

## Emotional intelligence in medical education: a critical review

M Gemma Cherry,<sup>1</sup> Ian Fletcher,<sup>2</sup> Helen O'Sullivan<sup>3</sup> & Tim Dornan<sup>4</sup>

**CONTEXT** Emotional intelligence (EI) is a term used to describe people's awareness of, and ability to respond to, emotions in themselves and other people. There is increasing research evidence that doctors' EI influences their ability to deliver safe and compassionate health care, a particularly pertinent issue in the current health care climate.

**OBJECTIVES** This review set out to examine the value of EI as a theoretical platform on which to base selection for medicine, communication skills education and professionalism.

**METHODS** We conducted a critical review with the aim of answering questions that clinical educators wishing to increase the focus on emotions in their curriculum might ask.

**RESULTS** Although EI seems, intuitively, to be a construct that is relevant to educating safe and compassionate doctors, important questions about it remain to be answered. Research to date has not established whether EI is a trait, a learned ability or a combination of the two. Furthermore, there are methodological difficulties associated with measuring EI in a medical arena. If, as has been suggested, EI were to be used to select for medical school, there would be a real risk of including and excluding the wrong people.

**CONCLUSIONS** Emotional intelligence-based education may be able to contribute to the teaching of professionalism and communication skills in medicine, but further research is needed before its wholesale adoption in any curriculum can be recommended.

*Medical Education* 2014; 48: 468–478  
doi: 10.1111/medu.12406

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<sup>1</sup>Division of Clinical Psychology, Institute of Psychology, Health and Society, University of Liverpool, Liverpool, UK

<sup>2</sup>Division of Health Research, Faculty of Health and Medicine, Lancaster University, Lancaster, UK

<sup>3</sup>Department of Medical Education, School of Medicine, University of Liverpool, Liverpool, UK

<sup>4</sup>Department of Educational Development and Research,

Faculty of Health, Medicine and Life Sciences, Maastricht University, Maastricht, the Netherlands

*Correspondence:* M Gemma Cherry, Division of Clinical Psychology, University of Liverpool, Whelan Building, The Quadrangle, Brownlow Hill, Liverpool L69 3GE, UK. Tel: 00 44 151 794 5614; E-mail: M.G.Cherry@liverpool.ac.uk

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 INTRODUCTION

On 5 February 2013, a senior lawyer delivered the report of a public inquiry, the Francis Report, to the UK Secretary of State for Health.<sup>1</sup> The inquiry was set up in response to the ‘appalling suffering of many patients’ in a regional hospital. The Francis Report affirmed: ‘The patient must be the first priority in all of what the NHS [National Health Service] does by ensuring that, within available resources, they receive effective care from caring, compassionate and committed staff.’<sup>1</sup> Amongst its 290 recommendations, which addressed every tier of the health care system, were some that concerned health professions education. Nurse education should be more focused on ‘the practical requirements of delivering compassionate care in addition to the theory’.<sup>1</sup> People with appropriate values, attitudes and behaviours should be recruited into nurse education and trained to deliver compassionate care, on which they should receive feedback.<sup>1</sup> Regulatory systems should ensure that doctors are also educated to deliver safe and compassionate care.<sup>1</sup>

The events that led to this set of recommendations took place in provincial England and thus might be of little concern to people in other countries. We suggest, however, that a critical incident in a country in which health professionals are directly accountable to government can tell us something about ‘the fate of our times’, defined by Frank as: ‘...what is particular to a given historical period and how those particularities constitute the fate of those who live then’.<sup>2</sup> The fate of our times, in affluent countries at least, is not just to deliver safe and compassionate health care but, also, to be accountable for doing so. It follows logically that doctors must be demonstrably good communicators because it is only by observing a person’s communication that it is possible to see his or her compassion in action.<sup>3</sup> The General Medical Council (GMC), the regulatory body controlling the standards of medical education in the UK, states that tomorrow’s doctors, **will** [our emphasis] ‘communicate clearly, sensitively and effectively with patients, their relatives or other carers, and colleagues from the medical and other professions, by listening, sharing and responding’.<sup>4</sup> They **will** ‘behave according to a set of defined ethical and legal principles’.<sup>4</sup> Medical schools in the UK have taken the formalisation of doctor–patient communication so seriously that communication skills are now formally taught and assessed as part of every undergraduate medical curriculum in the country.<sup>5</sup> Like medical students, UK doctors in the

first stage of residency education are required to demonstrate that they are ‘sensitive and respond to the needs and expectations of patients, taking into account only where relevant, the patient’s age, colour, culture, disability, ethnic or national origin, gender, lifestyle, marital or parental status, race, religion or beliefs, sex, sexual orientation, or social or economic status’.<sup>6</sup>

