Exploring Emotional Intelligence in a Caribbean Medical School

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ABSTRACT

Objective: To explore the emotional intelligence (EI) in medical students in a Caribbean medical school and investigate its association with gender, age, year of study and ethnicity.

Design and Methods: A cross-sectional design using convenient sampling of 304 years two to five undergraduate medical students at the School of Medicine, The University of the West Indies (UWI), St Augustine campus, was conducted. The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT-V2.0) was administered to test four branches of EI: perceiving emotions, facilitating thought, understanding emotions and managing emotions. Data were analysed using SPSS version 19. T-test, analysis of variance (ANOVA) and r (product moment correlation) were calculated to establish the effects of selected variables (gender, age, year of study and ethnicity) on total and sub-scales EI scores and tested against 0.05 and 0.01 significance levels.

Results: The total mean score for EI fell within the average according to MSCEIT standards. Gender analysis showed significantly higher scores for males and for younger age groups (< 25 years). Year of study and ethnicity did not yield any significant effect.

Conclusions: These findings of higher EI scores in males and younger students are unusual, given the well-publicized stereotype of the Caribbean male and the perception that advancing age brings maturity and emotional stability. It would be valuable to widen this study by including other UWI campuses and offshore medical schools in the Caribbean. This preliminary study examined a sample of medical students from a well-established Caribbean medical school. Since EI is considered to be important in the assessment and training of medical undergraduates, consideration should be given to introducing interventions aimed at increasing EI.

Keywords: Caribbean, emotional intelligence, medical school, medical students

Exploración de la Inteligencia Emocional en una Escuela de Medicina de Caribe

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RESUMEN

Objetivo: Explorar la inteligencia emocional (IE) en estudiantes de medicina en una Escuela de Medicina del Caribe, e investigar su asociación con el género, la edad, el año de estudio y el origen étnico.

Diseño y métodos: Se llevó a cabo un diseño transversal usando un muestreo conveniente de 304 estudiantes de medicina de segundo a quinto año de la Escuela de Medicina, de la Universidad de West Indies (UWI), campus de San Agustín. Se aplicó la prueba de inteligencia emocional Mayer-Salovey-Caruso (MSCEIT-V2.0) para investigar cuatro áreas de la IE, a saber: percepción de las emociones, facilitación del pensamiento, entendimiento de las emociones, y manejo de las emociones. Los datos fueron analizados utilizando el SPSS versión 19. Se calcularon el T-test, el análisis de varianza (ANOVA) y r (correlación del momento del producto) para establecer los efectos de las variables seleccionadas (género, edad, años de estudio y etnicidad) sobre las puntuaciones totales y de las subescalas de la IE, y se probaron contra los niveles de significación 0.05 y 0.01.

Resultados: La puntuación media total para IE cayó dentro del promedio según las normas de MSCEIT. El análisis de género mostró puntuaciones significativamente mayores para los hombres y para los

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grupos de edad más joven (< 25 años). El año de estudio del estudiante y el origen étnico no arrojaron ningún efecto significativo.
Conclusiones: *Estos hallazgos de puntuaciones más altas de la IE en los varones y los estudiantes más jóvenes son inusuales, dado el estereotipo bien divulgado del hombre del Caribe y la percepción de que la edad avanzada aporta madurez y estabilidad emocional. Sería valioso ampliar este estudio mediante la inclusión de otros campuses de UWI y escuelas de medicina offshore en el Caribe. Este estudio preliminar examinó una muestra de estudiantes de medicina de una escuela médica del Caribe bien establecida. Puesto que la IE se considera importante en la evaluación y capacitación de los estudiantes de medicina, debe tomarse en consideración el introducir intervenciones destinadas a aumentarla.*

INTRODUCTION

The humanistic sides of medicine – good bedside manner and good verbal and nonverbal communication, intra and inter-personal communication and empathy – are all measurable components of emotional intelligence (EI); the construct that has gained increasing popularity and now has a relatively large academic and popular associated literature (1). The concept of EI was first described by Salovey and Mayer in 1990. They defined it as "the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use the information to guide one's thinking and actions" (2). Emotional intelligence was made popular by Goleman with the publication of his book: "Emotional Intelligence: Why It Can Matter More than IQ" in 1995 (3).

