
Received lower evaluations or grades solely because of gender rather than performance?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been denied opportunities for training or rewards based on race or ethnicity?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been subjected to racially or ethnically offensive remarks/names?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Received lower evaluations or grades solely because of race or ethnicity rather than performance?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been denied opportunities for training or rewards based on sexual orientation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been subjected to offensive remarks/names related to sexual orientation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Received lower evaluations or grades solely because of sexual orientation rather than performance?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been subjected to negative or offensive behavior(s) based on your personal beliefs or personal characteristics other than your gender, race/ethnicity, or sexual orientation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you were subjected to negative or offensive behavior(s) based on your personal beliefs or personal characteristics other than your gender, race/ethnicity, or sexual orientation, please describe the behavior(s) here:

500 characters left.

2018 Y2Q Part VIII - Background Information

What is your current marital status?

- Single (never legally married)
- Legally married
- Common law or civil union
- Divorced
- Separated, but still legally married
- Widowed

How many dependents do you have (not including a spouse/partner)?

- 0
- 1
- 2
- 3
- 4 or more

2018 Y2Q Part VIII - Background Information

The individual responses provided below will not be shared with or reported to your medical school. The data will only be reported in aggregate.

What sex were you assigned at birth?

- Male
- Female

What is your current gender identity? Select all that apply:

- Male
- Female
- Trans male/Trans man
- Trans female/Trans woman
- Genderqueer/Gender non-conforming
- Different identity (please state):

2018 Y2Q Part VIII - Background Information

The individual responses provided below will not be shared with or reported to your medical school. The data will only be reported in aggregate.

How do you self-identify?

- Bisexual
- Gay or lesbian
- Heterosexual or straight

If one of the above three identities did not best describe you, then with what identity do you feel more comfortable?

I self-identify as:

2018 Y2Q - Medical School Strengths and Areas for Improvement

Any comments you write below about your school's programs will be provided to your medical school verbatim. The verbatim responses will not be linked to your identity and will not be linked to Y2Q data other than your campus location. In responding to these essay-type questions, you should not provide self-identifying information unless it is your intention that your identity be known.

Please comment on what you perceive to be the strengths of your medical school experiences to date. (3000 character limit)

3000 characters left.

Please comment on any areas where you believe your medical school could improve. (3000 character limit)

3000 characters left.

2018 Y2Q - Survey Feedback

Please share any thoughts that you have about this survey:

1500 characters left.

2018 Y2Q - Submit Your Survey

Please read carefully:

Clicking on "Submit Survey" below will complete the survey and direct you to a final page that displays your name. You may print that page for personal purposes, or for purposes such as raffles, prize drawings, or other incentives that your school or student organization may have offered to encourage your participation in this survey.

If you have questions you have not completed, you may use the "Previous" button to review prior responses.

(Optional:) Would you like an email confirming your participation in the Y2Q?

Indicate your preference below:

- Email** me confirmation of my participation in the Y2Q, which will be sent after I click "Submit Survey" below.
- Do **not** email me confirming my participation in the Y2Q. I understand that I can use the standard confirmation page that will be displayed after I click "Submit Survey" below.

Appendix B

Demographics of Second-Year Medical Students: University of South Carolina School of Medicine – Columbia (2014-2018) & All
Medical Schools (2015-2018)

Note: The AAMC did not report demographic information for all medical schools in 2014.

