

Medical Schools and Emotional Intelligence Screening

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Abstract

Emotional intelligence is a social construct that reflects an individual's inter-personal and intra-personal skills such as self-awareness, regulation of one's own emotions, communication skills, empathy, and professionalism. It encompasses a host of non-cognitive characteristics that are independent of IQ and other knowledge-based technical skills. This paper takes into account academic research along with findings in Emotional Intelligence by Daniel Goleman (1995) to demonstrate that emotional intelligence is a necessary component of a physician's skill set. Therefore, it must be assessed prior to admission into medical school to ensure the graduation of quality health care professionals that are not only scientifically knowledgeable, but also emotionally intelligent and socially aware. Additionally, physicians must be in tune with the humanistic demands of an ever-growing, multicultural patient population, and reflect the values of communities in which they serve. This paper illustrates the importance of emotional intelligence in the medical profession and calls for necessary research to be conducted to further validate assessments that can accurately measure one's emotional intelligence. Ultimately, the aim of this paper is to propose that medical schools need to take measures in their admission process development to ensure that their students will not only succeed in medical school, but will also succeed as quality health care professionals in the context of primary patient care.

Medical Schools and Emotional Intelligence Screening

Medical school admissions committees are challenged with admitting applicants who are most likely to become excellent physicians. Over the years, the Medical College Admission Test (MCAT) and the undergraduate grade point average (GPA) have been used as primary tools in selecting medical students. While these tools ensure the selection of applicants that are academically able, are they sufficient to predict interpersonal qualities, communication skills, and other non-cognitive characteristics expected from competent physicians? Are they capable of predicting success during the clinical years of medical school in the context of patient care? Will these assessors (MCAT & GPA) guarantee the graduation of competent doctors who reflect the values of and are in tune with the communities they serve?

While MCAT scores and GPAs provide medical school administrators with insight into how intelligent candidates are from a cognitive perspective, these do not necessarily illustrate how competent students will be after graduation. The literature to date demonstrates that the only thing that these meth-

ods of predictive evaluation are able to prove is that an individual will succeed in taking part in and graduating from medical school. However, many researchers argue that medical schools need to be able to assess an applicant's emotional intelligence in addition to their cognitive intelligence. Emotional intelligence is defined as the awareness of one's own emotions and moods and those of others, especially in managing people (Emotional, n.d.). Interpersonal skills, communication skills, integrity, maturity, extroversion, and other non-cognitive characteristics are important when selecting medical students due to the fact that the MCAT and students' GPAs cannot predict their success during their clinical practice years and post-graduation.

This research paper will take into account the findings in the book *Emotional Intelligence* by Daniel Goleman (1995), as well as academic research, in order to demonstrate that emotional intelligence is a necessary component of a medical practitioner's skill set, and thus should be measured prior to medical school admission. Ultimately, the aim of this paper is to propose that medical schools need to take measures to ensure that their students will not only succeed in medical school, but also succeed as quality health care professionals in the context of primary patient care.

Goleman's Emotional Intelligence Theory

Although John Mayer and Peter Salovey, along with Maria DiPaolo, tentatively developed the idea of emotional intelligence in a 1990 paper, Daniel Goleman is largely credited with its popularization in organizational applications. Goleman (1995) writes that in key leadership positions, emotional intelligence is required because of the fact that building consensus and personal connections are difficult tasks. The days of direct orders being the only way in which organizational leaders communicate are over. Emotional intelligence brings strategic self-awareness into communication with team members, and allows for better decisions made on the job, as well as better recruitment and promotion of people within organizations. This is because, as Goleman (1995) writes, it allows individuals who are in leadership roles to retain control of their feelings and impulses; decisions are made based on proactive rather than reactive concerns. Looking at the medical profession, one can see how this approach could help temper decisions made in a multiple-expert environment such as that within a hospital.

Goleman (1995) states that emotional intelligence built on personal engagement needs to be linked to constant innovation. This runs counter to traditional organizational leadership research, which is more focused on making people work effectively as a team than delivering rapid, adaptive change mechanisms. The reason this is necessary in both organizational and personal life is that, as Goleman (1995) writes, there is a need to build a committed collection of different individuals that each have the skills to mitigate change and conflict in their own way, but who can work together. Again, this theory can

be aligned with the medical profession given the need for constant strategic shifts in care.