The NHS has responded to the Francis Report<sup>1</sup> by commissioning an assessment of the values and beliefs of its existing and future workforce, although the fundamental issue may be deeper than any such institutional response can address.<sup>7</sup> It is striking that none of the reports, recommendations or actions cited here acknowledge that the words ‘suffering’, ‘compassion’ and ‘sensitivity’ are laden with emotion. According to Shapiro’s interpretation of contemporary medical education, it is not only official reports that sanitise emotions: processes of professional socialisation systematically blunt learners’ emotional reactions.<sup>8</sup> Doctors mistrust emotions and intellectualise them in order to remain objective about what they do.<sup>8</sup> They turn emotional constructs like suffering, compassion and sensitivity into a set of cognitive and behavioural skills, which are safely remote from their personhood.<sup>8</sup> McNaughton made a similar point: emotion has been ‘either elided as part of a larger construct of values, attitudes and beliefs, or falsely dichotomised with “reason”, making it largely invisible as a valuable form and source of knowledge’.<sup>3</sup> She identified three discourses of emotion in the medical education literature, one of which is particularly relevant to the fate of our times: a discourse of emotion as skills. Emotional intelligence (EI) is an emotion theory, which is a logical counterpart to communication skills because it is ‘a dependable method for measuring and judging capacities seen as not otherwise amenable to reliable capture’.<sup>3</sup> If (trainee) doctors’ compassion is to be quality-assured, it must be measurable, but currently only two things can be measured: the quality of their communication and their EI. McNaughton criticised the skills approach to emotion for emphasising performance rather than ‘reaching inside the boundaries of the individual’.<sup>3</sup> She cited a review by Lewis *et al.*,<sup>9</sup> which criticised EI for trying to measure the immeasurable and perpetuating an individualised rather than a collective model of emotion.

A medical school dean of our times – whose duty it is to be accountable for the education of safe and compassionate doctors – may not be as ready to dis-

miss EI, which at least provides a theoretical platform on which to base selection for medicine, communication skills education and professionalism. Interest in EI has grown despite the concerns expressed by Lewis *et al.*<sup>9</sup> about its fitness for purpose. We thought it would be timely, therefore, to conduct an up-to-date critical review building on the work of earlier authors. We framed a set of questions that clinical educators wishing to increase the focus on emotions in their curricula might ask:

- 1 What is EI and how can it be measured?
- 2 What is the relevance of EI to a communication skills educator and how can a focus on it help develop learners' emotional competencies and professionalism?
- 3 How can EI contribute to the selection and emotional development of medical students?
- 4 What methodological issues are associated with incorporating EI-based education into medical curricula?

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## METHODS

### Search strategy

In order to address these questions, we searched four electronic databases (MEDLINE, EMBASE, PsycINFO and CINAHL [Cumulative Index to Nursing and Allied Health Literature]) for relevant literature published between the inception of the respective database and March 2013. The searches combined index terms and free text words, adapted for each database to reflect minor modifications specific to its vocabulary or search terms. Search strategies were based on a combination of synonyms of relevant components: medicine; medical education; emotional intelligence; students, and doctors. The constructs of compassion, sensitivity, empathy, emotional self-efficacy, emotional management, emotional regulation and resistance to stress were included in the searches as potential aspects of EI and will be referred to under the umbrella term 'EI' throughout this paper unless otherwise stated. Searches had no language restrictions and did not include methodological filters that would limit results to a specific study. More details about the searches are available from the authors on request. A subsequent hand search of high-yield journals was carried out, followed by a search of reference lists of all full-text studies, and the snowballing of relevant references, examination of the reference lists of relevant systematic reviews, and a hand search of the researchers' own files.