Arora and colleagues systematically reviewed the evidence for EI in medicine (4). This literature search identified 485 citations. An abstract review led to the retrieval of 24 articles for full-text assessment, of which 16 articles were included in the final review. Eleven studies focussed on postgraduates, four on undergraduates and one on medical school applicants. Six out of seven studies found women to have higher EI than men. Higher EI was reported to positively contribute to the doctor-patient relationship (three studies), increased empathy (five studies), teamwork and communication skills (six studies), and stress management, organizational commitment and leadership (three studies). Arora and co-researchers concluded that measures of EI correlate with many of the competencies that modern medical curricula seek to deliver (4). Emotional intelligence is increasingly discussed as having a potential role in medicine, nursing, and other healthcare disciplines, both for personal mental health and professional practice (5).

Emotional intelligence may play a key role in patient care (6). The University of the West Indies (UWI) is a regional university that serves 15 countries with five campuses located in the Anglophone Caribbean. The UWI was founded in 1948 at Mona, Jamaica. It began first as a College of the University of London. In that year, 33 students from nine Caribbean countries were admitted to the founding Faculty of Medicine. In 1961, The UWI became an independent entity and about that time, it established two other campuses, first in Trinidad and Tobago at St Augustine and later at Cave Hill, Barbados. The twin island Republic of Trinidad and Tobago is located at the southernmost end of the Caribbean archipelago, a mere eight kilometres from Venezuela. The Caribbean faces its own challenges with perceived 'intelligences' of the diverse population. Trinidad and Tobago, with a population of 1.3 million, is made up of approximately 40% of East Indian descent, 37.5% African descent and 20.5% Mixed. The minority ethnic groups such as Chinese, Syrian/Lebanese and Caucasians comprise less than 1% (7).

Data on emotional intelligence of medical students in the Caribbean are not available. This study will therefore establish trends that can be accessed by researchers in the region and beyond. Additionally, a study of this type will serve to inform students of the ability to understand their own emotions, their social and personal competence and ultimately help them to empathize with their patients. Collected data can positively impact those charged with developing the socio-physiological and 'soft' skills in medical students. Furthermore, the data will enable faculty and assessment specialists to make recommendations to curriculum experts. Medical students who graduate from The UWI should ultimately benefit.

The aim of the study was to measure the EI of medical students at various levels of training at the Faculty of Medical Sciences, The UWI, St Augustine, Trinidad and Tobago, and investigate the association with students' gender, age, year of study and ethnicity.

Objectives
The objectives of the study were to:
- Explore the distribution of total and sub-scale EI scores (perceiving emotions, facilitating thought, understanding emotions, managing emotions, experiential area and strategic area) among the medical students at a Caribbean medical school.

- Study the effects of gender, year of study and ethnicity on total and sub-scale EI scores (perceiving emotions, facilitating thought, understanding emotions, managing emotions, experiential area and strategic area) among the medical students at a Caribbean medical school.
- Study the association of age with total and sub-scale EI scores (perceiving emotions, facilitating emotions, understanding emotions, managing emotions, experiential area and strategic area) among the medical students at a Caribbean medical school.

SUBJECTS AND METHODS

The study was conducted at the School of Medicine, Faculty of Medical Sciences (FMS), The UWI, St Augustine campus located in Trinidad and Tobago. This medical school offers a five-year programme, after which successful students are granted the MB BS degree. The authors employed a cross-sectional study design. A sample of 304 undergraduate medical students from years two to five was selected using convenience sampling. The sample was originally supposed to be a stratified random sample. However, this was logistically difficult and convenience sampling was utilized. This study was approved by the Ethics Committee of the FMS, The UWI, St Augustine, Trinidad and Tobago.

Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) V2.0

Emotional intelligence was measured using 'The Mayer-Salovey-Caruso Emotional Intelligence Test' (MSCEIT) V2.0 – an ability-based test designed to measure the four branches of the EI model by Mayer and Salovey (8). The MSCEIT V2.0 was developed from an intelligence-testing tradition formed by an emerging scientific understanding of emotions and their functions. From the first published ability measure, the test was specifically intended to assess emotional intelligence, namely Multifactor Emotional Intelligence Scale (MEIS). The MSCEIT V2.0 consists of 141 items and can be completed between 30 and 45 minutes. There are four branches of emotional intelligence on which MSCEIT has been modelled: perceiving emotions (ability to perceive emotions in oneself and others as well as in objects, art, stories, music and other stimuli), facilitating thought (ability to generate, use, and feel emotion as necessary to communicate feelings or employ them in other cognitive processes), understanding emotions (ability to understand emotional information, to understand how emotions combine and progress through relationship transitions, and to appreciate such emotional meanings) and managing emotions [ability to be open to feelings, and to modulate them in oneself and others so as to promote personal understanding and growth] (8). The MSCEIT V2.0 demonstrates stronger discriminant validity than self-report measures, which are more highly correlated than ability based measures with personality constructs such as extroversion and neuroticism (9).

With respect to the qualitative interpretation of MSCEIT, a person with a score of 69 or less needs to 'consider development', 70–89 needs to 'consider improvement', 90–99 is considered a low average score, 100–109 is considered a high average score, 110–119 is considered competent, 120–129 is considered to have 'strength' and 130+ is considered to have 'significant strength'. Further, the scores are reported in line with ability based intelligence score where 100 is the mean reference score and the standard deviation is 15.

Data analysis

Data were analysed using SPSS version 19. Means and standard deviations (SD) were calculated for sub-population and various sub-scales. In addition, t-test, analysis of variance (ANOVA) and r (product moment correlation) were calculated to establish the effects of selected variables (gender, age, year of study and ethnicity) on total and sub-scale EI scores. P-values were tested against 0.05 and 0.01 levels of significance.

RESULTS

A total of 304 medical students completed the MSCEIT V2.0. Table 1 and the Figure summarize the characteristics of the sample including gender of students, age above and below the mean of 22.37 years, age above and below 25 years, year of study and ethnicity. There was no Year 1 class at the time of the study as the questionnaires were administered at the end of the academic year when Year 1 students were promoted to Year 2. It was difficult to recruit the final year students because data collection was done a few weeks before their final exit examinations.

Aggregated MSCEIT scores in medical students

The Cronbach alpha was found to be 0.92. The mean aggregated MSCEIT score was 97.81 (SD 16.05, range 52.00–141.74), which falls in the low average range. For the branch scores, the perceiving emotions mean score was 99.99 (SD 15.40, range 33.99–165.75), facilitating thought mean score was 102.55 (SD 18.20, range 46.73–149.89), understanding emotions mean score was 102.92 (SD 16.42, range 56.58–164.95) and managing emotions mean score was 95.11 (SD 14.87, range 48.14–149.49). The mean of each branch score fell between low average and high average according to the MSCEIT standard.

Emotional intelligence and gender

The data in Table 2 indicate that all the t-test results for males and females were statistically insignificant except for the sub-scales managing emotions (t = 3.60; $p < 0.01$) and the strategic area (t = 2.19; $p < 0.05$) where males scored higher in both cases and these scores achieved statistical significance. Table 2 shows that in the current study, males excelled in total emotional intelligence scores as well as in all

