

1-1-2019

Implicit Bias and the Feedback Paradox: Exploring How Health Professionals Engage with Feedback while Questioning Its Credibility

Javeed Sukhera

Amsterdam UMC - Free University Amsterdam, javeed.sukhera@lhsc.on.ca

Michael Wodzinski

Schulich School of Medicine & Dentistry

Alexandra Milne

London Health Sciences Centre

Pim W. Teunissen

Amsterdam UMC - Free University Amsterdam

Lorelei Lingard

Amsterdam UMC - Free University Amsterdam

See next page for additional authors

Follow this and additional works at: <https://ir.lib.uwo.ca/paedpub>

Citation of this paper:

Sukhera, Javeed; Wodzinski, Michael; Milne, Alexandra; Teunissen, Pim W.; Lingard, Lorelei; and Watling, Chris, "Implicit Bias and the Feedback Paradox: Exploring How Health Professionals Engage with Feedback while Questioning Its Credibility" (2019). *Paediatrics Publications*. 2051.

<https://ir.lib.uwo.ca/paedpub/2051>

Authors

Javeed Sukhera, Michael Wodzinski, Alexandra Milne, Pim W. Teunissen, Lorelei Lingard, and Chris Watling

Implicit Bias and the Feedback Paradox: Exploring How Health Professionals Engage With Feedback While Questioning Its Credibility

Javeed Sukhera, MD, PhD, DABPN, FRCPC, Michael Wodzinski, Alexandra Milne, RN, Pim W. Teunissen, MD, PhD, Lorelei Lingard, PhD, and Chris Watling, MD, PhD, FRCPC

Abstract

Purpose

Learners and practicing health professionals may dismiss emotionally charged feedback related to self, yet little research has examined how to address feedback that threatens an individual's identity. The implicit association test (IAT) provides feedback to individuals regarding their implicit biases. Anticipating feedback about implicit bias might be emotionally charged for mental health professionals, this study explored their experience of taking the IAT and receiving their results, to better understand the challenges of identity-threatening feedback.

Method

The researchers sampled 32 psychiatry nurses, psychiatrists, and psychiatric residents at Western University in Ontario, Canada, after they completed the mental illness IAT and received their results. Using constructivist grounded theory, semistructured interviews were conducted from April to October 2017 regarding participants' experience of taking the IAT. Using constant comparative analysis, transcripts were iteratively coded and analyzed for results.

Results

While most participants critiqued the IAT and questioned its credibility,

many also described the experience of receiving feedback about their implicit biases as positive or neutral. Most justified their implicit biases while acknowledging the need to better manage them.

Conclusions

These findings highlight a feedback paradox, calling into question assumptions regarding self-related feedback. Participants' reactions to the IAT suggest that potentially threatening self-related feedback may still be useful to participants who question its credibility. Further exploration of how the feedback conversation influences engagement with self-related feedback is needed.

Feedback in health professions education is fraught with multiple tensions. Often, the most challenging feedback is disconfirming to self-perceptions, leading recipients to react unfavorably and limiting the usefulness of such feedback.¹⁻⁷ Negative performance feedback that learners or practitioners perceive as personal information is often difficult to reconcile with self-conceptions and may potentially hurt an individual's self-esteem and pride.⁸ Such self-related feedback may also produce strong emotions such as disappointment or despair,⁹⁻¹¹ which may be internalized as guilt or shame¹² and may interfere with task performance.¹³ Several scholars have proposed that learners and health

professionals can reconcile emotionally charged feedback through nurturing self-monitoring, reflection, and an iterative process of feedback-mediated change,¹⁴⁻¹⁷ facilitated through discussion.¹⁸

The most emotionally challenging feedback may relate to how individuals view themselves and their group identity. Because being a good doctor appears central to the self-concept of physicians, any feedback that threatens this ideal is difficult to reconcile.¹⁹ Recent research regarding implicit-bias-related feedback also found that providing physicians and nurses with feedback regarding their implicit biases could conflict with an idealized version of their professional identity.²⁰ Feedback regarding an individual's negative implicit biases can provoke defensiveness,²¹⁻²³ leading recipients to avoid feedback altogether.²⁴

Identity-related feedback may also influence recipients' perceptual judgments about the credibility of feedback,²⁵ and certain groups may be more vigilant to subtle cues that threaten their social identity.²⁶ Social identity also contributes to stereotype threat when

individuals experience unease related to confirming a negative stereotype about their group.²⁷ Payne and Hysong²⁸ found that the intense emotions associated with clinical feedback for physicians often stemmed from the assessment process itself rather than solely from the feedback that individuals received. Multiple contextual, sociocultural, and identity-related variables therefore influence feedback acceptance and perceived need for behavior change once feedback is received. Certain circumstances, such as when discussing racial biases or professional misconduct, pose a challenge because self-related feedback cannot be uncoupled from performance-related feedback. Because the topic of self-related feedback is underexplored in the health professions literature, an exploration of the relationship between identity and feedback may yield useful insights to address this challenge.

