

Burnout and Perception of Medical School Learning Environments Among Sexual Minoritized Medical Students

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Background

Diversifying the healthcare workforce to be more inclusive of sexual minoritized (SM) physicians is an important strategy for addressing health disparities related to sexual orientation.

A culture of heterosexism and discrimination creates non-welcoming learning environments, potentially contributing to symptoms of burnout. Increased rates of burnout further create a barrier to retention and recruitment of SM healthcare workers.

Medical school learning environments are important in fostering students' professional growth and self-actualization. These environments may not be equally supportive of all students, as nearly 29% of SM students report not openly expressing their sexual identity, often because of fear of discrimination.

Poor perceptions of the medical school learning environment have been associated higher levels of burnout, lower levels of empathy, and career regret.

There have been no large-scale studies examining differences in students' perceptions of learning environments by SM status nor how learning environments influence SM student burnout.

Methods

Design: Cross-sectional study of graduating medical students responding to the 2016 and 2017 Association of American Medical Colleges (AAMC) Graduation Questionnaire (GQ).

Participants: Medical students graduating from AAMC accredited allopathic US medical schools in 2016 and 2017.

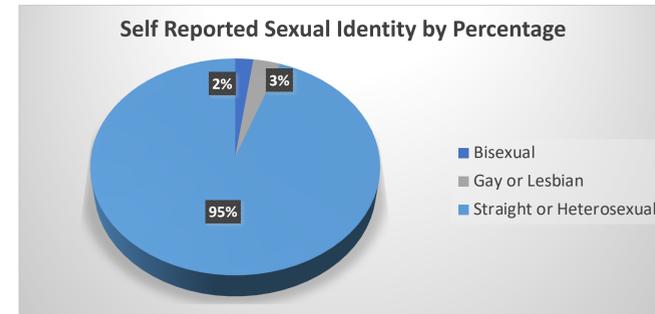
Exposure: Our primary exposure was sexual orientation. Student sexual identity was based on self-identification and categorized as bisexual, gay/lesbian (GL), or heterosexual/straight.

Main Outcomes and Measures: Burnout as measured by the Oldenburg Burnout Inventory for Medical Students (OLBI-MS) and student perceptions of the medical school learning environment as measured by the Medical Student Learning Environment Survey (MSLES).

Analysis: Logistic regression was used to model the association between burnout, SM status, and learning environment while adjusting for demographic characteristics.

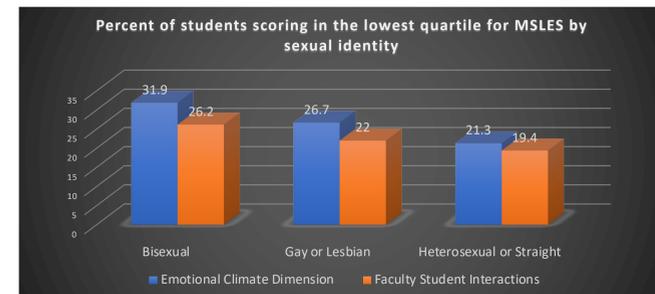
Main Findings

Descriptive and Bivariate Analyses

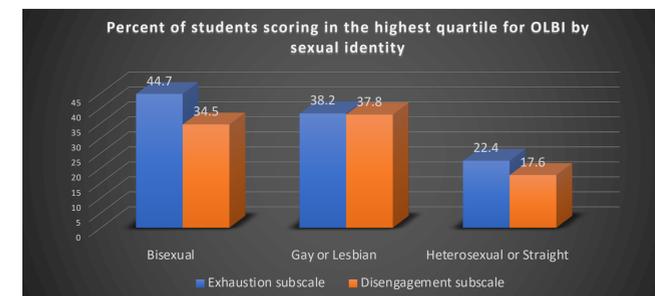


A total of 25,757 respondents were included in the analysis.