A health care professional who is emotionally intelligent and socially able can bring together a team of individuals with differing personalities and backgrounds. An effective doctor or hospital administrator can recognize personality differences and succeed in creating a common sense of purpose and a shared identity as members of a team. Identities can be powerful motivators, as Goleman (1995) writes: under great stress, such as hospital environments, people are likely to revert to family or tribal identities. The strategic leadership abilities of a medical leader are needed to create deep connections among individuals in the workplace. As Goleman (1995) writes, this can require motivating others to change by protecting and nurturing what he believes is the vital role of creative team members who bring attention to needed change within the organization.

Goleman is valuable because he addresses the personal nature of professional development. Goleman (1995) writes that we still look to an omnipresent, omniscient leader at the top to come up with an inspiring vision, the right strategic direction, exciting new ideas, and the answers to the organization's most pressing problems. Nonetheless, Goleman (1995) suggests, leadership needs to be shared by all individuals in an organization. This occurs through the integration of inspiration and the solicitation of new ideas on a regular basis. Central to the concept of leadership is the transfer or sharing of power between different individuals, but this cannot be attempted if there is a limited ability among medical personnel to demonstrate emotional intelligence.

Critics of Goleman's Approach to Emotional Intelligence

Prominent researchers have argued against Goleman's theory on emotional intelligence and its application. Goleman's early work has been criticized for assuming from the beginning that EI is a type of intelligence (Eysneck, 2000). Eysenck writes that Goleman's description of EI contains assumptions about intelligence in general, and that it even runs contrary to what researchers have come to expect when studying types of intelligence:

Goleman exemplifies more clearly than most the fundamental absurdity of the tendency to class almost any type of behavior as an "intelligence"... If these five "abilities" define "emotional intelligence," we would expect some evidence that they are highly correlated; Goleman admits that they might be quite uncorrelated, and in any case if we cannot measure them, how do we know they are related? So the whole theory is built on quicksand: there is no sound scientific basis.

In addition, many critics said that Goleman's claim about emotional intelligence predicting 80% of one's success throughout life did not have a scientific basis and was exaggerated. Jack Mayer, originally credited with the theory of emotional intelligence, has stated in a personal interview that Gole-

man's assertion that emotional intelligence is more valuable than IQ in predicting success is a notion that is not backed scientifically. Critics of Goleman have said that his book on emotional intelligence is based on specific personality traits rather than on emotion and its relation to intelligence. Although Colgeman is criticized for his "scientific-review" on emotional intelligence, the constructive model still holds its validity and importance.

Medical School Candidate Screening

From very early in the medical school admissions process development, the profession has called for additional focus on professional abilities, such as empathy, rather than a sole concentration on cognitive ability (Danielsen & Cawley, 2007). In fact, "more than a score of reports from foundations, educational bodies, and professional task forces have criticized medical education for emphasizing scientific knowledge over biologic understanding, clinical reasoning, practical skill, and the development of character, compassion, and integrity" (Cooke, Irby, Sullivan, & Ludmerer, 2006, p. 1339). Cooke et al. (2006) attribute much of the candidate screening process to the political and organizational climate of medical schools, in that in academic hospitals, research, not teaching, is at the forefront of instructors' responsibilities, and that American universities and medical schools have been focused on the acquisition of funding for publishable research initiatives. To this end, what is often valued is the ability of students to self-manage and learn without a significant amount of support.

However, medical schools now value critical thinking and analytical skills. This pushes the profession far beyond its previous focus on providing immediate care and towards a broader definition that includes preventative health initiatives (Guo, 2005; Deardorff, 2006). The greatest need for change, however, may be seen in the development of new socio-economic adaptations that cater to a multicultural, multiethnic patient population. As noted in the literature, needs in health care practice must now extend to the recognition of culturally- and racially-led health disparities which exist in the prevention, diagnosis, treatment, and follow-up of cancer, heart disease, HIV/AIDS, diabetes, infant mortality, and mental health (Wear, 2003). This means that medical schools need to recognize that competencies linked to empathy and emotional perception can be valuable for hospitals and clinics serving a multicultural community (Portera & Grant, 2010). Despite these findings, however, the medical school admissions process has been, to date, limited to professional standards within a monocultural environment based only on cognitive intelligence. Research goes as far as to show that even the credentials of qualified immigrants from foreign countries are devalued (Guo, 2005). "As a consequence, immigrant individuals and families, along with Canadian society as a whole, have suffered severe impacts" (Guo, 2005).