An example of a situation where feedback and identity intersect is providing feedback related to stigmatizing attitudes about individuals with mental illness to mental health professionals. Both explicit and implicit biases against individuals

Please see the end of this article for information about the authors.

Correspondence should be addressed to Javeed Sukhera, LHSC VH 800 Commissioners Rd. E., Suite B8-176, London, Ontario, Canada, N6A 5W9; telephone: (519) 685-8500, ext. 74968; email: jsukhera@uwo.ca.

Acad Med. 2019;94:1204-1210.

First published online April 30, 2019
doi: 10.1097/ACM.0000000000002782

Copyright © 2019 by the Association of American Medical Colleges

with mental illness are prevalent in the general population, and mental health professionals may also hold implicitly negative attitudes toward individuals with mental illness²⁹ that have a negative effect on care despite best intentions.³⁰ Several reviews have demonstrated that views of mental health professionals about individuals with mental illness did not differ greatly from those of the general population.^{31–34} We chose to explore how mental health professionals and trainees process feedback about their implicit biases related to mental illness because their identity includes destigmatizing as part of their role. We anticipated that feedback about such implicit biases might be especially challenging for these individuals.

An investigation of how mental health professionals perceive the influence of receiving implicit-bias-related feedback may therefore provide a deeper understanding of how to recognize and manage self-related feedback. Our study goal was to explore how mental health professionals process and integrate feedback about implicit bias that might be perceived as threatening.

Method

For the purposes of this study, we defined implicit bias as associations, attitudes, or beliefs that exist and enact their influence outside of an individual's conscious awareness.³⁵ We defined feedback as data from a computer-based test related to an individual's implicit bias. We defined participant engagement as participation or involvement in feedback rather than dismissal or rejection.

We used constructivist grounded theory³⁶ to conduct our research, in the hopes of advancing existing research to theorize feedback-related processes that are not currently well explained by the literature. In this study, we sought to explore how individuals process and integrate feedback about their implicit biases. Building on our earlier research that explored how health professionals process implicit-bias-related feedback,²⁰ we posted and shared recruitment notices among mental health professionals working at Western University Affiliated Hospitals in Ontario, Canada. Initially we recruited psychiatric nurses and then expanded the sample to include both practicing psychiatrists and psychiatry

residents. Approval was obtained from the Western University Research Ethics Board to conduct the study.

For the semistructured interviews, we first reviewed the letter of information and consent with each participant, followed by her or his completion of the online version of the mental illness implicit association test (IAT). Whenever possible, the interviewer left the room during IAT completion. The IAT asks participants to associate words and assess automatic associations between certain concepts.³⁷ The IAT measures response latency and has typically demonstrated insensitivity to procedural variation, suitable internal consistency, high test–retest reliability, and less susceptibility to social desirability than explicit measures of bias.^{37–44} Once each participant completed the IAT, the participant received a result that assessed the extent to which they associated mental illness with dangerousness, associated physical illness with dangerousness, or held no strong bias either way, therefore offering a measure of implicit bias toward individuals with mental illness or physical illness. The mental illness IAT is one of a series of tests available on the Project Implicit website (<https://implicit.harvard.edu/implicit>). At the conclusion of the interview, the interviewer logged basic demographic information about the participant, such as gender and professional designation.

During the first set of interviews, nurse participants were asked open-ended questions about the experience of taking the IAT and whether their results were expected or unexpected. To foster a nonjudgmental and safe interview, we let participants know that they were welcome to share their IAT result with us but that their result itself was not the focus of our inquiry. Interviews then proceeded in accordance with a discussion guide adapted from previous research.²⁰ For example, we asked about the participants' emotions and cognitions while taking the test and receiving the result. As we moved from our initial purposeful sample, we expanded to include practicing psychiatrists and psychiatry residents and revised our discussion guide accordingly. We anticipated that expanding the sample would help explore unique dimensions of professional identity within diverse health professionals at various stages of their professional development.

Interviews took place from April 2017 to October 2017. Once these were recorded and transcribed, coding and analysis were conducted by two authors (J.S. and M.W.). The first 17 transcripts were transcribed and coded line-by-line by J.S. and M.W. Subsequent transcripts were coded line-by-line by J.S. using constant comparative analysis, with a shift toward focused and axial coding. Analysis was shared and discussed on a regular basis with two authors (M.W. and C.W.), with additional team meetings with the entire team to synthesize overall findings. We collected data until the team felt we had achieved theoretical sufficiency based on findings and the original research question. To facilitate member checking, a synopsis of results was shared in writing with selected participants through individual emails.

