Received: 20 September 2023 | Revised: 8 November 2023 | Accepted: 9 November 2023
https://doi.org/10.1016/j.rpth.2023.102270

FORUM

Academic bullying in science and medicine: the need for reform

1 | INTRODUCTION

Workplace bullying and harassment have been a matter of systematic study and concern for decades [1–3]. Here, inspired by our desire for reform within academia, we explore the phenomenon of academic bullying in medicine, the factors that facilitate incidents, and the efforts required for its elimination.

2 | THE NATURE AND PREVALENCE OF ACADEMIC BULLYING

Academic bullying is defined as a sustained and progressive display of hostile behavior and mistreatment from one's academic superior [4]. It can be viewed as a form of abuse wherein offenders exploit their position of authority and target subordinates through manipulative actions to hinder career advancement and growth [5]. Bullying behaviors span a wide scope of verbal and nonverbal actions that commonly include name-calling, blaming, public shaming, work interference, isolation, and silent treatment [6]. Specific to offenders within academia are actions such as the violation of intellectual property and authorship rights and threatening of funding or promotional opportunities [4,6,7]. Further, a prominent concern within the academic workplace is that the opinion of a single faculty member can have a profound impact on one's career and reputation. As such, more junior individuals and those belonging to marginalized groups are particularly vulnerable [2,8].

Academia is a field at high risk of bullying due to its long-established system of hierarchy and tenure ship [9]. In a global survey of graduate students and postdocs (n = 2006) within academic scientific institutions, 84% of respondents reported experiencing academic bullying, 59% being witnesses, and 49% being both victims and witnesses to abusive supervision [4]. Another survey in the United States among women physician leaders (n = 354) in academic medicine revealed that 85.3% had experienced mistreatment in their careers, 92.5% experienced bullying from men, and 64.7% experienced bullying from women. Notably, 61.5% reported that bullies were their immediate supervisors [5].

The negative personal and psychological effects of experiencing or witnessing academic bullying are extensive, and symptoms of anxiety, depression, emotional exhaustion, and burnout are particularly common [2]. Bullying can also negatively affect behavior and relationships. Examples include workplace retaliation, decreased motivation, high turnover, work interference with family, avoidable medical errors, and physician abandonment of academic practice and/or additional training [2,9,10]. Moreover, at an academic organizational level, bullying cultures promote a toxic work environment, which may negatively affect recruitment, scientific integrity, quality of education and knowledge translation, and the esteem of the academic research environment itself [2]. These effects highlight the multifaceted negative impact of bullying, which threatens the meaning and vitality of academia as a whole.

3 | ORGANIZATIONAL AND SOCIAL ANTECEDENTS OF ACADEMIC BULLYING

Incidents of academic bullying are facilitated by political, economic, and social features of the academic work environment [2]. Academic institutions have reputations of work overload, lack of support or consideration from superiors, and minimal opportunities for participating in organizational decision making [11]. Some even describe the experience of an academic career as *survival of the fittest*, where only the most resilient are able to withstand and find success [12].

The competitive nature of academia is another strong motivator of bullying. Scientists and clinician researchers often compete for rankings to build their scientific credibility for academic promotion and funding. Academic metrics, such as the h-index, have been developed to quantify the cumulative impact and relevance of one's research. However, these measures may be misleading and conflated with success as they may motivate researchers to generate higher outputs of scattered research rather than producing focused, quality, and meaningful work [13]. Also, the culture of academic competition may encourage bullying behaviors such as assuming undue authorship rights or theft of intellectual property.

While academic organizations can play a vital role in diminishing abusive behaviors, many lack the resources to implement existing institutional policies surrounding workplace harassment and bullying [14]. As a result, institutions can indirectly promote a mentality that the most sensible choice would be to tolerate bullying and develop further resilience [13]. In this cycle of abuse, institutions punitively motivate principal investigators to write more publications, secure more funding, and acquire more awards. This pressure is then transferred from leaders to subordinates, leaving them in a vulnerable, yielding state as they rely on positive supervisor reports to secure financial stability and future employment opportunities. The product

© 2023 The Authors. Published by Elsevier Inc. on behalf of International Society on Thrombosis and Haemostasis. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

of this cycle is not only an anthology of academic work but a systematic trap of psychosocial and financial duress [13].

Lastly, the relatively recent shift of interactions to the online space has created a new territory for bullying. Social media platforms enable anonymity, an unlimited audience, and a boundless capacity for self-promotion as well as cyberbullying [15]. Cyberbullies may directly intrude on another's work by deleting emails and file attachments, with the intention of destabilizing the victim's ability to perform [16]. Such use of technology to control and condition a colleague in the workplace is not only unethical and unprofessional but also inhumane and unlawful. Researchers cannot function to their full potential when at risk of experiencing abuse [16].

4 | INITIATIVES TO COMBAT TOXICITIES IN ACADEMIA

Researchers suggest that existing policies targeting academic bullying have had no tangible effect over the last 30 years [7]. Based on the best available evidence, we propose the following concepts as fundamental to combat academic bullying (Figure): 1) knowledge translation and awareness, 2) development of reporting and accountability systems, and 3) positive mentorship.