Table 1:   Gender, ethnicity and year of study cross-tabulation

| Year of study	Gender		Not identified	Ethnicity Indo-Trinidadian	Afro-Trinidadian	Total
Year 2	Male	Frequency	4	16	8	28
		Percentage	5.7	22.9	11.4	40
	Female	Frequency	5	19	18	42
		Percentage	7.1	27.1	25.7	49.9
	Total	Frequency	9	35	26	70
		Percentage	12.8	50.0	37.1	100
Year 3	Male	Frequency	2	10	13	25
		Percentage	2.7	13.5	17.6	33.8
	Female	Frequency	8	20	21	49
		Percentage	10.8	27.0	28.4	66.2
	Total	Frequency	10	30	34	74
		Percentage	13.5	40.5	46	100
Year 4	Male	Frequency	3	37	11	51
		Percentage	2.2	27.4	8.1	37.8
	Female	Frequency	14	49	21	84
		Percentage	10.4	36.3	15.6	62.2
	Total	Frequency	17	86	32	135
		Percentage	12.6	63.7	23.7	100
Year 5	Male	Frequency	0	10	0	10
		Percentage	0.0	40	0	40
	Female	Frequency	0	12	3	15
		Percentage	0.0	48	12	60
	Total	Frequency	0	22	3	25
		Percentage	0.0	88	12	100
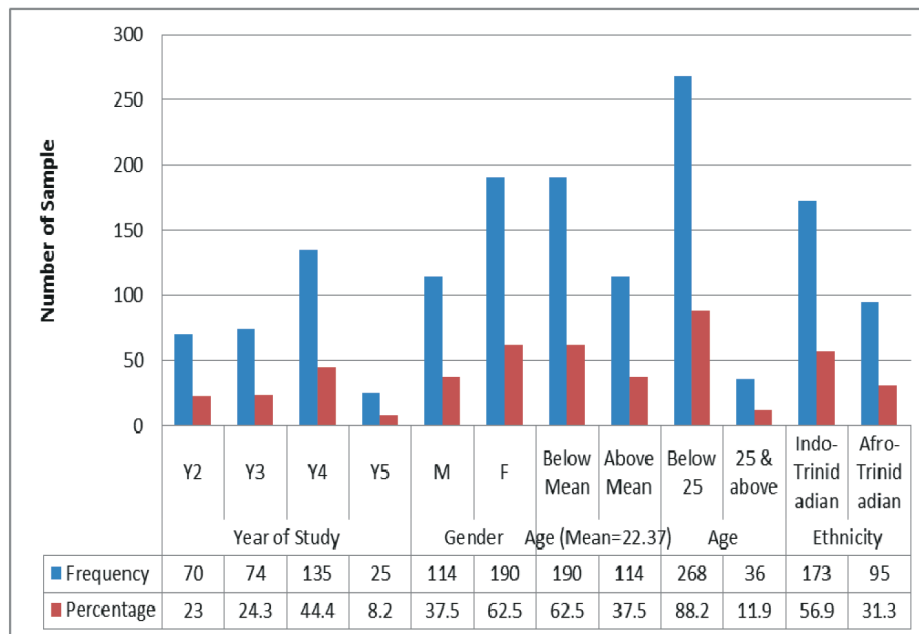
Figure: Characteristics of the sample used for data analysis.

Table 2:   Emotional intelligence (EI) and gender

EI and sub-scales	Gender	n	Mean	SD	SE	t-ratio	Df	significant level
Perceiving emotions	Male	109	101.61	18.19	1.85	1.39	294	$p > 0.05$ (NS)
	Female	187	99.04	13.48				
Facilitating thought	Male	110	105.07	19.99	2.18	1.84	296	$p > 0.05$ (NS)
	Female	188	101.07	16.95				
Understanding emotions	Male	110	103.07	16.83	1.97	0.12	296	$p > 0.05$ (NS)
	Female	188	102.84	16.22				
Managing emotions	Male	109	99.11	16.87	1.76	3.60	293	$p < 0.01$
	Female	186	92.77	13.05				
Experiential area	Male	109	101.81	17.98	2.01	0.79	294	$p > 0.05$ (NS)
	Female	187	100.23	15.91				
Strategic area	Male	109	101.33	17.20	1.92	2.19	293	$p < 0.05$
	Female	186	97.12	15.17				
Total emotional intelligence	Male	108	99.02	16.94	1.94	0.98	292	$p > 0.05$ (NS)
	Female	186	97.10	15.52				

NS: not significant; $p = 0.05 = 1.96$; $p = 0.01 = 2.58$

the sub-scale scores when compared to the females. The findings, however, did not achieve statistical significance.

Emotional intelligence and age
Analysis of age differences in the MSCEIT V2.0 indicated that younger students (below mean age 22.37 years) scored significantly higher in all areas including perceiving emotion (t = 2.36; $p < 0.05$), facilitating thought (t = 2.74; $p < 0.01$), understanding emotion (t = 3.32; $p < 0.01$), managing emotion (t = 2.83; $p < 0.01$), experiential area (t = 2.88; $p < 0.01$) and strategic area (t = 3.12; $p < 0.01$). Younger students also scored significantly higher on total EI scores (t = 2.79; $p < 0.01$) and these findings achieved statistical significance (Table 3).