Team members were the principal investigator (J.S.), a child and adolescent psychiatrist, faculty member, and PhD candidate in health professions education; as well as research staff (M.W.), nursing staff (A.M.), and three experts in health professions education (C.W., L.L., and P.T.).

Results

Of health professionals and residents invited to participate, our study sample was 11 psychiatric nurses, 10 practicing psychiatrists, and 11 psychiatry residents. In total, we completed a total of 32 semistructured interviews. One of the participants did not complete the IAT because of technical issues and was excluded from the analysis (31 interviews). Participants' gender and discipline are reported in Table 1. Quotes below are identified by discipline (RN, registered nurse; R, resident; F, faculty).

Among participants included in the study, 10/31 (32%) demonstrated implicit dangerousness bias against mental illness, 17/31 (55%) demonstrated implicit dangerousness bias against physical illness, and 4/31 (13%) demonstrated no implicit bias against either group. Regarding taking the IAT, 16/31 (52%) described the experience as positive, 11/31 (35%) as neutral, and 4/31 (13%) as negative. Thirteen of 31 participants (42%) classified their results as what they expected, 18/31 (58%) as unexpected (Table 1).

Table 1

Summary of Participant Characteristics and Feedback Results After Taking the Mental Illness IAT, From a Study of Feedback to Responses About Implicit Bias, Western University, Ontario, Canada, 2017^a

Characteristic	No. (%)
Discipline	
Registered nurse	10 (32)
Psychiatry resident	10 (32)
Psychiatrist	11 (35)
Gender	
Male	12 (39)
Female	19 (61)
IAT results	
Bias against mental illness	10 (32)
Bias against physical illness	17 (55)
No bias	4 (13)
Results expected	13 (42)
Results unexpected	18 (58)
Positive experience	16 (52)
Neutral experience	11 (35)
Negative experience	4 (13)
Total	31 (100)

Abbreviation: IAT indicates implicit association test. ^aParticipants' responses varied. Most felt that the experience of receiving bias-related feedback was positive or neutral.

We found that while most participants critiqued and questioned the credibility of the IAT, they described their experience of receiving feedback about their implicit biases as positive or neutral. See Chart 1 for key themes developed through grounded theory analysis with accompanying participant quotes. While there was variation among participants with respect to their IAT results, all participants reflected on their biases and described the need to address the implications of their biases on patients whom they serve. All participants shared their results freely.

During analysis we found that our participants described any bias as negative, whether it was against mental illness or against physical illness. For example, individuals who demonstrated a bias against patients with physical illness were not relieved that their result showed an absence of a negative bias against patients with mental illness. We engaged in further comparison between and across groups and noted that even the four participants who

received a result with no bias responded to feedback about their biases with meaningful comments regarding the exercise of receiving feedback and the implications of bias-related feedback on their practice. All respondents reacted to their feedback, and all reflected on its implications on their professional role. We therefore felt that an analysis of all data, regardless of IAT result, was useful and pertinent to the feedback-receiving process we sought to explore. Regardless of whether IAT results showed bias or not, we found that completing the IAT and receiving feedback about their biases led participants to question the IAT's credibility but also provoked reflection on how feedback about one's implicit biases could be managed.

Participants questioned the validity of the IAT

Most participants strongly critiqued the IAT. While many questioned the test's validity, describing it as "rigged, misleading, or tricky," most criticism described the IAT as too general or simplistic for a group of mental health professionals. For example, one participant described the issue by saying that there is a "spectrum of suffering" that was too broad for the IAT to capture:

Yeah, I mean, there's such a spectrum of suffering ... a lot of people take their Paxil and go see their psychiatrist once every couple months and they're fine. And there's other people ... who go to inpatients, see a counselor.... (RN1)

Most registered nurse participants offered that a test that measures their implicit biases by categorizing groups into mental illness and physical illness fails to address the continuum of mental illness and physical illness that lies within each category.

Physician and resident participants conveyed the same criticism, suggesting that "dangerousness" is an individual concept that may vary across populations and types of illness. One stated that "mental health patients are so individualized there's no way to generally indicate if a mental health patient is dangerous or not ... it's completely individualized" (F3). Another participant stated:

The questions, I found, were quite misleading because of the question about mental illness in general. Whereas I do associate some mental illnesses with more dangerous behavior, not all of them, for sure. And even the ones that are

associated with somewhat of an increase in that kind of dangerous behavior it's usually not acute. (F6)

Criticism of the IAT as "misleading" or "too general" was common among most participants. In addition, criticisms regarding the generalizations that the IAT appeared to be making further influenced participants' interpretation of their results. For example, one physician described their result as "surprising" because there are "subsegments of mental health patients" who are dangerous, but this is not their "generalization" of mental health patients "as a whole" (F4).