All identified references were exported to a bibliographic database in EndNote<sup>®</sup> X7 (Thomson Reuters, Inc., Carlsbad, CA, USA). One author (MGC) scanned all identified titles and abstracts to identify potentially relevant articles, full-text versions of which were subsequently obtained to permit more detailed assessment. These were then assessed for relevance to the review; uncertainty was resolved by discussion within the research team. As the aim was to produce a descriptive and critical synthesis of data, the studies to be included were then chosen on the basis of which studies best addressed the aim of this review. Other publications were consulted to provide context for the data discussed within papers. Although the review was selective rather than exhaustive in its approach, the searching and selection of studies followed published guidelines to ensure rigour.<sup>10</sup>

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## RESULTS AND DISCUSSION

### What is EI and how can it be measured?

To answer question 1, we précis the critique by Lewis *et al.*<sup>9</sup> of the construct of EI, its measurement, its relevance and its usefulness to doctors, and supplement it with findings from articles published in the 8 years since their review was published. Throughout this review, we include moods under the term 'emotions' for consistency with the EI literature.

Salovey and Mayer first sought to explain why some individuals are more capable than others of processing emotional information and using it to guide their behaviour by proposing a social interaction model of EI.<sup>11</sup> In this model, EI was defined as: 'a type of social intelligence that involves the ability to monitor one's own and others' emotions, to discriminate among them and to use this information to guide one's own thinking and actions'.<sup>11</sup> Mayer *et al.*<sup>12</sup> later criticised the representation of EI as a set of inter-related mental competencies because this representation might lead researchers to consider it a blanket term for interpersonal skills. They refined the construct to encompass the abilities to perceive emotion, to integrate emotion to facilitate thought, to understand emotion, and to regulate emotion to promote personal growth.<sup>13</sup> This revised conceptualisation included the verbal and non-verbal appraisal of emotion, regulation of emotion in the self and others, and use of emotional content in problem solving. Emotional intelligence, then, became a skill set that included

empathy, the ability to solve problems, optimism and self-awareness.

Since this initial conceptualisation, a number of definitions of EI have been proposed.<sup>14</sup> Davies and Stankov<sup>15</sup> and Law *et al.*<sup>16</sup> defined EI as an abstract construct with four components: appraisal and expression of emotion in oneself; appraisal and recognition of emotion in others; regulation of emotion in oneself, and the use of emotion to facilitate performance. Bar-On<sup>17</sup> defined EI as a set of non-cognitive skills, abilities, competencies and capabilities that allow individuals to cope with environmental pressures. Kasman *et al.*<sup>18</sup> defined EI as 'the means to perceive and express emotions and regulate emotions in self and others'.

These multiple conceptualisations may, at first glance, seem to 'blur' EI as a construct. Research traditions, however, converge in a way that allows models of EI to be split into two broad types: *ability models* and *trait and mixed (dispositional) models*.<sup>19</sup> *Ability models* (such as that of Salovey and Mayer<sup>11</sup>) are extensions of information-processing theories of intelligence and conceptualise EI as an 'intelligence'. They view EI as a set of cognitive abilities that relate to the perceiving, understanding, using and managing of emotional information<sup>14</sup> and as a further dimension of intellectual competence not considered by traditional conceptualisations of intelligence. *Trait models* (such as that of Petrides *et al.*<sup>20</sup>) and *mixed (dispositional) models* (such as those of Goleman<sup>21</sup> and Bar-On<sup>17</sup>) view EI as a set of inter-related competencies, skills, abilities, personal qualities and personality traits. There is some overlap between the main components of the two types. Both agree that EI is a multidimensional construct with both cognitive and affective elements, consisting of the ability to recognise, deal with and apply emotional information to everyday decision making and behaviour. They both regard a person with higher levels of EI as being able to join together emotions and reasoning, to use emotions to facilitate such reasoning, and to reason intelligently about emotion. Similarly, all use standardised, self-report questionnaires to measure EI. The reliability, validity and cross-cultural applicability of the tools differ, however, as does the degree of overlap between individual questionnaire items. It is important to stress that an individual's EI is distinct from his or her predisposition to experience certain *types* of emotion, which is related to the personality traits of positive and negative affectivity.<sup>22,23</sup> It should be noted, also, that an individual's EI does not relate to how *intensely* he or she experiences emotions.