4.1 | Knowledge translation and awareness

The first step to address academic bullying is education and awareness at the institutional level. Evidence suggests that differing perceptions of mistreatment in the workplace may lead to underreporting and bystander silence [10]. This warrants the need for staff-facing educational tools that clearly define inappropriate behaviors and the negative consequences of such behaviors.

4.2 | Reporting, accountability, and safety

Academic organizations should also implement appropriate reporting and accountability protocols for bullying incidents [17]. Reporting systems should be clear, accessible, and as free as possible of concerns surrounding reprisal or recrimination [17]. The resulting incident reports can then be used to inform the development of legislation and corrective and preventive action plans to address and discipline violators.

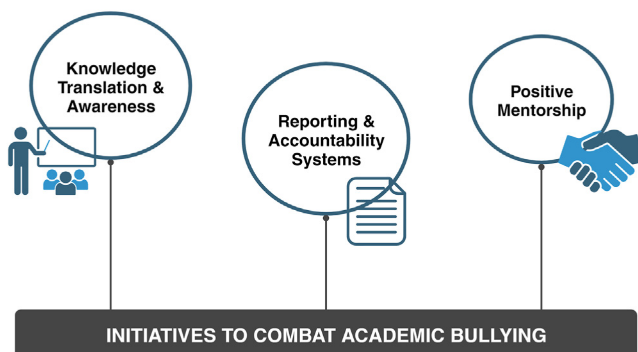


FIGURE Initiatives to combat toxicities in academia. Created with BioRender.com.

At a higher level, regulators should also ensure that academic institutions adhere to their legal obligations in protecting the human and labor rights of their employees [16]. Accountability measures such as the submission of annual statements summarizing staff complaints and bullying incidents, as well as initiatives taken to address and reduce occurrences, should be implemented.

4.3 | Mentorship

Lastly, mentorship programs should be developed to help promote a more respectful and safe academic environment. Healthy mentoring relationships are essential in creating productive careers in academic medicine [18]. The key qualities in healthy mentoring relationships are reciprocity, mutual regard, clear expectations of commitment, personal compatibility, and shared priorities and goals [19]. Institutions can help facilitate this by implementing a memorandum of understanding between supervisors and incoming students. This agreement outlines the roles and responsibilities of the mentor and mentee from the start, creating a level of transparency and increasing the likelihood of a successful working relationship [20].

In a systematic review evaluating mentorship among underrepresented physicians and trainees in academic medicine, Bonifacino et al. [8] describe several themes of successful mentorship programs. Firstly, to assure sustainability, mentorship programs should be aligned with local needs, as well as institutional goals and resources. They also suggest that prospective mentors undergo formal training to equip them with the skills and tools needed to guide mentees. A final and critical theme that emerged pertained to the need for diversity within academia. In fact, having mentors from similar cultural, racial, ethnic, and/or gender backgrounds as mentees were identified as a significant facilitator to program success. It is, therefore, crucial for institutions to support mentors, especially those of underrepresented minority backgrounds, to establish, grow, and sustain the needed diversity within mentorship programs and also to avoid undue overreliance and toll on a small group of individuals. Ultimately, to generate a discernable impact on systemic issues such as academic bullying, coordinated efforts that promote equity through diversity, inclusion, fairness, and social justice must be explicitly prioritized by academic institutions.

5 | CONCLUSION

Academic bullying is a longstanding structural issue that must be structurally addressed. Efforts to combat bullying should be focused on identifying incidents and implementing anti-bullying policies that lead to cultural action and change. Furthermore,

academic institutions and leaders should be proactive and sensitive to the power dynamics within academia to ensure that privileges are acknowledged, not misused, and that junior individuals are safe and protected. A more inclusive future in academia relies on the action and mentality of leaders surrounding collaboration with trainees. As once stated by American novelist Toni Morrison: "If you have some power, then your job is to empower somebody else."

KEYWORDS

academia, bullying, medicine, mentoring, physician

AUTHOR CONTRIBUTIONS

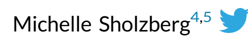
P.M. and M.S. conceived and wrote the article. All authors provided critical feedback and approved the final version of the manuscript.

FUNDING

The authors received no funding for this article.

RELATIONSHIP DISCLOSURE

M.S. is the Associate Editor of Illustrated Materials for *Research and Practice in Thrombosis and Haemostasis*, past president of the Association of Hemophilia Clinic Directors of Canada, and division head of Hematology/Oncology at St. Michael's Hospital. P.J. receives research funding from Bayer and consultancy fees from Star/Vega Therapeutics, Band/Guardian Therapeutics, and BioMarin, as well as meeting support from Star/Vega Therapeutics. A.W., P.M., and G.T. have no relevant conflict of interest to disclose.