Analysis of age differences comparing students under and over 25 years in the MSCEIT V2.0 indicated that younger students (under 25 years) scored significantly higher in areas including facilitating thought (t = 2.79; $p < 0.01$), understanding emotion (t = 3.46; $p < 0.01$), managing

emotion (t = 2.30; $p < 0.05$) and strategic area (t = 3.41; $p < 0.01$). Students under 25 years also scored significantly higher on total EI scores (t = 2.28; $p < 0.05$) as presented in Table 3. Increasing age correlated negatively with all sub-scales and total EI scores is shown in Table 4.

Emotional intelligence and year of study
When a logistic regression model was applied to the variables, EI and year of study, none of the F values with regard to year of study was found to be significant.

Emotional intelligence and ethnicity
When the variables EI and ethnicity were analysed, the non-identified group of 36 sample subjects was dropped and the independent sample *t*-test was used to find out the significant differences between the Indo-Trinidadian and Afro-Trinidadian sample. The outcome revealed that none of the t-ratios was found to be statistically significant.

Table 3:   Emotional intelligence (EI) and below and above mean age (22.37 years), and age below and above 25 years (as MSCEIT V2.0 standard classification)

EI and sub-scales	Age	n	Mean	SD	SE	t-ratio	Df	Significance level
Perceiving emotions	Below mean age	187	101.59	15.18	1.84	2.36	294	$p < 0.05$
	Above mean age	109	97.25	15.47				
Facilitating thought	Below mean age	188	104.74	17.82	2.16	2.74	296	$p < 0.01$
	Above mean age	110	98.81	18.33				
Understanding emotions	Below mean age	188	105.30	16.47	1.94	3.32	296	$p < 0.01$
	Above mean age	110	98.86	15.58				
Managing emotions	Below mean age	188	96.94	14.90	1.78	2.83	293	$p < 0.01$
	Above mean age	107	91.90	14.33				
Experiential area	Below mean age	187	102.91	16.33	1.99	2.88	294	$p < 0.01$
	Above mean age	109	97.20	16.76				
Strategic area	Below mean age	188	100.84	15.74	1.92	3.12	293	$p < 0.01$
	Above mean age	107	94.87	15.95				
Total emotional intelligence	Below mean age	187	99.76	15.84	1.92	2.79	292	$p < 0.01$
	Above mean age	107	94.39	15.92				
Perceiving emotions	Below 25 years	261	100.2	15.67	2.78	0.10	294	$p > 0.05$ (NS)
	25 years and above	35	99.74	13.40				
Facilitating thought	Below 25 years	262	103.62	17.92	3.20	2.79	296	$p < 0.01$
	25 years and above	36	94.71	18.61				
Understanding emotions	Below 25 years	262	104.12	16.73	2.87	3.46	296	$p < 0.01$
	25 years and above	36	94.21	10.58				
Managing emotions	Below 25 years	260	95.84	15.08	2.66	2.30	293	$p < 0.05$
	25 years and above	35	89.73	12.06				
Experiential area	Below 25 years	261	101.35	16.67	3.00	1.54	294	$p > 0.05$ (NS)
	25 years and above	35	96.75	16.49				
Strategic area	Below 25 years	260	99.82	16.27	2.84	3.41	293	$p < 0.01$
	25 years and above	35	90.15	11.31				
Total emotional intelligence	Below 25 years	259	98.59	16.22	2.87	2.28	292	$p < 0.05$
	25 years and above	35	92.03	13.60				

MSCEIT: Mayer-Salovey-Caruso Emotional Intelligence Test; NS: not significant; $p = 0.05 = 1.96$; $p = 0.01 = 2.58$

Table 4:   Correlation between emotional intelligence (EI) and age

EI and sub-scales	r with age
Perceiving	-0.05
Facilitating	-0.15
Understanding	-0.22
Managing	-0.11
Experiential	-0.12
Strategic	-0.19
Total emotional intelligence	-0.14

DISCUSSION

This exploratory study is one of the few to report on the use of the MSCEIT V2.0 in measuring EI in an undergraduate medical student population and the first of its kind to be undertaken in the Caribbean. Trinidad and Tobago's culturally diverse population offers an initial dataset from which to analyse emotional intelligence in the Caribbean.

