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Reducing bias in decision-making improves care and influences medical student education

Katherine Woolf and Jane Dacre

Correspondence to:

Dr Katherine Woolf

Lecturer in Medical Education, UCL Division of Medical Education

Honorary Lecturer in Psychology, UCL Division of Psychology and Language Sciences

Address: Academic Centre for Medical Education, UCL Division of Medical Education, Whittington Campus, Highgate Hill, London N19 5LW, UK.

Email: k.woolf@medsch.ucl.ac.uk

Tel: 0207 288 3546

Website: <http://www.ucl.ac.uk/dome>

Editorial for the article “Non-conscious bias in medical decision-making: what can be done to reduce it?”(Medical Education 2011)

Are you in control of your own behaviour? In a paper in this month's *Medical Education*, Stone and Moskowitz (1) quote psychological research to explain how doctors' judgement and behaviour is influenced by their non-conscious beliefs, even when those beliefs directly oppose the doctor's intentions and stated views. The article relates to the way health professionals treat their patients, and provides practical advice for delivering training to reduce the impact of medical students' non-conscious biases on their interactions with minority ethnic patients. The authors describe how discovering counter-stereotypical information about a patient, viewing a patient as having several social identities rather than one stereotyped identity, taking the patient's perspective, and seeing patients as opportunities to put into practice their goal of helping others, can all help students avoid biased decision-making and improve patient care.

Stone and Moskowitz's article is about helping students make medical decisions with minority ethnic patients, but we believe this article also has other educational implications. A third of our medical students and junior doctors in the UK are themselves from minority ethnic groups (2,3,4). There is evidence now emerging in the medical education literature that non-conscious bias may influence how minority ethnic doctors and medical students regard themselves, and their peer group. This raises three interesting points with regards Stone and Moskowitz's paper.

First, how will minority ethnic students react to being taught to reduce their biases about minority ethnic patients? We are reminded of the junior doctor who informed us that, because she was "brown", she "didn't need diversity training". In teaching designed around Stone and Moskowitz's suggestions, the ethnic backgrounds of both learners and trainers should be acknowledged and made a part of the discussions. Stone and Moskowitz explain that ethnicity can be a taboo subject, and describe how to address this potential difficulty. We would also comment that trainers should be aware that students' anxieties about discussing ethnicity may differ depending on their own ethnicity, and the ethnic composition of the rest of the group. For example, some white students may fear being suspected of being racist, whereas some minority ethnic students may fear being perceived as having a chip on their shoulder.

Second, medical students and junior doctors may themselves be affected by the non-conscious biases of their seniors. Esmail & Everington (5) famously showed that a junior doctor's ethnicity (as estimated from their name) was a significant determinant in whether they were shortlisted for a job. A recent study of over 2.5 million school pupils in England showed teachers generally underestimated black and Bangladeshi pupils' ability and overestimated white, Indian and Chinese children's ability, because of stereotypical perceptions about those different ethnic groups (6). In an interview study with medical students and their clinical teachers, we found evidence that medical students from minority ethnic, particularly Asian, backgrounds were subject to stereotyping (9). Bearing in mind minority ethnic medical students tend to underperform in undergraduate examinations (7, 8), we hypothesised that stereotyping affects the quality of the student-teacher relationship and thus students' learning, and may also negatively influence minority students' exam performance via the psychological mechanism of stereotype threat (9) (although our subsequent randomised controlled trial failed to find convincing evidence that stereotype threat could be reduced by a theory-driven intervention (10)). Another interesting finding from our interview study was that, despite using stereotypes, clinical teachers cared deeply about teaching and wanted the best for their students (9). As XXX point out in their article, non-conscious biases can influence the behaviour of even the best-intentioned individuals. Training for clinical teachers designed on the principles described by Stone and Moskowitz may therefore help teachers prevent non-conscious biases from affecting their teaching without their realising it. Such training for teachers would have the added advantage of showing students that medical schools are committed to fairness and equality, which can itself reduce stereotype threat (11).

Third, students' non-conscious ethnic biases might affect how they relate to their peers as well as to their patients. UK medical schools typically have class sizes of three to four hundred students per year. While the majority of those students are from white ethnic backgrounds, the proportion of minority ethnic medical students is relatively high compared to other university courses, even considering that minority ethnic students are more likely than white students to enter university generally (2,12). For many students, medical school may be the first time they come into contact with significant numbers of people from other ethnic groups. Psychological

research has shown that lack of previous contact can make people anxious about interacting with those from other ethnic groups, and can foster stereotyping and prejudice (13). Thankfully, there is also good evidence that the types of methods suggested by Stone and Moskowitz to reduce bias in dealing with patients (e.g. perspective-taking, gathering of counter-stereotypical information, and perceptions of multiple group identities) could also help students form intergroup friendships and reduce nonconscious stereotyping (13,14,15,16). Learning is a social activity and therefore improved intergroup contact may even improve learning in our large, ethnically-diverse medical schools, although evidence is needed to support that hypothesis.

In conclusion, Stone and Moskowitz's paper should be welcomed by those looking to run theory-driven diversity training. As clinicians, it is also important to ensure that the use of cultural knowledge without stereotyping may be an essential component of developing an accurate diagnostic hypothesis, because epidemiological studies tell us that certain minority groups are more likely to have particular conditions. We welcome the increased emphasis proposed in cultural competence training in delivering patient care, and suggest that in addition, this training might be adapted to improve cultural competence in education delivery. As the authors acknowledge, their workshop template requires thorough evaluation and testing. We encourage medical educators to do that testing – and encourage this journal to publish the results.

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