Commentary

PAIN®

Appearance of trustworthiness: an implicit source of bias in judgments of patients' pain

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"Men in general judge more from appearances than from reality."—The Prince (1532/1898) (Niccolo' Machiavelli 1469-1527).

There has long been a concern that superficial, nondiagnostic, patient characteristics can influence clinicians' evaluation of patients' pain and their responses to patients' complaints and requests for help. Studies have shown that the pain judgments of experienced clinicians and health care workers from a variety of disciplines are influenced by matters of appearance—including ethnicity, age, gender, skin colour, socioeconomic status, and attractiveness. Older adults often have their pain underestimated relative to younger adults,[6,7,25] the pain reports of ethnic/racial minorities and females are less likely to be believed than their demographic counterparts,[5,20,25,26] and more attractive patients are perceived to be in less pain and to have better physical functioning.[8] One study in Australia found that just changing the name of a patient on a file (from an Anglo to a Latin name) was sufficient to affect the pain assessments of qualified, practicing physiotherapists.[1] Similarly, in a study of nurses in a long-term care setting, Katsma and Souza[11] found the more experienced the nurse, the less likely they were to believe patients' self-report. This study also found that the nurses doubted the self-report of patients and were more likely to cue into facial expression as the basis of their pain evaluation.

Aside from the issue of basic fairness, such biases can have important implications for treatment decisions. Racial and socioeconomic disparities in the prescription of opioids for migraine or low-back pain are well documented,[4,13,21,22] and a recent study from Norway found that female patients with chronic pain were less likely to be offered physiotherapy as a treatment strategy than male patients.[18] Reiterating the role of appearances in pain management, Turk and Okifuji,[23] for example, found that the prescription of opioids by medical specialists was strongly influenced by their assessment of patients' pain behaviours. Indeed, only recently Sullivan and Ballantyne[19] published topical review in *Pain*®, warning of the problem of "adverse selection" for the prescription of opioids for patients based on pain report and other pain behaviours rather than more objective criteria.

Despite evidence that clinicians' pain judgments and treatment decisions can be biased by the mere appearance of patients, very little research has sought to account for these effects, which is essential if we are to take steps to overcome them. One possibility is that patients' appearance affects judgments of pain by influencing clinicians' implicit judgments of patient trustworthiness. Research by Schäfer et al.[16] reported in this issue of *Pain*® supports this idea in a 2 ways: First, the authors provide sound evidence that clinicians make implicit (rapid, nonconscious) judgments of patient trustworthiness on the basis of appearances. Second, they demonstrate that the impact of patient characteristics (in this case, gender and history of depression) on clinicians' pain assessments is moderated by the appearance of trustworthiness. Each of these processes is considered in turn below, as well as their clinical implications and suggestions for future research.

1. Clinicians make implicit evaluations of patient trustworthiness based on appearances

On many occasions, it is very likely that clinicians deliberately assess patients' trustworthiness before making treatment recommendations. The safe prescription of opioids, for example, is routinely recommended to include consideration of a patients' history of treatment adherence (responsibility), testimony, risk profile, and motives for treatment.[24] However, few clinicians would admit to the possibility that their evaluation of a patient's trustworthiness was made within the first 10 seconds of meeting a patient, on the basis of their appearance rather than diagnostic information. And yet, this is the upshot of experimental research of Schäfer et al.[16] published in this issue of *Pain*®.

The authors report the results of an original study in which clinicians and clinicians-in-training were asked to rate patients' pain and the sincerity or authenticity of patients' pain behaviour on the basis of a brief vignette (akin to a patient file) and a 5- to 10-second patient video. Female and male patient "files" varied by history of depression (time of onset). Importantly, unbeknownst to participants, the patient videos had been prescreened and selected on the basis of a consensus that they seemed high or low in trustworthiness. Although participants were not explicitly asked to evaluate patients' trustworthiness during their evaluation of each patient's case, the authors found that patients' appearance of trustworthiness played a role in pain assessments. Nevertheless, the pain behaviour of "untrustworthy-looking" patients was more likely to be deemed insincere or inauthentic in some way and magnified the (typical) effects of history of depression and patient gender on pain estimates and treatment recommendations.