Pauline Manuel[1]
Grace H. Tang[1]
Angela Weyand[2]
Paula James[3]
Michelle Sholzberg[4,5] 

[1]*Hematology/Oncology Clinical Research Group, St. Michael's Hospital, Toronto, Ontario, Canada*
[2]*Department of Pediatrics, University of Michigan Medical School, Ann Arbor, Michigan, USA*
[3]*Department of Medicine, Queen's University, Kingston, Ontario, Canada*
[4]*Department of Medicine and Laboratory Medicine & Pathobiology, St. Michael's Hospital, Toronto, Ontario, Canada*
[5]*Li Ka Shing Knowledge Institute, St. Michael's Hospital, Toronto, Ontario, Canada*

Handling Editor: Dr Mary Cushman

Correspondence
Michelle Sholzberg, Department of Medicine and Laboratory Medicine & Pathobiology, St. Michael's Hospital, 30 Bond Street, Toronto, ON M5B1W8, Canada.
Email: Michelle.Sholzberg@unityhealth.to

TWITTER

Pauline Manuel @_paulinemanuel

Grace H. Tang @ghltang

Angela Weyand @acweyand

Paula James @james_paulad

Michelle Sholzberg @sholzberg

REFERENCES

[1] Einarsen S, Hoel H, Cooper C. *Bullying and emotional abuse in the workplace*. CRC Press; 2002.

[2] Mahmoudi M, Keashly L. Filling the space: a framework for coordinated global actions to diminish academic bullying. *Angew Chem Int Ed Engl*. 2021;60:3338–44.

[3] Rajalakshmi M, Naresh B. Influence of psychological contract on workplace bullying. *Aggression Violent Behav*. 2018;41:90–7.

[4] Moss SE, Mahmoudi M. STEM the bullying: an empirical investigation of abusive supervision in academic science. *EClinicalMedicine*. 2021;40:101121. https://doi.org/10.1016/j.eclinm.2021.101121

[5] Iyer MS, Way DP, MacDowell DJ, Overholser BM, Spector ND, Jagsi R. Bullying in academic medicine: experiences of women physician leaders. *Acad Med*. 2023;98:255–63.

[6] Frederick D. Bullying, mentoring, and patient care. *AORN J*. 2014;99:587–93.

[7] Moss S, Tàuber S, Sharifi S, Mahmoudi M. The need for the development of discipline-specific approaches to address academic bullying. *eClinicalMedicine*. 2022;50:101598. https://doi.org/10.1016/j.eclinm.2022.101598

[8] Bonifacino E, Ufomata EO, Farkas AH, Turner R, Corbelli JA. Mentorship of underrepresented physicians and trainees in academic medicine: a systematic review. *J Gen Intern Med*. 2021;36:1023–34.

[9] Goldberg E, Beitz J, Wieland D, Levine C. Social bullying in nursing academia. *Nurse Educ*. 2013;38:191–7.

[10] Colenbrander L, Causer L, Haire B. 'If you can't make it, you're not tough enough to do medicine': a qualitative study of Sydney-based medical students' experiences of bullying and harassment in clinical settings. *BMC Med Educ*. 2020;20:86. https://doi.org/10.1186/s12909-020-02001-y

[11] Winter R, Sarros J. The academic work environment in Australian Universities: a motivating place to work? *Higher Educ Res Dev*. 2002;21:241–58.

[12] Nielsen MB, Matthiesen SB, Einarsen S. The impact of methodological moderators on prevalence rates of workplace bullying. A meta-analysis. *J Occup Organ Psychol*. 2010;83:955–79.

[13] Mahmoudi M, Ameli S, Moss S. The urgent need for modification of scientific ranking indexes to facilitate scientific progress and diminish academic bullying. *BioImpacts*. 2019;10:5–7.

[14] Averbuch T, Eliya Y, Van Spall HGC. Systematic review of academic bullying in medical settings: dynamics and consequences. *BMJ Open*. 2021;11:e043256. https://doi.org/10.1136/bmjopen-2020-043256

[15] Noakes T, Noakes T. Distinguishing online academic bullying: identifying new forms of harassment in a dissenting Emeritus Professor's case. *Heliyon*. 2021;7:e06326. https://doi.org/10.1016/j.heliyon.2021.e06326

[16] Kostakopoulou D, Mahmoudi M. Academic cyberbullying. *eClinicalMedicine*. 2022;53:101714. https://doi.org/10.1016/j.eclinm.2022.101714

[17] Mahmoudi M. Academic bullies leave no trace. *BioImpacts*. 2019;9:129–30.

[18] Jackson VA, Palepu A, Szalacha L, Caswell C, Carr PL, Inui T. 'Having the right chemistry': a qualitative study of mentoring in academic medicine. *Acad Med*. 2003;78:328–34.

[19] Straus SE, Johnson MO, Marquez C, Feldman MD. Characteristics of successful and failed mentoring relationships: a qualitative study across two academic health centers. *Acad Med*. 2013;88:82–9.

[20] *Student-Supervisor Memorandum of Understanding*. University of Toronto Institute of Health Policy, Management, & Evaluation; 2011.