Statistical analysis of the collected data found that the total mean score for EI for medical students at the FMS, The UWI, Trinidad and Tobago campus fell in the low average according to the MSCEIT standard. Further, all sub-scale scores: perceiving emotions, facilitating thought, understand-

ing emotions, managing emotions, experiential area and strategic area, fell between low average and high average according to the MSCEIT standard. The over-emphasis on learning 'hard' sciences and a strong bio-technical focus in medical education undermines the nurturing of 'soft' skills' which might be attributed to the current findings (10). Indeed, this finding is of concern given that the medical profession requires professionals with higher EI. However, emphasis on the biological and technical aspects of medicine has, as some scholars note, "been at the expense of the psychosocial, humanistic qualities, caring, empathy, humility, compassion and sensitivity" (11). This finding underlines the need for curriculum intervention designed to reinforce the humanistic values associated with the profession.

In the present study, males were found to have higher levels of EI than females. Although this result defies the traditional assumption that in general, females excel in emotional abilities, other studies have found this to be the case (12–14). Not surprisingly, however, the majority of studies have found females to be more emotionally intelligent (4, 15–30). Arora *et al* reviewed all studies of EI in medicine and found women to have higher EI than men in six of the seven studies (4). Some studies have reported that gender is not a significant predictor of emotional intelligence (5, 31).

The findings with regard to higher EI scores of Caribbean male medical students does not reflect the stereotype of the Anglophone Caribbean male, who is often portrayed as 'purveyors of violent crime' and as a 'nerd' if he shows academic inclinations (32, 33). Contrary to other studies (34), the year of study and ethnicity did not have any significant effect on the EI of the selected sample.

CONCLUSION

The current research shows that students demonstrate low average to high average EI scores. Younger age and male gender were associated with higher EI scores. This exploratory study provides new information on EI scores for medical students in years two to five at the School of Medicine, FMS, The UWI, St Augustine, Trinidad and Tobago. Since this work was carried out in a single university campus (island population 1.3 million), it would be valuable to widen this study to include students from The UWI campuses in other Caribbean islands such as Jamaica and Barbados, and students enrolled at offshore medical schools in the Caribbean. Longitudinal studies could be done to investigate changes as students progress through medical school.