At the same time, some researchers such as Brown and Lilford (2008) defend the focus on MCAT scores and GPAs because, as they write, there are

no better methods of measuring capabilities at the present time. They note that:

Different specialties have different requirements, but from our reading of the literature we distill three broad attributes that doctors should have — cognitive ability (including linguistic and mathematical intelligence, problem solving capacity and memory); humanity (kindness, empathy, emotional intelligence, bedside manner and ability to work in a team); and diligence (care in clinical practice, capacity to work hard, punctuality, honesty and conscientiousness). Although the best option would be to screen potential doctors for all these attributes, the evidence suggests that only cognitive ability can be assessed with reasonable accuracy by a mass selection process. (p. 786)

In other words, while researchers such as Brown and Lilford (2008) recognize the need for emotional intelligence within the medical profession and in the evaluation process, they demonstrate that there is a limit to the ability of administrators to measure such a skill set.

Brown and Lilford (2008) may not be incorrect about this intrinsic difficulty. Mayer, Salovey and Caruso (2008) describe in fact that, in terms of psychological measurement for application in professional field assessment, researchers see emotional intelligence both as a set of interrelated abilities, and also as "an eclectic mix of traits, many dispositional, such as happiness, self-esteem, optimism, and self-management, rather than as ability based" (p. 503). In addition, the authors note that as the term has been picked up in the organizational literature (Goleman, 1995), emotional intelligence has been currently employed to denote many more aspects of psychological traits or concepts than originally intended. Emotional intelligence, thus far, has been difficult to measure accurately.

Mayer et al. (2008) note significantly that much work on emotional intelligence is still needed. They mention, in particular, that cultural and gender-based factors have yet to be mined for data, and that there are definitive gaps in knowledge regarding the integration of personality and psychometric measurements. Currently, the Mayer et al. (2008) model for testing emotional intelligence includes the facets of perception, appraisal and expression of emotion; emotional facilitation of thinking; understanding, analyzing and employing emotional knowledge; and the reflective regulation of emotions to further emotional and intellectual growth. As Schutte, Malouff, Hall, Haggerty, Cooper et al. (1998) point out, Salovey and Mayer's (1990) original framework for emotional intelligence may provide a more accurate construct for an individual's current state of emotional intelligence development (p. 169).

Mayer et al. (2008) do not, however, mention the paucity of neurological or neurolinguistic measurement in the literature regarding emotional intelligence. Although Jausovec, Jausovec and Gerlic (2001) demonstrate minor correlations between brain activity and perceived emotional intelligence, there

have been few studies which have tested these hypotheses in any significant way. Extensive investigations using functional magnetic resonance imaging (fMRI) and positron emission tomography (PET) must be utilized in concert with qualitative analysis (Jausovec, Jausovec, & Gerlic, 2001). The recognition of emotional information, for example, may be informed by brain function depending on associative or synaptic pathways, in addition to cultural factors and expected behavioral outcomes within cultural contexts. In other words, these significant findings create flawed data, which will not serve the development of accurate psychometric information and analysis. A true measure of emotional intelligence must include a more robust model that stands up to critical scientific evaluation.

Despite these claims, similar assessments of the validity of cognitive intelligence tests have also been made in the academic literature for decades. In an early but influential research review paper, McClelland (1973) argues that standardized tests such as the MCAT do not measure job competence, only an ability to do well on standardized tests. For example, one study demonstrated that in reviewing 12,000 correlations between aptitude test scores and various measures of later occupational success with 10,000 respondents, correlations did not exceed what would be expected by chance (McClelland, 1973, p. 3). In more recent reviews of the literature on the validity of cognitive testing for medical school, both Danielsen and Cawley (2007) and Veloski, Fields, Boex, and Blank (2005) confirm that little progress has been made. This is because tests like the medical college admission test (MCAT) have been developed to solely measure and emphasize scientific knowledge over emotional and social intelligence. Although students performing well on the MCAT are likely to do well during the first two didactic years of medical school, they may very well lack emotional intelligence and social skills to do well during their clinical years and post-graduation residency.

