

To the Editor: Academic Prizes and Medals—Whom Are We Really Rewarding?

Yassar Alamri , MBChB, PhD

Tim Wilkinson, MB, ChB (Otago), PhD (Otago),

MClinEd (UNSW), MD, FRACP, FRCP, FANZAHPE, FAMEE

Lutz Beekert, MD (Hamburg), FRACP, MRCP (UK), FCCP

We read with great interest the findings by Lipman and his colleagues.¹ A plethora of competitive academic prizes, medals, bursaries, and awards are regularly offered to medical students and trainees by universities, employers, training colleges, nongovernmental organizations, philanthropic endowments, and governmental funds.² Academic prizes offered to medical students could be for achieving the highest examination mark, presenting the most interesting case, or writing the best essay. This practice often continues during postgraduate training, and when selecting trainees, several training colleges award “additional points” for the applicants’ prior awards.²

Such awards are well-intentioned; it could be argued that they are used to encourage or reward students to become interested in a certain field, to demonstrate that a particular area of medicine is valued, and/or to celebrate the successful student.

However, the inadvertent consequences of these awards may prompt such generous donors to reconsider. A number of psychological, and more recently educational, studies on the potential interaction between rewards and motivation, and between learning and behavior, have been published.^{3,4}

The self-determination theory⁵ posits a distinction to the dominant type of motivation underpinning an individual’s actions, pursuits, and behaviors. In brief, the motivation to undertake an action is said to be *intrinsic* if that action is done for its inherent enjoyment. In contrast, a motivation is *extrinsic* if the individual undertakes an action based upon an external process/drive. The 2 types of motivation will depend on the context and task, rather than being fixed within an individual, and they may coexist for some tasks. In any particular circumstance, often one predominates over the other.

In general, individuals who are intrinsically motivated for a particular task frequently report being content to learn without the need for any outward prompts. In fact, under these circumstances, individuals

may be more creative and have superior problem-solving capabilities.⁵ On the other hand, individuals driven by extrinsic motivations tend to falter on a variety of tasks soon after the reward is withdrawn.⁵

This is not to say that rewards do not have some beneficial effects. For example, Chang and Mills reported significant increases in research productivity by otolaryngology residents after implementing a reward system in which points (gained by completing various research-related steps) are converted to a monetary balance to be spent on academic pursuits.⁶ However, the observed increase was almost exclusive to case reports and retrospective clinical studies (ie, lower-quality research activities).⁷ It must be noted that the findings by Chang and Mills were from residents, and that a relationship between undergraduate rewards and career/research may not be directly comparable.

We should also emphasize that not all rewards are the same. The “reward” of seeing a patient get better or the “reward” of being thanked for going the extra mile can be very motivating. Self-determination theory⁵ also suggests that some of these differences in effects can be explained by whether the reward is seen as controlling or not. Controlling rewards tends to undermine intrinsic motivation. The examples given here are more autonomy-promoting, so they can strengthen intrinsic motivation.

The contributions to motivation can be complex and interacting, but medical educators ought to be aware of the unintended, and potentially negative, consequences of rewards on medical student and trainee education and (intrinsic) enthusiasm toward learning. Using competitive prizes (eg, where the number of applicants to such prizes may be small/not reflective of the general pool of students) in selection criteria and progression assessments is a flawed measure.

References

1. Lipman JM, Colbert CY, Ashton R, et al. A systematic review of metrics utilized in the selection and prediction of future performance of residents in the United States. *J Grad Med Educ*. 2023;15(6):652-668. doi:10.4300/JGME-D-22-00955.1

2. The Royal Society of Medicine. Prizes for trainees. Accessed October 20, 2022. <https://www.rsm.ac.uk/prizes-and-awards/prizes-for-trainees/>
3. Alamri Y, Monasterio E, Beckert L, Wilkinson TJ. Intrinsic vs extrinsic motivation as drivers for early engagement in research by medical students. *Adv Med Educ Pract.* 2021;12:189-194. doi:10.2147/AMEP.S295909
4. Patel L, David TJ. Everybody has won, and all must have prizes. *Lancet.* 1996;348(9040):1497. doi:10.1016/s0140-6736(96)06346-5
5. Ryan RM, Deci EL. Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *Am Psychol.* 2000;55(1):68-78. doi:10.1037//0003-066x.55.1.68
6. Chang CW, Mills JC. Effects of a reward system on resident research productivity. *JAMA Otolaryngol Head Neck Surg.* 2013;139(12):1285-1290. doi:10.1001/jamaoto.2013.5303
7. Fried MP. Resident, research, and rewards. *JAMA Otolaryngol Head Neck Surg.* 2014;140(5):479. doi:10.1001/jamaoto.2014.424



Yassar Alamri, MBChB, PhD, is Resident Medical Officer, Canterbury District Health Board, and Clinical Lecturer, Department of Medicine, Christchurch School of Medicine, University of Otago, Christchurch, New Zealand; **Tim Wilkinson, MB, ChB (Otago), PhD (Otago), MClEd (UNSW), MD, FRACP, FRCP, FANZAHPE, FAMEE**, is a Professor, Department of Medicine, and the Acting Dean of Otago Medical School, University of Otago, Christchurch, New Zealand; and **Lutz Beckert, MD (Hamburg), FRACP, MRCP (UK), FCCP**, is a Respiratory Physician, Department of Medicine, and Head of Medical Education Unit, Christchurch School of Medicine, University of Otago, Christchurch, New Zealand.

Corresponding author: Yassar Alamri, MBChB, PhD, Christchurch Public Hospital, Central Christchurch, New Zealand, yassar.alamri@nzbri.org