Along with participants who described the IAT as general were some participants who expressed negative emotions about the test and suggested that their results should be interpreted considering their criticisms. One stated, "I found the test almost tried to create associations that were not there for me" (F3). Another said, "It was like they're trying to trick you by moving the stuff around" (RN1), and a similar observation was that "you didn't have the options the way you think. I think that you were just very much directed to go aggressive always with mental health. Anything that was negative always went to mental health" (RN4). A registered nurse whose test result indicated bias against mentally ill patients stated:

So, taking that test reminded me of the word association game, where as fast as you can you say the word that you think of, and that was the whole like [point of] pressing the letters to categorize them. And I found more accuracy, you do it a number of times, so the first half of the times my accuracy was perfect, but near the end, and I don't know why I just got annoyed of doing it so many times or I was just like over it, that I made a couple of errors. Do those errors necessarily imply anything, I really don't think so. (RN8)

Such statements demonstrate how criticisms of the IAT influenced participants' perceptions regarding the validity of the feedback they received about their biases.

Among the participants who criticized the IAT as "tricky" or a "setup" were those who received results indicating a dangerousness bias against mental illness as well as others who had a bias

Chart 1

Key Themes and Associated Participant Quotes, From a Study of Feedback to Responses About Implicit Bias, Western University, London, Ontario, Canada, 2017^a

Feedback source	Feedback information	Feedback implications
Criticizing: "I find the questions kind of offensive...." (RN7)	Questioning accuracy: "I don't think it tells me a lot about myself because I don't necessarily agree with the result." (F6)	Reflecting: "I was kind of surprised ... but it was interesting ... because it's not something that you conscientiously think about, right?" (R4)
Questioning validity: "It was not accurate. It was so open-ended and biased. It was just ... it was, like, blatantly a setup." (RN1)	Accepting: "I didn't think I had any bias ... so obviously, it's a bigger issue than I thought." (RN5)	Acting upon: "I've realized about myself that I need to educate myself a lot more." (RN9)

Abbreviations: RN indicates registered nurse; F, faculty; R, resident.

^aParticipants criticized and questioned the credibility of the feedback source, while acknowledging their biases. Self-related feedback was reflected upon instead of being discarded.

against physical illness. A physician who received a result of bias against physically ill patients suggested that they "self-corrected" despite being "dragged" toward answers "preferred by the system" (F10). Yet, a registered nurse whose results identified bias against mentally ill patients stated:

I felt like it was trying to trick me into doing that, so I was trying very hard not to; and then I was also, like, it said go as fast as you can, so I was kind of pressuring myself for speed thinking that that has something to do with it, when really I should have probably just gone slower, do you know what I mean? (RN5)

These examples illustrate that across all groups, and regardless of IAT result, participants consistently criticized the test and questioned its validity.

Despite their critique, participants acknowledged and reflected upon bias-related feedback

Across all groups of participants, and despite the nature of feedback they received, all participants reflected on their results instead of discarding them. When we comparatively analyzed our participants' comments based on whether they classified their IAT result as expected or unexpected, we found broad variation in their descriptions of taking the IAT and interpretation of their result. We conducted further analysis of critical statements about the IAT as well as positive statements about the test and experience of taking it. We consistently found examples of ambivalence among each individual participant. While all participants were both critical of the IAT and contemplated the implications

of IAT feedback on their practice, some emphatically denied the accuracy of their results and questioned the validity of the test while still describing their experience of taking the IAT as positive.

One participant described the test as "frustrating, irritating," and when receiving their results that they had bias, they stated, "I think that the results will never be fully accurate because of the specific vagueness in every question." They went on later in the interview to describe how they were "struggling with the bias but being able to acknowledge where it came from" (RN8). Another participant whose test result indicated bias against mental illness described their experience as negative and questioned the validity of the results:

My emotions when I saw my results were negative or ... upsetting due to the fact of I am a health care provider that supports these individuals and my results show that I correlate dangerousness with mental health patients.... I think the results are inaccurate. (RN2)

When asked if their results would affect them, this participant initially said, "No"; however, later in the interview, the same participant made a contradictory observation, stating that the experience of taking the IAT would influence their attitudes and the way they practice:

I think every day I can learn more. I don't know everything but I think my—I thought my emotions and attitudes towards mental illnesses was in the right direction and was positive, but obviously there's always room to improve.... I may reflect each day more on how I could have changed the way that I cared for my patients or presented myself or the way

I showed empathy towards my patients. (RN2)

Such responses highlight the incongruence we found in participants' comments. They questioned the validity of their feedback source yet acknowledged the need to reflect on the implications of the feedback they received about their implicit biases.