Instead, EI represents the extent to which an individual's cognitive capabilities are informed by his or her emotions, and the extent to which that person cognitively manages emotions.<sup>23</sup>

The benefits to lay people of having high levels of EI are multiple.<sup>24</sup> For example, EI positively influences the ability to identify others' emotional expressions and makes people more satisfied with their interpersonal relationships, more flexible in social interactions, better able to manage their moods and more adaptable when under stress.<sup>25–28</sup> Emotional intelligence is also an attribute of good leaders and teamworkers.<sup>29</sup> It is positively associated with psychological well-being<sup>30</sup> and even orgasmic frequency in women.<sup>31</sup> The popularisation of EI as 'mattering more than IQ'<sup>24</sup> has promoted it as a crucial attribute for successful psychological and social functioning, although it must be noted that recent research cites individuals who display high levels of emotional competence as having the potential to be Machiavellian.<sup>32</sup> The importance of EI may, it could be argued, be stronger for professionals whose everyday work is highly emotionally charged,<sup>33</sup> and particularly in contexts that involve higher levels of 'emotional labour'.<sup>34</sup> A short answer to question 1, then, is that EI is a construct that has face validity in medical education because doctors must respond appropriately to multiple emotional experiences every working day.<sup>35–47</sup>

### **What is the relevance of EI to a communication skills educator and how can a focus on it help develop learners' emotional competencies and professionalism?**

With regard to the relevance of EI to communication skills education, McNaughton stated: '...competencies related to [emotional] skills and knowledge, and internalised values and attitudes are considered integral to the self-regulation an individual needs to become a good doctor. This mandate is met in part through communication skills training in which emotion becomes visible in demonstrations of professional behaviours linked to attitudes and values. Behavioural training feeds back into cognitive aspects of decision making. Decisions about how, when and what to say are skills that can be developed through organised practice.'<sup>3</sup>

Although some authors regard it as excessively reductionist to atomise emotional competencies and measure them via performance,<sup>48</sup> there is consensus in favour of doing so, at least in the UK, where all medical schools formally teach students to

display appropriate skills and emotional reactions to patients and assess their ability to do so in objective structured clinical examinations (OSCEs).<sup>5</sup> Moreover, McNaughton herself argued that demonstrating professional behaviour linked to attitudes and values feeds back into cognitive aspects of decision making.<sup>3</sup> It is also logical to atomise emotional competencies according to EI theory, which sees people as having an emotional skills set that can be developed. Moving from a theoretical to an empirical argument, there is evidence that students' scores on communication skills components of OSCEs correlate with their EI,<sup>49,50</sup> but it is unsafe to assume the relationship is causal because it may be confounded by one or more unmeasured variables. Preliminary though the empirical evidence may be, the theoretical link is strong enough for it to be worth further exploration by researchers and curriculum developers.

As far as professionalism is concerned, it 'continues to receive some attention in training programmes, primarily through faculty example and mentoring, yet there is no clear consensus or evidence base to inform best practice, teaching, and evaluation in this area'.<sup>51</sup> It seems logical to suggest that EI contributes to people's ability to meet professional ideals of medicine such as compassion, self-regulation and the maintenance of an effective patient–doctor relationship.<sup>52</sup> Brewer and Cadman<sup>36</sup> identified five domains in which emotional competence 'determines one's capacity to develop key skills and competencies'; these are self-awareness, self-regulation, motivation, empathy and social skills, which in turn map onto domains identified by the UK GMC as relevant to professionalism.<sup>52</sup> Brewer and Cadman<sup>36</sup> hypothesised that those who are more 'emotionally intelligent' are better placed to deal with the stresses of medical education and perform better both academically and clinically, and thus there is reason, albeit theoretical, to hypothesise that EI-based education may play a role in the development of professionalism.

Although links between EI and communication education and professionalism are currently only theoretical, the fact that doctors' EI affects their patients' and their own health outcomes makes it too important a construct to ignore, particularly at a time when health care professionals are called upon to increase their compassion, empathy and emotional responsiveness. The review of Lewis *et al.*<sup>9</sup> concluded that EI was a potentially important construct, but also that, as applied by researchers at the time, it was immeasurable and 'uroboric' (self-fulfill-

ing). Lewis *et al.*<sup>9</sup> recommended that EI should be applied critically and cautiously in medical education, particularly as a predictor of doctors' academic or interpersonal 'success'. The situation has not changed: as far as communication skills and professionalism are concerned, EI is for researchers and developers, not educational practitioners, although practitioners might reasonably expect to see interventions informed by EI entering curricula in the future.