The Future of Medical School Admissions

Doctors should not only have biomedical knowledge, but also emotional and social knowledge that will foster better doctor-patient relationships, as noted in the literature above. The fundamental problem facing medical school admissions processes, as noted by Elam and Stratton (2006), is that they have remained largely unchanged over the last fifty years, in the United States in particular. Despite the repletion of research showing a need for empathy and emotional intelligence in the medical profession, these skills remain unmeasured, and research that may prove how to measure it is sidelined. As noted by Veloski et al. (2005), for example, although a measure of ethics is beginning to be applied in some schools, emotional intelligence, empathy and values-based skills are left off of the list of needed attributes. Given that academic intelligence and emotional intelligence are mutually exclusive of each other, there may be little or no correlation between the two. A student with a high MCAT score and GPA or academic intelligence, for instance, may

not have the best bedside manners. A student with a moderate MCAT score and GPA on the other hand, may have better bedside manners and greater emotional intelligence. These factors must be taken into account during the admissions process. Due to the biased selection factors (MCAT score, GPA) towards academic intelligence, many likely competent students are discouraged from applying to medical school because of cut-off scores on the MCAT.

There is, however a different approach which could help to rectify these imbalances in addition to a simplified version of the Mayer et al. (2008) measurement. Kolb's active learning cognition theory, according to Portera and Grant (2010), is one which emphasizes the ability of students to utilize their lived experiences in the classroom in order to reflect and experiment, and it can be used in measurement processes. This construct of educational theory builds on both self-oriented and social reflection as well as reading in order to assist students in developing more abstract, but useful, understandings of life experiences. This process ends in the application of and experimentation with ideas in the outside world for confirmation, disconfirmation, or refinement of their theories. Portera and Grant (2010) write, as well, that the cyclical nature of learning through Kolb's approach can provide for continuous reflection, dialogue, and action and thereby achieve the goal of building emotional intelligence within students within medical programs. The fundamental benefit of allowing for emotional praxis to take place, therefore, is that it will lead not only to better health care and mutual professional respect, but possibly to less organizational tension over the long term (Deardorff, 2006).

Conclusions

Although there is an ongoing debate, as detailed above, between those who support measuring quantitative knowledge through cognitive characteristics such as GPAs and the MCAT, and those who advocate for a more humanistic approach to medicine, some of the literature demonstrates a need for the inclusion of emotional intelligence as a skill required by medical school candidates. Medical professionals in the United States need to be able to mitigate not only physical ailments, but also the social, cultural and organizational demands of a multi-patient, multi-expert environment. If success in medical school is measured only by the ability of a student to pass courses, there is no guarantee that patients' needs will be served. The validity of standardized tests, as they currently stand, has also been called into question by scholarly research. Another path must be taken to address the current flaws in the system.

If emotional intelligence is a necessary component of a medical practitioner's skill set, as this paper suggests it is, it should be tested for prior to medical school admission. As noted by Elam and Stratton (2007), however, medical school admissions officers must determine the most suitable candidates from among 37,000 who are competing for 17,000 available positions. This means that additional research is needed in order to devise an applicable means of

ensuring that emotional intelligence can be measured accurately on a large-scale basis, as noted in the literature. Provisions must be made to support wide scale, longitudinal research into the efficacy of measurement of skills for medical school admission in order to rectify this challenge over the long term.

Such research can ultimately hope to achieve a better balance in the admissions process for medical school. It can validate the effectiveness of non-cognitive assessments such as the Personal Qualities Assessment (PQA) and others as predictors of success during clinical years and post-graduation residency training. Additionally, research can call for a reform in medical school admission policy and can even integrate seminars and workshops dealing with emotional intelligence and professionalism as a part of their curriculum. Extensive research can then pave way for more balanced selection criteria in medical students that not only accounts for academic intelligence, but also emotional intelligence. Physicians are expected by society to uphold the highest of moral and ethical standards and display professionalism in their field. In addition, they are expected to display empathy, great character, integrity, maturity, and effective communication and interaction in the context of patient care. We must sharply focus our modern day medicine upon primary patient care and professionalism, and train students that are not only academically competent, but also emotionally and socially intelligent.

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