Similar paradoxical statements were made by a physician participant, who initially stated:

I was surprised at the result, because I don't think it actually reflects my view of mental health patients as being automatically more dangerous. They can be for sure, but as a general view of mental health patients, I don't have the view that in general [mental] health patients are dangerous, whereas that seems to be what the result was implying. (F4)

This same participant went on to reflect on how important it was for them to avoid generalizing all patients with mental illness:

So it's a balance, I mean you do have to recognize that there can be periods of time where the risk level is a bit higher, but you do need to continuously assess the situation. And you know the same patient who was very aggressive towards me and threatened this and that, once they're well will be a patient who walks into your office as an outpatient and you have a very pleasant conversation with them and it's almost forgotten that that happened. (F4)

Overall, the exercise of completing the IAT was perceived as useful despite the nature of feedback and whether the feedback was expected or unexpected. Only four

participants classified the experience of taking the IAT as negative, while most described the experience as positive or neutral. One participant stated:

I think it's kind of a mixed experience. It was good for reflection, but like I said, I think there's a bit of anxiety sort of confronting that part of you, that piece of you. (R1)

By and large, participants described their experience with self-related, identity-threatening feedback as challenging, but useful.

Discussion

When provided self-related feedback with the potential to threaten their identity as health care professionals, our participants engaged with this feedback rather than discarding it. They questioned the validity of feedback from the IAT, yet acknowledged and reflected on feedback about their biases. An important factor that likely influenced their engagement with bias-related feedback was the study interview itself, raising questions on which variables of the feedback conversation may foster the uptake of emotionally challenging feedback.

When dealing with feedback that is related to the self, such as biases, prejudice, or professional misconduct, health professionals face a potential challenge. Feedback intervention theory offers that emotionally charged feedback related to the self has the potential to reduce the effectiveness of feedback interventions.¹³ As a response, educators are often encouraged to keep feedback focused on the task rather than on the recipient's identity. Feedback intervention theory elaborates further, however, that feedback's very potential to influence behavior may lie in shifting the locus of control toward the self, so that the learner feels a sense of agency as they become motivated toward change.⁴⁵ Therefore, there is still potential for self-related feedback to motivate change. Self-related feedback is an important yet underexplored area of inquiry for health professions researchers. Our efforts to explore how participants reacted to feedback that was potentially threatening to their self-concept led to the paradoxical finding that participants engaged with bias-related feedback despite distrusting this information. In other words, they participated in or were

involved with such feedback rather than dismissing or rejecting it.

Understanding the feedback paradox

Our efforts to understand this paradox lead back to participants' interpretation regarding the feedback source and its validity. We provided participants with feedback data through a computer-based test and a subsequent qualitative research interview. If they questioned the validity of the IAT, we did not offer our own interpretation regarding the test. Instead, we sought to explore how the participant felt about their results and the implication of these results for their practice. That participants engaged with feedback they perceived as self-threatening and of questionable validity has implications for providing such feedback usefully. Our findings challenge assumptions within the existing health professions education literature by providing an example where participants perceived feedback as both "actionable" and of questionable validity.

Our findings cannot be interpreted without considering the nature of the research interview itself. While previous research describes how feedback conversations can facilitate reflection and coach toward performance change,^{18,46-48} we speculate that our interviews were unique because they de-emphasized feedback content while facilitating reflection and intentionally promoting a safe learning environment. As the health professions education community seeks a deeper understanding of assessments within clinical workplaces, our findings suggest that achieving meaningful learning through feedback debriefing and reflection cannot be accomplished by quantitative feedback alone. When provided feedback that may threaten an individual's identity, that person's resulting emotions are likely to require debriefing to facilitate reconciliation.⁴⁹

Implications for implicit bias recognition and management curricula

We chose to explore implicit-bias-related feedback, anticipating that feedback about an individual's deeply held biases is an example of feedback that is both self-related and potentially identity-threatening. Literature on implicit bias recognition and management emphasizes that addressing the negative impact of implicit biases on health equity requires

confronting feedback about one's biases.^{20,50,51} Previous publications have warned that the feedback triggered by the IAT can provoke cognitive dissonance related to an individual's beliefs and behaviors,⁵² while others have cautioned regarding the powerful self-conscious emotions that self-related feedback can invoke.¹² If a practitioner's identity is threatened by revelations through the process of completing the IAT, and receiving their result has the potential to create negative emotional reactions, how might educators address these reactions?