### **How can EI contribute to the selection and emotional development of medical students?**

Because more emotionally intelligent doctors are, by some criteria, better ones,<sup>9,50</sup> it is tempting to consider EI as an alternative to traditional means of assessing non-cognitive skills in medical school applicants.<sup>53,54</sup> Lewis and colleagues,<sup>9</sup> however, strongly opposed the use of EI as a selection criterion, particularly because some measures have an inherent positive bias towards women. There is little evidence to support a selection strategy based on EI and, in particular, a lack of longitudinal evidence that more emotionally intelligent applicants become more emotionally intelligent doctors, or that an individual's EI at selection affects his or her patients' outcomes.<sup>55</sup> There is insufficient evidence, at present, to support the use of EI as a selection criterion.<sup>56</sup>

Although EI was formerly regarded as a stable trait, current evidence suggests otherwise.<sup>57,58</sup> It can be enhanced by learning to perceive, appraise and express emotions, access and generate emotions, and regulate and understand them.<sup>57,58</sup> Hence attention has turned to developing EI and the competencies underpinning it in medical students.<sup>59</sup> These skills can be directed towards oneself ('self-directed') and might involve, for example, talking positively, being aware of one's own emotions, controlling one's impulses, and regulating one's emotions. They can be directed towards others ('other-directed'), such as in making empathic statements, eliciting patient concerns and emotions, communicating emotions accurately to others and ensuring shared emotional processing.<sup>59</sup> The skills that are most easily taught and measured, and most directly related to patient and provider outcomes, are those relating to emotional awareness, management and understanding.<sup>58</sup> These include being aware of and managing one's patients' emotions and one's own at the same time so that both parties experience the interaction in as positive a way as possible. Research is starting to show that, as pre-



dicted by Lewis *et al.*,<sup>9</sup> EI can be learned by medical students and curriculum interventions can enhance their learning. Interventions of this type have yet to be tailored to communication skills or professionalism education, but it would be logical to evaluate the benefits of doing so.

### What methodological issues are associated with implementing EI-based education into medical curricula?

It has been tempting to assume that a construct as intuitively appealing as EI can be incorporated unproblematically into medical curricula. A number of methodological questions, however, confront a curriculum lead who decides to develop medical students' EI skills or incorporate them into a communication skills programme. Firstly, the construct of EI was not originally developed in medicine and therefore the issues associated with assessing it in this arena must be investigated. Ability-based measures include both EI that is attributable to experience and learning (crystallised EI) and abilities to solve new problems, independent of prior learning (fluid EI). Ability-based measures are considered free from self-report bias (because they are supposed to measure *abilities* rather than self-reported skills or behaviours), but they may be more 'fluid' than an educator would like. Medicine is a very competitive field. Research into general intelligence indicates that IQ scores can increase by an average of 0.64 of a standard deviation when participants are motivated to succeed (by monetary gains, for instance).<sup>60</sup> It is, as yet, unclear whether ability-based measures of EI, which are based on a conceptual framework similar to that of IQ measures, are also susceptible to motivational bias. Furthermore, the notion that an individual needs a certain degree of introspection in order to recognise his or her own emotions has led some researchers to question whether ability-based questionnaires are truly ability-based, or whether they require participants to self-report traits or characteristics.<sup>61</sup> This raises the possibility that ability-based measures may not, in fact, be free from self-report bias and may be subject to a socially desirable response bias. The validity threat posed by a self-report bias is even greater when using trait or mixed (dispositional) measures, given that they are designed to assess self-perceived EI skills and abilities. The risk for self-report bias is, in fact, a reality in tools that require participants to answer questions about their perceptions of skills (such as the Trait Emotional Intelligence Questionnaire [TEI-Que]<sup>62</sup>).

Another methodological issue confronts a curriculum lead considering the use of EI to select between medical school applicants. Given that we assess people in many different ways, just how independent a construct is EI? Concern has been expressed that EI and personality are 'more highly correlated than many researchers would prefer'.<sup>63</sup> High levels of correlation between dimensions of personality and both trait and mixed (dispositional) models of EI have been reported.<sup>15,64,65</sup> There is also overlap, albeit less, between measures of personality and ability-based measures of EI.<sup>25</sup> Researchers argue that the ability-based model of EI is more distinct from personality traits and transient health states<sup>66–70</sup> because it derives from previous information-processing theories of intelligence.