Both bisexual students and gay or lesbian students reported less favorable learning environments than heterosexual students (mean [SD], 8.56 [3.29] vs 9.22 [3.33] vs 9.71 [3.2]; $p < .001$ for emotional climate and 13.46 [3.69] vs 14.07 (3.45) vs 14.32 [3.37]; $p < .001$ for faculty-student interactions).



SM students were overrepresented in the lowest quartiles of both the MSLES dimensions and both the OLBI dimensions, $p < .001$.



Regression Analysis

Bisexual and gay or lesbian students were more likely to be in the top quartile for burnout scores (OR 1.71; 95% CI 1.42-2.07; $p < .001$ and OR 1.53 (1.31-1.79; $p < .001$).

This association was attenuated when accounting for student perceptions of the learning environment with poorer perceptions of the medical school learning environment associated with higher burnout symptoms.

Associations between top burnout scores and characteristics of students

Characteristic		Odds Ratios (95% Confidence Intervals)		
		Unadjusted model		
		Top in exhaustion	Top in disengagement	Top in both
Sexual orientation				
	Heterosexual/straight	1 [Reference]	1 [Reference]	1 [Reference]
	Bisexual	1.70 (1.44-2.01)	1.243 (1.04-1.48)	1.71 (1.42-2.07)
	Gay/Lesbian	1.33 (1.13-1.50)	1.435 (1.25-1.65)	1.53 (1.31-1.79)
		Fully adjusted		
		Top in exhaustion	Top in disengagement	Top in both
Sexual orientation				
	Heterosexual/straight	1 [Reference]	1 [Reference]	1 [Reference]
	Bisexual	1.11 (0.92-1.35)	1.32 (1.10-1.58)	1.39 (1.13-1.71)
	Gay/Lesbian	1.18 (1.01-1.38)	1.32 (1.13-1.54)	1.40 (1.18-1.67)
MSLES quartile				
Emotional climate	Top quartile	1 [Reference]	1 [Reference]	1 [Reference]
	Second quartile	1.65 (1.50-1.80)	1.31 (1.19-1.45)	1.60 (1.40-1.83)
	Third quartile	2.44 (2.25-2.65)	2.32 (2.13-2.53)	3.00 (2.68-3.36)
	Bottom quartile	5.63 (5.13-6.18)	5.41 (4.92-5.96)	7.95 (7.06-8.96)
Faculty student	Top quartile	1 [Reference]	1 [Reference]	1 [Reference]
	Second quartile	1.09 (1.00-1.19)	1.48 (1.35-1.62)	1.17 (1.04-1.32)
	Third quartile	1.22 (1.12-1.34)	1.80 (1.64-1.99)	1.36 (1.20-1.54)
	Bottom quartile	1.41 (1.27-1.56)	2.69 (2.41-3.00)	1.85 (1.62-2.11)

Abbreviations: MSLES, medical student learning environment survey

Variables adjusted for in the fully adjusted model include: Sex, Race/ethnicity, Age, Marital Status, School ownership, and Student loans

Key Points

Question: Is there an association between perceptions of medical school learning environment and burnout among SM students?

Findings: In this cross-sectional study, SM students had less favorable perceptions of the medical school learning environment compared to heterosexual students. There is an association between poorer perceptions of medical school and increased burnout.

Meaning: Improving the medical school learning environment and inclusivity of medical school is key in mitigating burnout among SM students.

Limitations

Identifying as SM on the GQ does not indicate that students openly disclosed their SM status throughout their training.

Lack of data on respondent gender identity and limited survey options for sexual minoritized excluding other common identifies (such as queer, asexual, pansexual) resulting in underreporting of SGM identities

Our analysis does not account for intersectionality with other identities.

Conclusion

SM students had less favorable perceptions of the medical school learning environment compared to heterosexual students.

Results suggest the medical school environment may be associated with rates of burnout in SM students.

Future research should explore interventions to improve the learning environment for SM students.

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