While previous research provides examples of teaching and learning about implicit bias through a progression from feedback to change, our study emphasizes that the utility of identity-threatening feedback such as the IAT lies not only in the test itself but also in the debriefing conversation that ensues. Previous research on addressing implicit gender bias proposes a framework called the "Conscious Competence Ladder," which suggests that IAT feedback helps learners move from "unconscious incompetence" to "conscious incompetence" as they become aware of their biases, experience discomfort, and work to instill new habits.⁵³ Teal and colleagues⁵¹ suggest a developmental continuum from acceptance to integration, moving through stages of denial and minimization, while our past research suggests that IAT-related feedback provokes tensions related to personal and professional identity.²⁰ Our exploration of IAT feedback with mental health professionals extends existing research by addressing the issue of defensive reactions related to the IAT. Despite their defensive and ambivalent reactions, our participants responded in a way suggesting that the IAT remains a useful prompt to trigger reflection and discussion. We therefore propose that implicit bias recognition and management curricula have the potential to advance equity and reduce disparities only if the debriefing conversation regarding bias-related feedback sufficiently addresses the emotional reactions of recipients.

Limitations

Our study was not without limitations. As noted, we found that all participants who completed the IAT and received their results engaged with feedback regardless of whether they received feedback that

they held dangerousness bias or not. We believe our findings are useful in circumstances when self-related feedback cannot be detached from task-related feedback; however, future research on various types of implicit-bias-related feedback would add further insights. Our participants were also limited to a small, single-site group of psychiatrists; psychiatry residents; and mental health registered nurses. Therefore, our choice to use dangerousness bias may or may not be perceived differently because of participants' roles. In contrast, however, sampling for participants' discipline was an important component of our study design to explore how identity influences processing of IAT-related feedback. Lastly, we acknowledge that our participants both acknowledged and reflected on their results; however, we appreciate that the extent to which they engaged with both their feedback and the research interview may be difficult to gauge, meriting future research in this area.

Conclusion

Despite these limitations, the implications of our findings are important to consider in the context of the existing body of research on feedback in health professions. Our findings highlight a possible feedback paradox, calling into question some of our assumptions and knowledge regarding self-related feedback in the literature. Our study indicates that potentially threatening self-related feedback may still be useful to participants who question its credibility. These results call for future research regarding which attributes of the feedback conversation facilitate reflection on emotionally challenging feedback.

Funding/Support: This work was supported by grants from Associated Medical Services–Phoenix Fellowship and the London Health Sciences Centre Children's Health Foundation.

Other disclosures: None reported.

Ethical approval: Approval was obtained from the Western University Research Ethics Board to conduct the study.

J. Sukhera is assistant professor of psychiatry and pediatrics and fellow, Centre for Education Research and Innovation, Schulich School of Medicine and Dentistry, Western University, London, Ontario, Canada.

M. Wodzinski is an MD candidate, Schulich School of Medicine and Dentistry, Western University, London, Ontario, Canada.

A. Milne is a registered nurse in paediatrics, London Health Sciences Centre, London, Ontario, Canada, and master of nursing and nurse practitioner candidate, Ryerson University, Toronto, Ontario, Canada.

P.W. Teunissen is professor of workplace learning in healthcare, Faculty of Health Medicine & Life Sciences, Maastricht University, Maastricht, the Netherlands, and gynecologist, Department of Obstetrics and Gynecology, VU University Medical Center, Amsterdam, the Netherlands.

L. Lingard is professor, Department of Medicine, and director, Centre for Education Research and Innovation, Schulich School of Medicine and Dentistry, Western University, London, Ontario, Canada.

C. Watling is professor and associate dean for postgraduate medical education, Schulich School of Medicine and Dentistry, Western University, and scientist, Centre for Education Research and Innovation, London, Ontario, Canada.