These methodological concerns leave curriculum leads with unanswered questions about whether to measure EI and which measure to use. (How) is it possible to measure EI abilities rather than self-reported preferred ways of behaving? Is there a risk that we will assess motivation to be admitted to medical school rather than actual emotional competencies? For now, we advise test administrators to interpret scores in the context of an individual's wider functioning and self-presentation (such as OSCE scores or interpersonal performance in interview). That, however, adds another layer of complexity to the already complicated processes of selecting and educating medical students.

If we set aside methodological concerns, a second pertinent question concerns the cost of measuring EI. Certain measures, such as the Bar-On Emotional Quotient Inventory (Bar-On EQ-i)<sup>17</sup> and the Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT),<sup>70</sup> must be administered online. The test publisher, Multi-Health Systems, Inc. (Toronto, ON, Canada) then applies a scoring algorithm to the raw data, which costs approximately GBP6.00 (US \$10.00) per participant. Other measures, such as the TEIQue, require a minimum of 18 'units' (participants) for scoring, each of which costs a minimum of GBP2.15 (US\$3.50). The financial gains for EI test developers may seem a minor point when considering the complicated world of EI, but the influence of cost on potential users of current EI measures cannot be ignored.

Further questions refer to whether tools designed to measure EI can be reliably applied to medical populations and how well these will perform in

such populations. Medical students differ from the general population because their age range is narrow and they are a highly selected population of high academic achievers who share a common ambition. The reliability and validity of some, but not all, tools have been confirmed in medical student samples<sup>66</sup> and thus a curriculum lead would be wise to check validity evidence before choosing a measure.

A fifth question concerns whether there is a 'minimum' level of EI after which it stops having an influence on medical students' and doctors' practices or indeed negatively influences practice.<sup>32</sup> Given that EI research is still in its infancy, the data available to answer this question are limited, which makes it particularly difficult to know how EI might be used as a selection criterion.

Finally, what are the potential negative or unintended outcomes of applying EI to medical education? Two obvious concerns are that labelling a student or doctor as emotionally unintelligent might represent a self-fulfilling prophecy, whereas labelling one as highly emotionally intelligent might instigate tensions in the competitive setting of a medical school or collegial group. Measuring EI will inescapably focus people's attention in a way that could, ultimately, trivialise the very quality it was intended to strengthen. Equally inescapably, it will distract attention from other qualities that are not measured or fed back to people but that might be every bit as important to patients and colleagues. Furthermore, wealthy schools and parents may find ways to train applicants to do well in EI measures, disadvantaging candidates from less privileged backgrounds.

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## CONCLUSIONS

Medicine is an emotionally demanding practice and medical education is an emotional process and yet it has been customary to regard emotional experience as collateral to the central task of acquiring and applying practical competence.<sup>8</sup> Views, however, are changing. Neuroscience research has shown that knowledge and skills are more valuable when possessed by people who can apply them in emotionally sensitive ways.<sup>71</sup> Cognitive science has shown that emotions influence how health professional learners identify and perceive information, and interpret and act on it.<sup>72</sup> Achievement emotions have been shown to influence medical students' academic performance.<sup>73</sup> Emotional highs and lows amongst

medical students have been linked to their development of the identity of a doctor.<sup>74</sup> Current concern about unprofessional acts by health professionals adds further impetus to the professionalism movement and focuses, specifically, on the need for compassionate as well as safe and effective care.<sup>1</sup>

On the grounds that health care professionals who communicate better and demonstrate higher levels of professionalism are more emotionally intelligent,<sup>25–28,49,50</sup> EI seems, on first inspection, to provide just what medical curricula need. However, research to date has not established whether EI is a trait, a learned ability or a combination of the two. Doubt remains as to whether it is independent of personality and transient emotional states and can be measured without being confounded by social desirability bias and learners' determination to be successful. Competing theories and measures represent the construct in different ways and, whichever approach is taken, commercial exploitation has made EI expensive to measure. Furthermore, there is currently no agreed method of measuring EI in a way that is linked to performance in medical school or patient outcomes and it seems less and less likely that such agreement will emerge because measurement approaches continue to diverge in the research literature.