Schäfer et al.[16] established the implicit (automatic or nonconscious) nature of clinicians' judgments of patient trustworthiness in 2 ways. By recording perceptions of the purpose of the

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study, they were able to demonstrate participants' (lack of) awareness of the manipulation of patient's appearance. As such, the researchers have been able to show that participants did not repeatedly deliberate on each patient's trustworthiness in the process of evaluating their pain and pain behaviour. In addition, at the completion of the study, participants were asked to rate the apparent trustworthiness of static images of each of "their patients." Patients who had been preselected for their appearance of untrustworthiness were also perceived by study participants to be untrustworthy. Hence, there is good reason to believe that the impact of patient appearance on pain assessments was related to perceptions of trustworthiness.

2. Impact of patient characteristics on pain judgments depends on evaluations of trustworthiness

Previous research has shown that the impact of patients' appearance on clinicians' pain assessments is moderated by a number of factors, such as clinician experience,[11] implicit attitudes about race,[14,15] and clinician gender.[14,26] Schäfer et al.[16] provide evidence that patients' perceived trustworthiness also moderates the impact of patient characteristics on pain assessments. Specifically, they found that patient characteristics (gender and history of depression) had maximal impact on pain estimates and treatment recommendations when patients were also perceived to be untrustworthy. Although Schäfer et al.[16] did not directly test the (mediation) hypothesis that clinicians' trustworthiness perceptions account for the impact of patient gender and depression on pain assessments, their (moderation) analyses are certainly suggestive of the possibility that perceived trustworthiness plays a role in the impact of these observable patient characteristics on pain estimates and treatment recommendations. It is notable that at the completion of the study, participants rated both low and high trustworthy female stimuli as lower in trustworthiness than low and high trustworthy male stimuli (see Results: Trustworthiness ratings, in Schäfer et al.,[16] indicating that gender may indeed influence perceived trustworthiness).

3. Future research directions

This line of research raises several interesting and important questions for pain management researchers and clinicians. These include the following: Which patient attributes are used as cues for trustworthiness by clinicians? Apart from influencing clinicians' treatment decisions, what are the wider implications of clinicians' implicit evaluations of patient trustworthiness for patient care and treatment outcomes? Are there certain patient groups whose appearance is more likely to influence clinician judgments? And what can be done to reduce such biases?

Schäfer et al.[16] demonstrate that implicit evaluations of patient trustworthiness influence pain evaluations and treatment decisions. However, it is foreseeable that the consequences of clinicians' trustworthiness judgment may be more far-reaching, affecting even patient's health outcomes. People (particularly those in subordinate positions, such as patients) are fairly skilled at detecting the social judgments of others from nonverbal behaviour[2,9,17]; a side-ways glance, self-protective body posture, tone of voice, microexpressions of contempt, or a lack of empathic expression is just some of the ways in which clinicians' evaluations of patient trustworthiness may be revealed.[2] Importantly, being on the receiving end of these subtle displays of social disapproval or negative evaluation can negatively impact on patients' health outcomes by eliciting psychological and physiological stress responses or by influencing health behaviour (eg, treatment adherence).[12] In addition, patients are less likely to trust a clinician who shows mistrust of them, and patient trust is crucial to patients' treatment expectations, compliance with treatment recommendations, and responsiveness to treatment.[3]

4. Final thoughts

Although the answers to our research questions continue to be pursued, it behooves us to be mindful of our trustworthiness judgments and the potentially superficial bases on which they are formed. Awareness of the potential for patients' appearance to influence clinician judgments is particularly relevant in the case of patients who are unable to self-report their pain (eg, babies, older age groups, and those with communication difficulties), whose treatment of pain may rely almost exclusively on clinician's judgments of their pain behaviour.[10]

Conflict of interest statement

The authors have no conflicts of interest to declare.