References

- Bennett H, Gattrell J, Packham R. Medical appraisal: Collecting evidence of performance through 360 feedback. *Clin Manage.* 2004;12:165–172.
- Eva KW, Armson H, Holmboe E, et al. Factors influencing responsiveness to feedback: On the interplay between fear, confidence, and reasoning processes. *Adv Health Sci Educ Theory Pract.* 2012;17:15–26.
- Fidler H, Lockyer JM, Toews J, Violato C. Changing physicians' practices: The effect of individual feedback. *Acad Med.* 1999;74:702–714.
- Lockyer J, Violato C, Fidler H. Likelihood of change: A study assessing surgeon use of multisource feedback data. *Teach Learn Med.* 2003;15:168–174.
- Overeem K, Wollersheim HC, Arah OA, Crujlsberg JK, Grol RP, Lombarts KM. Factors predicting doctors' reporting of performance change in response to multisource feedback. *BMC Med Educ.* 2012;12:52.
- Sargeant J, Macleod T, Sinclair D, Power M. How do physicians assess their family physician colleagues' performance? Creating a rubric to inform assessment and feedback. *J Contin Educ Health Prof.* 2011;31:87–94.
- Sargeant J, Mann K, Sinclair D, van der Vleuten C, Metsemakers J. Challenges in multisource feedback: Intended and unintended outcomes. *Med Educ.* 2007;41:583–591.
- Ashford SJ, Blatt R, Walle DV. Reflections on the looking glass: A review of research on feedback-seeking behavior in organizations. *J Manage.* 2003;29:773–799.
- Atwater LE, Waldman DA, Brett JF. Understanding and optimizing multisource feedback. *Hum Resource Manage.* 2002;41:193–208.
- Brett JF, Atwater LE. 360 degree feedback: Accuracy, reactions, and perceptions of usefulness. *J Appl Psychol.* 2001;86:930–942.
- Smither JW, London M, Reilly RR. Does performance improve following multisource feedback? A theoretical model, meta-analysis, and review of empirical findings. *Personnel Psychol.* 2005;58:33–66.
- Bynum WE 4th. Filling the feedback gap: The unrecognized roles of shame and guilt in the feedback cycle. *Med Educ.* 2015;49:644–647.
- Kluger AN, Denisi AS. The effects of feedback interventions on performance: A historical review, a meta-analysis and a preliminary feedback intervention theory. *Psychol Bull.* 1994;119:254–284.
- Archer JC. State of the science in health professional education: Effective feedback. *Med Educ.* 2010;44:101–108.
- Sargeant JM, Mann KV, van der Vleuten CP, Metsemakers JF. Reflection: A link between receiving and using assessment feedback. *Adv Health Sci Educ Theory Pract.* 2009;14:399–410.
- Sargeant J, Mann K, Sinclair D, van der Vleuten C, Metsemakers J. Understanding the influence of emotions and reflection upon multi-source feedback acceptance and use. *Adv Health Sci Educ Theory Pract.* 2008;13:275–288.
- Sargeant J, Mann K. Feedback in medical education: Skills for improving learner performance. In: Cantillon P, Wood DF, Yardley S. *ABC of Learning and Teaching in Medicine.* 2nd ed. Hoboken, NJ: Wiley; 2010:29–32.
- Telio S, Ajajawi R, Regehr G. The "educational alliance" as a framework for reconceptualizing feedback in medical education. *Acad Med.* 2015;90:609–614.
- Sargeant J, Mann K, van der Vleuten C, Metsemakers J. "Directed" self-assessment: Practice and feedback within a social context. *J Contin Educ Health Prof.* 2008;28:47–54.
- Sukhera J, Milne A, Teunissen PW, Lingard L, Watling C. The actual versus idealized self: Exploring responses to feedback about implicit bias in health professionals. *Acad Med.* 2018;93:623–629.
- Frantz CM, Cuddy AJ, Burnett M, Ray H, Hart A. A threat in the computer: The race implicit association test as a stereotype threat experience. *Pers Soc Psychol Bull.* 2004;30:1611–1624.
- Monteith MJ, Voils CI, Ashburn-Nardo L. Taking a look underground: Detecting, interpreting, and reacting to implicit racial biases. *Soc Cogn.* 2001;19:395–417.
- O'Brien LT, Crandall CS, Horstman-Reser A, Warner R, Alsbrooks A, Blodorn A. But I'm no bigot: How prejudiced white Americans maintain unprejudiced self-images. *J Appl Soc Psychol.* 2010;40:917–946.
- Howell JL, Gaither SE, Ratliff KA. Caught in the middle: Defensive responses to IAT feedback among whites, blacks, and biracial black/whites. *Soc Psychol Pers Sci.* 2015;6:373–381.
- Watling C, Driessen E, van der Vleuten CP, Lingard L. Learning from clinical work: The roles of learning cues and credibility judgements. *Med Educ.* 2012;46:192–200.
- Kaiser CR, Vick SB, Major B. Prejudice expectations moderate preconscious attention to cues that are threatening to social identity. *Psychol Sci.* 2006;17:332–338.
- Steele CM, Aronson J. Stereotype threat and the intellectual test performance of African Americans. *J Pers Soc Psychol.* 1995;69:797–811.
- Payne VL, Hysong SJ. Model depicting aspects of audit and feedback that impact physicians' acceptance of clinical performance feedback. *BMC Health Serv Res.* 2016;16:260.

