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Opinion

Objective Standards in Post-Graduate Medical Education Training Programs: Have We Lost Our Way?

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While many educational standards are universal and objective such as quantitative performance on examinations or involvement in research, a vast majority of clinical performance measures are based on prior training, experience, and cognitive bias. Amazingly there is a dearth of studies examining rates of abuse, discrimination and harassment during post graduate medical training in the USA and studies which have been done in the Canadian training system have reported alarmingly high rates of 50% [1]. There have been many illuminating moments in recent years which have exposed negative workplace cultures across the United States but amazingly medicine and science has so far appeared impenetrable. Perhaps it is time for some self-reflection in our field.

Cognitive bias is the manner in which human beings process information and develop a hypothesis, particularly in assessing complex tasks at various stages of development is multi-faceted [2]. Based on regional, cultural, interpersonal, and institutional differences a post graduate trainee could appear well above or below expectations based strictly on a perceived social reality.

In the field of cognitive psychiatry the halo effect can be defined as an individual having a desirable trait that effects evaluations from faculty more universally and broadly [2]. The definition for a desirable trait could range anywhere from physical appearance "marketing", charisma, or institutional and cultural identification with a hospital and department. Examples such as being of the same denomination of a religiously affiliated hospital or having generations of family who are connected to a hospital who have institutional protection. This is an unwritten rule hidden out of plain sight from individuals interviewing for programs or for regulating bodies such as the ACGME (Accreditation Council for Graduate Medical Education) [2]. We have all had that situation as early as in elementary school where the playground bully would suddenly change their negative behavior when the supervisor would walk by to avoid being caught. During the course of our several years of post graduate training and working as attending physicians in private practice we have seen a staggering number of situations like this. One hypothetical example would be a trainee from a prominent family involved in hospital administration claim they had a medical appointment as an excuse to leave rounds only to discover on social media that person went out to play golf and did not initiative disciplinary proceedings or warnings.

The Halo effect could also be used to lower both the standards required for a superior evaluation in addition to lowering a trainees clinical work load. A trainee already having had established a positive rapport with a program's faculty could create a subconscious perception of competency such that they no longer the same level of supervision.

Reverse halo effect can affect resident and fellow evaluations by faculty. Conversely, this is known in psychiatry as "the devil" effect where an undesirable trait is representative of most, if not all other competencies being assessed. No pun intended, the devil truly is in the details. Based on geographic, cultural, and institutional norms the definition of an "undesirable" trait can be variable. It's not

uncommon for faculty to sublimate their own personal insecurities on trainees that create a focal point in what determines an undesirable trait. We find that in specialties that are heavily research based this has been more of an issue. For example, faculty who haven't published in years retaliating against a trainee after having a first authorship poster accepted at a national meeting. In the context of a training program there is a disproportionate amount of power a program director has, where this form of bias can have catastrophic consequences on a young physicians career, reputation, and livelihood. Unfortunately, what the ACGME in our opinion could improve on is protect against institutional nepotism. It is known that large hospital systems have significant legal and financial resources in comparison to a trainee in which to assert their will and public image to the Centers for Medicare and Medicaid Service (CMS) and accreditation bodies such as the Joint Commission. In the hierarchy of a hospital system a program director and section chief are much more likely to support their own faculty over that of a trainee, even with little direct evidence.

The reverse halo effect could also be an acquired phenomena which can be achieved when a member in a department wishes to raise their own stature by tacitly slandering another member of the department. This subtle form of suggestion can assassinate a trainees character and could create a herd mentality against that trainee. The change in perception doesn't occur immediately and could take months to even over a year. Unfortunately, such bias can result in motivated and dedicated trainees with feelings of inadequacy and depression. As such, not only do programs need to address these biases early but to implement more effective self-care programs and counseling for trainees. Inconsistencies due to an unregulated or under acknowledged reverse-halo effect could tacitly position training programs in dangerous violation of accreditation standards [3].

The Stroop effect was first described in the field of cognitive psychiatry by Dr. John Ridley Stroop in 1935, when studies were found to evaluate interference in reaction times of a task. It was demonstrated as follows: subjects are presented with the name of a color printed with the font of a different color. Naming the color of a word spelling a different color took longer and became more error prone. A theory behind this is the mind quickly interprets the semantic meaning over the actual meaning. In this context, we are examining this in the context of an attending faculty evaluating a trainee. An attending faculty with a strong positive or negative predisposition of a trainee may have difficulty in deciphering information on a task or milestone due to extraneous tangential information. The Stroop effect can be characterized as either "interference" in which one cognitive operation degrades the perception of another, or "facilitation" in which a cognitive operation can enhance the perception of the same task [3].

Although we as physicians may find it difficult to accept, prior studies have confirmed that physicians have an implicit bias against those with disabilities. Physical disabilities which trainees may have such as a hearing impairment, a mobility issue or a speech impediment can often be magnified into an "incompetency" and effect evaluations by faculty if a supervising attending has a particularly strong negative cognitive bias towards those with disabilities. This highlights the importance of raising awareness, educating and even performing standardized testing amongst supervising faculty about such biases, thus mitigating against the effects of cognitive bias as much as possible.

As such we propose subjecting faculty to mandatory neuropsychological testing such as the Stroop test to identify those who may have a propensity towards cognitive bias [3].

Another external mechanism that could limit institutional bias would be to assign each trainee an academic advisor who is faculty at a completely separate program who has access to performance evaluations who speaks with the trainee by phone every quarter and who serves as a voting member of the promotions committee. An outside faculty advisor who is separate from the program may be able to identify metrics and issues otherwise unseen by the institution. Cognitive Bias modification therapy (CBMT) for faculty has been evaluated for a potential option for faculty and ancillary staff involved in the 360 degree evaluation process. The goal would be to curb both positive and negative feedback loops as to achieve identification of root-cause analysis for each trainee to tailor to the learners individual needs and commitment to lifetime learning.

We all have a moral and ethical obligation to mentor, teach, and allow for our sacred profession to progress and evolve with the goal to propel humanity forward.

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Conflict of Interest

None.

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