Impact of Acceptance Date on Medical Students' Stress & Academic Success

Portia Tasnim Shaheed
Rowan University

Alissa Hochman
Rowan University

ROWAN-VIRTUA
School of
Osteopathic Medicine

Impact of Acceptance Date on Medical Students' Stress & Academic Success

Author name(s): Portia Shaheed OMS-I, Alissa Hochman PhD
Department: Family Medicine, Rowan-Virtua School of Osteopathic Medicine, Stratford, NJ, 08084

Background

Each year, medical school admissions committees scrutinize hundreds, if not thousands, of applications to determine who they believe will succeed in medical school based on certain predictive factors, including (but not limited to):

- Undergraduate/graduate GPA
- MCAT scores
- Socioeconomic background
- Gap years

Once a student is accepted, they generally have similar life stressors that come with the transition into medical school, such as finances, housing, adjusting to the new academic rigor, and more. Late acceptance into a program can make it much more difficult to handle these burdens while trying to academically succeed.[2]

This study aims to determine if the acceptance date serves as a moderator between stress and academic performance, such that life stress may have a strong negative impact on academic performance for students who are accepted later into medical school, in comparison to their earlier accepted peers.

Methods

- An IRB-approved survey was administered to medical students who matriculated to Rowan-Virtua SOM in July 2022.
- The survey collected student metrics such as undergraduate/graduate GPA, MCAT score, acceptance date, and leave of absence/lightened load status, as well as life stress factors significant during their transition into medical school.
- Life stressors were assigned values based on the Holmes-Rahe Life Stress Inventory.[1]

Results

We recruited 64 participants, 51 of whom met the inclusion criteria. There were no significant relationships between the variables listed below:

- Undergraduate GPA (ugpa)
- Graduate GPA (ggpa)
- MCAT (mcat)
- Transition time (days_start): split into four categories - less than 1 month, 1-3 months, 3-6 months, more than 6 months
- 1st block grade (block_grade)
- Stress score (stress_score)

Correlations

		ugpa	ggpa	mcat	days_start	block_grade	stress_score	gapyr_rec
ugpa	Pearson Correlation	1	-.164	.063	.127	-.090	.179	-.083
	Sig. (2-tailed)		.610	.659	.376	.530	.209	.604
	N	51	12	51	51	51	51	41
ggpa	Pearson Correlation	-.164	1	-.388	-.063	.078	-.289	.355
	Sig. (2-tailed)	.610		.213	.847	.809	.362	.284
	N	12	12	12	12	12	12	11
mcat	Pearson Correlation	.063	-.388	1	-.231	.162	-.007	-.218
	Sig. (2-tailed)	.659	.213		.103	.255	.959	.172
	N	51	12	51	51	51	51	41
days_start	Pearson Correlation	.127	-.063	-.231	1	.134	.026	.197
	Sig. (2-tailed)	.376	.847	.103		.350	.858	.218
	N	51	12	51	51	51	51	41
block_grade	Pearson Correlation	-.090	.078	.162	.134	1	-.204	.063
	Sig. (2-tailed)	.530	.809	.255	.350		.151	.694
	N	51	12	51	51	51	51	41
stress_score	Pearson Correlation	.179	-.289	-.007	.026	-.204	1	.031
	Sig. (2-tailed)	.209	.362	.959	.858	.151		.846
	N	51	12	51	51	51	51	41
gapyr_rec	Pearson Correlation	-.083	.355	-.218	.197	.063	.031	1
	Sig. (2-tailed)	.604	.284	.172	.218	.694	.846	
	N	41	11	41	41	41	41	41

Life Stress Inventory	
Life stressor	**# of responses**
Changes in residence	36
Changing to a new school	25
Major change in living condition	23
Major change in eating habits	21
Taking on a loan	20
Major change in sleeping habits	20

Of the responses, the following stressors were most burdensome to incoming students:

1. Moving/major changes in living condition
2. Major change in financial state/taking a loan
3. Personal goals and habits (major changes in eating, sleeping, religious activity, studying, etc.)

Other stressors: changes in relationships, personal/family illness, and concerns about beginning school.

Conclusion

Due to the variability in transition time for incoming medical students, this study aimed to identify if late acceptance would significantly increase the impact that life stressors have on academic performance with decreased transition time.

There are several limitations in this study. First, the sample size was too small to accurately reflect the transition experience of a full incoming cohort. This can be attributed to the timing of recruitment, which occurred while students were on break. Second, even though stressors that could not be attributed to medical school admission were already removed from the questionnaire, this inventory is generally used to predict stress-induced health breakdown and is not specific to the stressors that incoming medical students face. A different measure may have been more reflective of the stressors unique to the medical school transition.

In the future, a larger sample with more specific measure of medical school-related stressors could yield more conclusive results on the relationship between transition time and academic performance. Using the exploratory information from this study, specific recommendations can be made to the Center for Student Success on how to best support incoming students.

References

1. Holmes, T. H., & Rahe, R. H. (1967). The Social Readjustment Rating Scale. *Journal of Psychosomatic Research*, 11(2), 213–218. https://doi.org/10.1016/0022-3999(67)90010-4
2. Liang, A., Baker, M., Lash, L.H. Starting the journey: Transition to medical school. In: Lamb, S., Rajasekaran, S.K. Facilitating Effective Transitions Along the Medical Education Continuum: A Handbook for Learners and Faculty Derived from Corporate Coaching. American Medical Association, 2021. https://www.ama-assn.org/system/files/medicaleducation-transitions-handbook.pdf
3. Sohail N., Stress and Academic Performance Among Medical Students. *Journal of the College of Physicians and Surgeons*. 2013;23(1):67-71
4. Terry D. Stratton & Carol L. Elam (2014) A holistic review of the medical school admission process: examining correlates of academic underperformance, Medical Education Online, 19:1, DOI: 10.3402/meo.v19.22919