	South Carolina					All Medical Schools			
Year	2014	2015	2016	2017	2018	2015	2016	2017	2018
Total number of respondents	66	83	75	62	65	11,586	12,457	13,467	13,912
Gender									
Male	59%	69.90%	60%	50%	48.40%	49.20%	49.00%	47.30%	46.50%
Female	41%	30.10%	40.00%	50.00%	51.60%	50.80%	51.00%	52.70%	53.50%
Number of respondents	66	83	75	62	64	11,586	12,455	13,465	13,904
Age during second-year									
Under 21	0.00%	0.00%	0.00%	0.00%	0.00%	0.20%	0.10%	0.20%	0.10%
21 through 23	35%	28.90%	44%	35.50%	44.60%	36.90%	36.60%	37.30%	35.00%
24 through 26	47%	50.60%	38.70%	48.40%	38.50%	44.30%	45.50%	45.90%	48.10%
27 through 29	14%	14.50%	12.00%	6.50%	9.20%	12.10%	11.60%	10.80%	11.00%
Over 29	5%	6%	5.30%	9.70%	7.70%	6.60%	6.10%	5.70%	5.90%
Number of respondents	66	83	75	62	65	11,586	12,457	13,467	13,912
Median age at second year	24	24	24	24	24	24	24	24	24
How do you self-identify? (race)									
American Indian or Alaska Native	0.00%	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	1.00%	0.90%
Asian	9.00%	13.50%	11.30%	6.50%	8.10%	21.00%	11.30%	22.80%	24.10%
Black or African American	5.00%	4.10%	8.50%	8.10%	3.20%	7.20%	8.50%	7.70%	7.70%

Hispanic, Latino, or of Spanish origin	0.00%	4.10%	0.00%	1.60%	3.20%	8.90%	0.00%	8.90%	10.00%
Native Hawaiian or Other Pacific Islander	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%	0.00%	0.30%	0.30%
White	86.00%	81.10%	78.90%	82.30%	83.90%	65.70%	78.90%	64.20%	62.20%
Other	2.00%	1.40%	4.20%	1.60%	1.60%	3.60%	4.20%	3.30%	3.30%
Non-U.S. citizen and Non-permanent resident	0.00%	0.00%	0.00%	0.00%	0.00%	N/A	0.00%	1.30%	1.20%
Number of respondents	58	74	71	62	62	10,884	11,895	13,237	13,434
What is your current marital status?									
Single (never legally married)	81.00%	82.70%	86.70%	75%	85.20%	85.20%	86.70%	86.50%	86.80%
Legally married	18.00%	17.30%	12.00%	21.40%	14.80%	13.40%	12.00%	12.40%	12.20%
Common law or civil union	2.00%	0.00%	0.00%	0.00%	0.00%	0.50%	0.00%	0.40%	0.40%
Divorced	0.00%	0.00%	1.30%	1.80%	0%	0.60%	1.30%	0.40%	0.40%
Separated, but still legally married	0.00%	0.00%	0.00%	1.80%	0.00%	0.20%	0.00%	0.20%	0.10%
Widowed	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Number of respondents	57	75	75	56	61	10,481	11,370	12,286	12,725

Appendix C

Mean Scores for Components of Y2Q Survey: University of South Carolina School of Medicine – Columbia

University of South Carolina School of Medicine - Columbia: Mean Scores							
Year	Quality of Life scale	QOL- Level of Fatigue	QOL - Level of Support from Family and Friends	QOL- Level of Financial Concerns	Perceived Stress Scale	OLBI-MS Disengagement	OLBI-MS Exhaustion
2014	39.5	4.6	8.3	4.5	6.1	9.3	12.6
2015	40.6	4.2	8.1	5.5	5.3	9.3	11.3
2016	40.2	4.8	8.4	4.7	5.1	9.3	12.2
2017	39.8	4.9	8.1	4.7	5.3	9.8	12.1
2018	37.8	4.9	8.1	4.7	6	10.4	12.1

Appendix D

Mean Scores for Components of Y2Q Survey: All Medical Schools

All Medical Schools							
Year	Quality of Life scale	QOL- Level of Fatigue	QOL - Level of Support from Family and Friends	QOL - Level of Financial Concerns	Perceived Stress Scale	OLBI-MS Disengagement	OLBI-MS Exhaustion
2015	40.1	4.8	8	5.4	5.8	9.7	11.8
2016	40.6	4.8	8.1	5.5	5.1	9.7	11.7
2017	40.2	4.8	8.1	5.5	5.8	9.8	11.8
2018	40.5	4.8	8.2	5.3	5.9	9.8	11.9