- 29 Peris TS, Teachman BA, Nosek BA. Implicit and explicit stigma of mental illness: Links to clinical care. *J Nerv Ment Dis.* 2008;196:752–760.
- 30 Sukhera J, Miller K, Milne A, et al. Labelling of mental illness in a paediatric emergency department and its implications for stigma reduction education. *Perspect Med Educ.* 2017;6:165–172.
- 31 Kealy D, Ogrodniczuk JS. Marginalization of borderline personality disorder. *J Psychiatr Pract.* 2010;16:145–154.
- 32 Lauber C. Stigma and discrimination against people with mental illness: A critical appraisal. *Epidemiol Psychiatr Soc.* 2008;17:10–13.
- 33 Lauber C, Rössler W. Stigma towards people with mental illness in developing countries in Asia. *Int Rev Psychiatry.* 2007;19:157–178.
- 34 Schulze B. Stigma and mental health professionals: A review of the evidence on an intricate relationship. *Int Rev Psychiatry.* 2007;19:137–155.
- 35 Greenwald AG, Banaji MR. Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychol Rev.* 1995;102:4–27.
- 36 Charmaz K. *Constructing Grounded Theory: A Practical Guide Through Qualitative Research.* London, UK: Sage Publications; 2006.
- 37 Greenwald AG, McGhee DE, Schwartz JL. Measuring individual differences in implicit cognition: The implicit association test. *J Pers Soc Psychol.* 1998;74:1464–1480.
- 38 Nosek BA, Greenwald AG, Banaji MR. Understanding and using the implicit association test: II. Method variables and construct validity. *Pers Soc Psychol Bull.* 2005;31:166–180.
- 39 Bosson JK, Swann WB Jr, Pennebaker JW. Stalking the perfect measure of implicit self-esteem: The blind men and the elephant revisited? *J Pers Soc Psychol.* 2000;79:631–643.
- 40 Dasgupta N, McGhee DE, Greenwald AG, Banaji MR. Automatic preference for white Americans: Eliminating the familiarity explanation. *J Exp Soc Psychol.* 2000;36:316–328.
- 41 Greenwald AG, Farnham SD. Using the implicit association test to measure self-esteem and self-concept. *J Pers Soc Psychol.* 2000;79:1022–1038.
- 42 Greenwald AG, Nosek BA. Health of the implicit association test at age 3. *Z Exp Psychol.* 2001;48:85–93.
- 43 Nosek BA, Greenwald AG, Banaji MR. The implicit association test at age 7: A methodological and conceptual review. In: Bargh JA, ed. *Social Psychology and the Unconscious: The Automaticity of Higher Mental Processes.* New York, NY: Psychology Press; 2007:265–292.
- 44 Steffens MC. Is the implicit association test immune to faking? *Exp Psychol.* 2004;51:165–179.
- 45 Kluger AN, Van Dijk D. Feedback, the various tasks of the doctor, and the feedforward alternative. *Med Educ.* 2010;44:1166–1174.
- 46 Ramani S, Könings KD, Ginsburg S, van der Vleuten CP. Twelve tips to promote a feedback culture with a growth mindset: Swinging the feedback pendulum from recipes to relationships. *Med Teach.* 2012;34:1–7.
- 47 Ramani S, Krackov SK. Twelve tips for giving feedback effectively in the clinical environment. *Med Teach.* 2012;34:787–791.
- 48 Sargeant J, Lockyer J, Mann K, et al. Facilitated reflective performance feedback: Developing an evidence- and theory-based model that builds relationship, explores reactions and content, and coaches for performance change (R2C2). *Acad Med.* 2015;90:1698–1706.
- 49 Tekian A, Watling CJ, Roberts TE, Steinert Y, Norcini J. Qualitative and quantitative feedback in the context of competency-based education. *Med Teach.* 2017;39:1245–1249.
- 50 Sukhera J, Watling C. A framework for integrating implicit bias recognition into health professions education. *Acad Med.* 2018;93:35–40.
- 51 Teal CR, Gill AC, Green AR, Crandall S. Helping medical learners recognise and manage unconscious bias toward certain patient groups. *Med Educ.* 2012;46:80–88.
- 52 Hernandez RA, Haidet P, Gill AC, Teal CR. Fostering students' reflection about bias in healthcare: Cognitive dissonance and the role of personal and normative standards. *Med Teach.* 2013;35:e1082–e1089.
- 53 Fulmer CL. Unpacking evidence of gender bias. *J Women Educ Leader.* 2010;8:81–97.