If, as has been suggested, EI were to be used to select for medical school, there would be a real risk of including and excluding the wrong people. It is rather illogical, moreover, to exclude people because they lack a property they are supposed to acquire from the curriculum they are being selected for. Unlike EI, communication skills education has a firmly established place in undergraduate curricula, but it has been notoriously lacking in underpinning theory. A link between communication skills and EI is therefore of potential interest. Moreover, it is interesting that educational interventions can increase EI,<sup>57</sup> which, in turn, is associated with more effective communication, both in summative assessments and in clinical practice.<sup>49,50</sup> Medical education is a very competitive field, however, and thus focusing students' attention on EI and labelling people as more or less emotionally intelligent may have serious unintended consequences. There is, at present, no convincing evidence that EI-based education can develop medical students' professionalism.

Any curriculum lead who wishes to implement EI-based education into the teaching of communication skills is advised to tread carefully. Only one

study to date has evaluated the improvement of students' EI through the use of tailored educational interventions and it involved a stand-alone EI intervention rather than an integration of EI principles into an existing curriculum.<sup>75</sup> Full integration into a curriculum would be more difficult and its success cannot be guaranteed. To end this article, the present authors would like to offer the following advice to a medical school dean of our times.

We applaud your willingness to consider EI, which, used properly, has the potential to enrich the education of your students, particularly their communication skills. Our first and most important piece of advice is to put the label of 'emotional intelligence' to one side, at least until it is better defined and conceptually clearer. You would be better advised to clarify exactly which construct you would like to operationalise. Petrides and Furnham<sup>76–78</sup> distinguish between emotional self-efficacy (trait EI) and cognitive-emotional ability (ability EI); they are measured and operationalised in different ways. Trait EI is measured using self-report questionnaires designed to assess typical performance. Ability EI, by contrast, is measured as maximal performance and determined using norms that are subject to cultural consensus.<sup>79</sup> Because those different measures are theoretically and practically distinct from one another, it is important that you base your educational intervention on a solid conceptual framework. You should use the framework that you have chosen to specify your goals and intended behavioural outcomes, and measure these using standardised and validated measures. Grounding EI-based teaching in this way gives it the best chance of improving both crystallised and fluid EI.

Our second piece of advice is to identify the educational, sociological, cultural and developmental contexts in which your intervention will be applied. Will you implement it throughout the medical curriculum, or target a particular stage of learning or year group(s)? Will you incorporate the intervention into existing teaching or use it as a stand-alone additional module? How might students' cultures influence how they perceive and respond to such teaching? It is important to consider these issues because students' EI may modify their emotional reactions to situations they face during their education, which may, in turn, influence their ability to benefit from your educational intervention. Furthermore, students' cultures may influence their signalling and interpretation of emotions and emotional discourse<sup>80</sup> and thus how teaching is translated and applied. In order to

integrate EI-based teaching effectively, you need to put provisions in place to ensure that all of your students have an *emotional arsenal* of skills upon which to draw when faced with emotionally challenging situations. Teaching on EI should address the influence of medical students' emotional reactions on their conduct, identity, motivation and subsequent learning experiences. It should also aim to educate students explicitly about the concept of EI and help them to assume increasing partnership in its development in a culturally sensitive and accessible manner.

Our third piece of advice is to consider what is currently taught at other stages of your curriculum. If your students are already being educated in how to recognise and respond to patients' emotions, then they may already be acquiring the high-level skills required to develop EI abilities. If this is already occurring, then is an additional tailored educational intervention necessary? Possibly, but you need to be sure about that before introducing another intervention. We wish you the best of luck and hope that, as researchers address the *role* of EI in medicine, you will continue to evaluate and modify your curriculum as necessary.

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*Contributors:* all authors contributed to the conception and design of the article. MGC wrote the first draft of the paper, which was then subject to the critical revision of all of the authors. All authors approved the final manuscript for publication.

*Acknowledgements:* we wish to acknowledge Karen Mann (Faculty of Medicine, Dalhousie University) and Pim Teunissen (Department of Educational Research Development, Maastricht University) for critically commenting on the manuscript.

*Funding:* none.

*Conflicts of interest:* none.

*Ethical approval:* not required.

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*Received 24 May 2013; editorial comments to author 2 July 2013, accepted for publication 8 November 2013*