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A multi-institutional study of the emotional intelligence of resident physicians

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Abstract

BACKGROUND: Although emotional intelligence (EI) may have a role in the development of Accreditation Council for Graduate Medical Education core competencies, few studies have measured resident EI across specialties. This study aimed to describe the EI of resident physicians across multiple specialties.

METHODS: Three hundred twenty five surgery, pediatric, and pathology residents at 3 large academic institutions were invited to complete the psychometrically validated Trait Emotional Intelligence Questionnaire.

RESULTS: The response rate was 42.8% (n = 139). Global EI of all residents (101.0 ± 8.1) was comparable with, but less variable than, the general population sample and was not statistically different between specialties. Compared with the norm sample, residents in the 3 specialty groups demonstrated unique combinations of areas of relative high and low development.

CONCLUSIONS: There exist distinct strengths and opportunities for the development for surgery, pediatrics, and pathology residents. Future investigations could use EI profiling to create educational interventions to develop specific areas of EI and assess correlation with resident performance.

Emotional intelligence (EI) describes how a person perceives and responds to his or her own emotions and to the emotions of others. Owing to writers such as Daniel Goleman, EI has been a prevalent concept in the business community since the 1990s, and there exists evidence that EI has a predictive relationship with job performance.[1–4] More recently, there has been interest among medical

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educators regarding the relevance of EI to undergraduate and graduate medical education selection processes and training, although results of studies that have attempted to tie EI to performance outcomes have been mixed.[5–15]

There is particular interest in the role that EI may play in the development of the 6 Accreditation Council for Graduate Medical Education (ACGME) competencies that trainees are expected to attain by the conclusion of residency.[14–19] A literature review examining EI in a medical context concluded that EI correlates with several of the ACGME competencies, including patient care, professionalism, and interpersonal and communication skills.[16] A multi-institutional study of anesthesiology residents has since confirmed that there exist statistically significant correlations between resident EI scores and acquisition of ACGME core competencies as measured by faculty evaluation, although the associations were typically small to moderate.[15]

Given the potential importance of EI in graduate medical education, it is necessary to understand the factors that influence EI levels. The present study was performed to describe the EI profiles of resident physicians in 3 specialties, to examine the effect of specialty on EI, and to test the hypothesis that global EI increases with training level.

Methods

Participants and recruitment

Surgery residents at 3 large academic medical centers were eligible to participate. Pathology and pediatrics resident physicians from one of these academic medical centers were also invited to participate in the study. These residency groups were chosen based on the willingness of their program directors to join the study. Residents were invited to participate in the study, and all participation was strictly voluntary. Resident physicians were offered personalized reports that detailed their EI profile and suggestions for further development as compensation for the time required to complete the study materials. These reports were valued at over $165 each and were provided by Thomas International. To ensure complete confidentiality, the only individual who was able to link deidentified EI data to personal identifiers was an administrator with no oversight of any residents.

Study procedures

Eligible resident physicians were invited to the study via e-mail and directed first to an electronic consent and demographics questionnaire, which solicited the participant's residency program, gender, age, and training level. These data were collected using the REDCap electronic data capture tool hosted at Partners Healthcare.[20] REDCap (Research Electronic Data Capture) is a secure, Web-based application designed to support data capture for research studies. Once a resident consented to participate, he or she was sent a personalized URL to complete the Trait Emotional Intelligence Questionnaire (TEIQue) on a commercial platform (www.thomasus.com/). This platform was chosen for its easy-to-use interface and its capacity to generate detailed EI profile reports for study participants. The expected time for completion of this tool is 20 to 25 minutes. No personal identifiers were collected on the commercial Web site. The study ran from August 2013 to October 2013, and study participants received their personalized EI reports in November 2013. All study procedures and materials were approved by the Partners Institutional Review Board.

Trait Emotional Intelligence Questionnaire

The main study tool was the Trait Emotional Questionnaire, version 1.50, freely available online at www.psychomatriclab.com. The TEIQue comprises 153 items that yield 15 independent facet scores, which then cluster to 4 factor scores (Table 1); the 153 items also generate a global EI score. The TEIQue has been psychometrically validated (Cronbach alpha scores typically greater than .70) across a number of cultures and languages.[21–23] Each item on the TEIQue is a statement answered on a 7-point Likert scale on the basis of how strongly the respondent agrees or disagrees with the statement (1 = completely disagree; 7 = completely agree). Although certain research groups consider EI to be an ability, either as a social intelligence or a cognitive skill, the TEIQue is based on a trait conceptualization of EI in which an individual's EI reflects personal disposition and is therefore well suited for self-report.[24–30]

After the study was closed, Thomas International calculated TEIQue global, factor, and facet scores for each participant on a 1 to 7 scale in accordance to the TEIQue scoring key held by Dr Petrides's group at London Psychometric Laboratory, University College London (http://www.psychometriclab.com).[23] To create group EI profiles, these scores were normalized to Thomas International's large general population sample, which comprised of 1874 individuals with gender, age, and educational characteristics representative of the general working population. Standardized TEIQue global EI, factor, and facet scores for the norm population have a mean = 100 with standard deviation = 15. Given these norm population parameters, a given group's TEIQue domains were deemed to be highly developed (greater than 103), average (between 97 and 103), or less developed (less than 97) per the Thomas International corporate development parameters, which are designed to represent meaningful intergroup differences in TEIQue domains.