REFERENCES

1. Lewis NJ, Rees CE, Hudson JN, Bleakley A. Emotional intelligence medical education: measuring the unmeasurable? Adv Health Sci Edu 2005; **10:** 339–55.
2. Salovey P, Mayer J. Emotional intelligence. Imagin Cogn Pers 1990; **9:** 185–211.
3. Goleman D. Emotional intelligence. New York: Bantam Books; 1995.
4. Arora S, Ashrafian H, Davis R, Athanasiou T, Darzi A, Sevdalis N. Emotional intelligence in medicine: a systematic review through the context of the ACGME competencies. Med Edu 2010; **44:** 749–64.
5. Birks Y, McKendree J, Watt I. Emotional intelligence and perceived stress in healthcare students: a multi-institutional, multi-professional survey. BMC Med Educ 2009; **17:** 61.
6. Stratton TD, Elam CL, Murphy-Spencer AE, Quinlivan SL. Emotional intelligence and clinical skills: preliminary results from a comprehensive clinical performance examination. Acad Med 2005; **80:** S34–7.
7. Beaie ST. CARICOM Capacity Development Programme. 2000 Round of Population and Housing Census Data Analysis Sub-Project: National Census Report Trinidad and Tobago. Guyana, CARICOM Secretariat; 2009.
8. Mayer JD, Salovey P, Caruso DR. Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) Item Booklet. Toronto, Canada: MHS Publishers; 2002.
9. Brackett MA, Mayer JD. Convergent, discriminant and incremental validity of competing measures of emotional intelligence. Pers Soc Psychol Bull 2003; **29:** 1147–58.
10. DeLisle J, Teelucksingh P, Seemungal T, Mungrue K, Williams S. Gender differentials on breaking bad news: implications for communication skills training in medical school. In: Steele GA, ed. Health communication in the Caribbean and beyond: a reader. Mona, Kingston: The University of the West Indies Press; 2011.
11. Wear D, Brian C. The development of professionalism: curriculum matters. Acad Med 2000; **75:** 602–11.
12. Carr SE. Emotional intelligence in medical students: does it correlate with selection measures? Med Educ 2009; **43:** 1069–77.
13. Mishra R, Ranjan P. Emotional intelligence as related to self-esteem of adolescents. Indian J Hum Relat 2008; **34:** 13–17.
14. Uma DL, Rayal UTR. Adolescent's perception about family environment and emotional intelligence. Indian Psychol Rev 2004; **62:** 157–67.
15. Thingujam NKS, Ram U. Emotional intelligence scale: Indian norms. J Educ Psychol 2000; **58:** 40–8.
16. Mohanty I, Uma Devi L. Socio-personal variables and emotional intelligence of adolescents in secure attachment style. Indian Psychol Rev 2010; **74:** 29–37.
17. Ciarrochi J, Chan AYC, Bajgar J. Measuring emotional intelligence in adolescents. Pers Individ Dif 2001; **31:** 1105–19.
18. Mayer JD, Caruso D, Salovey P. Emotional intelligence meets traditional standards for an intelligence. Intelligence 1999; **27:** 267–98.
19. Palmer B, Gardner L, Stough C. The relationship between emotional intelligence, personality and effective leadership. Aust J Psychol 2003; **55:** 140–4.
20. Van RDL, Alanso A, Visweshvaran C. Group differences in emotional intelligence scores: theoretical and practical implications. Pers Individ Dif 2005; **38:** 689–700.
21. Extremera N, Fernandez-Berrocal P. Perceived emotional intelligence and life satisfaction: predictive and incremental validity using the Trait Meta-Mood Scale. Pers Individ Dif 2005; **39:** 937–48.
22. Wong C, Foo M, Wang C, Wong P. The feasibility of training and development of EI: an exploratory study in Singapore, Hong Kong and Taiwan. Intelligence 2007; **35:** 141–50.
23. Carbonneau D, Nicol AM. Emotional intelligence and pro-social behavior in adolescents. Psychol Rep 2002; **90:** 361–70.
24. Nasar R, Nasar Z. Emotional intelligence and creativity. Indian Psychol Rev 2008; **71:** 251–4.
25. Brackett MA, Mayer JD, Warner RM. Emotional intelligence and its relation to everyday behavior. Pers Individ Dif 2004; **36:** 1387–1402.
26. Kafetsios K. Attachment and emotional intelligence abilities across the life course. Pers Individ Dif 2004; **37:** 129–45.
27. Pandey R, Tripathi AN. Development of emotional intelligence: some preliminary observation. Psychol Stud 2004; **49:** 147–50.
28. Van RDL, Viswesvaran C, Pluta P. An evaluation of construct validity: what is this thing called emotional intelligence? Hum Perform 2005; **18:** 445–62.
29. Austin EJ, Evans P, Goldwater R, Potter V. A preliminary study of emotional intelligence, empathy and exam performance in first year medical students. Pers Individ Dif 2005; **39:** 1395–1405.
30. Carrothers RM, Gregory SW, Gallagher TJ. Measuring emotional intelligence of medical school applicants. Acad Med 2000; **75:** 456–63.

31. Depape AR, Hakim-Larson J, Voelker S, Page S, Jackson DL. Self-talk and emotional intelligence in university students. Can J Behav Sci 2006; **38:** 250–60.

32. Reddock R. Gender and achievement in higher education. Paper presented at Conference of the Association of Caribbean Higher Education Administrators (ACHEA); 2009 Jul 10; Port-of-Spain, Trinidad and Tobago.

33. Parry O. Masculinities, myths and educational underachievement: Jamaica, Barbados and St. Vincent and the Grenadines. In: Reddock R, ed. Interrogating Caribbean masculinities: theoretical and empirical analyses. Kingston: University of the West Indies; 2004.

34. Todres M, Tsimtsiou Z, Stephenson A, Jones R. The emotional intelligence of medical students: an exploratory cross-sectional study. Med Teach 2010; **32:** 42–8.