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References

[1] Adams K, Cimino JE, Arnold RM, Anderson WG. Why should I talk about emotion? Communication patterns associated with physician discussion of patient expressions of negative emotion in hospital admission encounters. Patient Educ Couns 2012;89:44–50.
[2] Beach MC, Roter DL, Wang NY, Duggan PS, Cooper LA. Are physicians' attitudes of respect accurately perceived by patients and associated with more positive communication behaviors? Patient Educ Couns 2006;62:347–54.
[3] Benedetti F. Placebo and the new physiology of the doctor-patient relationship. Physiol Rev 2013;93:1207–46.
[4] Burgess DJ, van Ryn M, Crowley-Matoka M, Malat J. Understanding the provider contribution to race/ethnicity disparities in pain treatment: insights from dual process models of stereotyping. Pain Med 2006;7:119–34.
[5] Chibnall JT, Tait RC, Andresen EM, Hadler NM. Race and socioeconomic differences in post-settlement outcomes for African American and Caucasian Workers' Compensation claimants with low back injuries. PAIN 2005;114:462–72.
[6] Gauthier LR, Gagliese L. Assessment of pain in older persons. In: Handbook of Pain Assessment. New York, NY: Guilford Press, 2011. p. 242–59.
[7] Hadjistavropoulos T, LaChapelle DL, MacLeod FK, Snider B, Craig KD. Measuring movement-exacerbated pain in cognitively impaired frail elders. Clin J Pain 2000;16:54–63.
[8] Hadjistavropoulos T, McMurtry B, Craig KD. Beautiful faces in pain: biases and accuracy in the perception of pain. Psychol Health 1996;11:411–20.
[9] Hall JA, Andrzejewski SA, Yopchick JE. Psychosocial correlates of interpersonal sensitivity: a meta-analysis. J Nonverbal Behav 2009;33:149–80.
[10] Herr K, Coyne PJ, McCaffery M, Manworren R, Merkel S. Pain assessment in the patient unable to self-report: position statement with clinical practice recommendations. Pain Manag Nurs 2011;12:230–50.
[11] Katsma DL, Souza CH. Elderly pain assessment and pain management knowledge of long-term care nurses. Pain Manag Nurs 2000;1:88–95.
[12] Pascoe EA, Richman LS. Perceived discrimination and health: a meta-analytic review. Psychol Bull 2009;135:531–54.
[13] Sabin JA, Greenwald AG. The influence of implicit bias on treatment recommendations for 4 common pediatric conditions: pain, uinary tract infection, attention deficit hyperactivity disorder, and asthma. Am J Public Health 2012;102:988–95.
[14] Sabin JA, Nosek BA, Greenwald AG, Rivara FP. Physicians' implicit and explicit attitudes about race by MD race, ethnicity, and gender. J Health Care Poor Underserved 2009;20:896–913.

[15] Sabin JA, Rivara FP, Greenwald AG. Physician implicit attitudes and stereotypes about race and quality of medical care. Med Care 2008;46: 678–85.
[16] Schäfer G, Prkachin KM, Kaseweter KA, de C Williams AC. Health care providers' judgments in chronic pain: the influence of gender and trustworthiness. PAIN 2016;157:1618–25.
[17] Snodgrass SE. Further effects of role versus gender on interpersonal sensitivity. J Pers Soc Psychol 1992;62:154–8.
[18] Stalnacke BM, Haukenes I, Lehti A, Wiklund AF, Wiklund M, Hammarstrom A. Is there a gender bias in recommendations for further rehabilitation in primary care of patients with chronic pain after an interdisciplinary team assessment? J Rehabil Med 2015;47: 365–71.
[19] Sullivan MD, Ballantyne JC. Must we reduce pain intensity to treat chronic pain? PAIN 2016;157:65–9.
[20] Tait RC, Chibnall JT, Kalauokalani D. Provider judgments of patients in pain: seeking symptom certainty. Pain Med 2009;10:11–34.
[21] Tamayo-Sarver JH, Dawson NV, Hinze SW, Cydulka RK, Wigton RS, Albert JM, Ibrahim SA, Baker DW. The effect of race/ethnicity and desirable social characteristics on physicians' decisions to prescribe opioid analgesics. Acad Emerg Med 2003;10:1239–48.
[22] Tamayo-Sarver JH, Hinze SW, Cydulka RK, Baker DW. Racial and ethnic disparities in emergency department analgesic prescription. Am J Public Health 2003;93:2067–73.
[23] Turk DC, Okifuji A. What factors affect physicians' decisions to prescribe opioids for chronic noncancer pain patients? Clin J Pain 1997;13:330–6.
[24] Victor L, Richeimer SH. Trustworthiness as a clinical variable: the problem of trust in the management of chronic, nonmalignant pain. Pain Med 2005;6:385–91.
[25] Wandner LD, Scipio CD, Hirsh AT, Torres CA, Robinson ME. The perception of pain in others: how gender, race, and age influence pain expectations. J Pain 2012;13:220–7.
[26] Weisse CS, Sorum PC, Dominguez RE. The influence of gender and race on physicians' pain management decisions. J Pain 2003;4:505–10.