10.5958/2320-608X.2019.00145.8

Gender Difference in Emotional Intelligence and its Component Traits in Medical Students

Kamalakannan Vadivel[1], Nilesh N Kate[2]

[1]Assistant Professor, Dr Kamalakannan Vadivel, [2]Professor, Dept. of Physiology, ESIC Medical College, Gulbarga, Karnataka

Abstract

Introduction: Emotional intelligence (EI) is a measure of emotional awareness. Higher EI is associated with improved patient-physician relationship, increased empathy, improved teamwork and communication abilities, stress management, organization commitment, leadership and higher academic performance. The aim of this study is to assess EI in medical students and to investigate if there is any gender difference in EI. We also studied the difference in the EI traits in relation to gender.

Materials and Method: It is an observational, survey based study. EI was assessed using Schutte Self Report Emotional Intelligence Test (SSEIT). SSEIT was distributed to 278 students after informed consent. Students have to respond on a five point Likert's scale. The data obtained were interpreted using descriptive statistics and analyzed with R statistical software package.

Results: 21% of students were found to have very high EI. 71% were found to have average EI. 8% were found to have low EI. Among the male students, 75% were having average EI score, 18% had high EI and 7% had very low EI. Among the female participants, 68% were found to have average EI, 23% had very high EI and 9% had low EI. EI was similar in both genders and the component traits measured by SSEIT were also similar in both gender.

Conclusion: EI and its trait is similar in both genders. Training modules can be incorporated in graduate medical education programme to improve EI in both genders.

Keywords: *Emotional intelligence, gender difference, SSEIT, EI trait.*

Introduction

Medical education is aimed at imparting the medical students with broad range of skill sets so as to enable them to deliver high quality health service. Accordingly, MCI has come up with revised graduate medical education regulation 2017. The aim of revised regulation is to create an "Indian Medical Graduate" (IMG) possessing requisite knowledge, skills, attitudes, values and responsiveness, so that she or he may function appropriately and effectively as a physician of first contact of the community while being globally relevant[1].

To achieve this, an IMG must be able to perform effectively, ethically & appropriately in carrying out his responsibilities as a clinician, a leader, as a member of health care system, a communicator and a lifelong learner. An IMG must also be able to provide health service that is clinically relevant and sound and he/she must be emotionally responsive[2]. The accreditation council for graduate medical education have identified and defined six competencies which include patient care, professionalism, system based practice, interpersonal and communication skills, medical knowledge, practice based learning and improvement[3].

To identify the strategies that will improve the above competencies, it is essential to identify the underlying

Corresponding Author:
Dr Kamalakannan V
Assistant Professor, Dept. of Physiology, ESIC Medical College, Gulbarga, Karnataka
e-mail: vk.kannan83@gmail.com

attributes of these competencies. It is thought that many of the skills that contribute towards these competencies have emotional intelligence as an essential component[4]. Most graduate medical education programmes are aimed at inculcating compassion and empathy, so as to improve patient care. Emotional intelligence (EI) competency has been used as an assessment method to assess three of the six core competencies viz., interpersonal and communication skills, professional behavior and patient care. [3] The EI competency includes twelve abilities viz., emotional self-awareness, emotional self-control, adaptability, achievement orientation, positive outlook, empathy, organizational awareness, coach and mentor, inspirational leadership, influence, conflict management, and teamwork[5].

EI is a measure of emotional awareness. It is an ability to respond to emotion in self and others. Evidences show that higher emotional intelligence is associated with improved patient-physician relationship, increased empathy, improved teamwork and communication abilities, stress management, organization commitment, leadership and higher academic performance[6-8].

EI can be assessed and measured by using concept models. Widely accepted models for EI includes ability EI model, trait EI model and mixed EI model[9]. Ability EI model was proposed by Mayer and Salovey. According to them ability EI is the ability to perceive and integrate emotion, and to understand emotion and regulate it so as to promote personal development[10, 11]. Trait EI model proposed by Petrides and Furnham. It measures self-perception of emotional self-efficacy[12]. Mixed EI model is proposed by Golemann[13]. According to this model EI is composed of set of interrelated skills, abilities, personal qualities and personality trait.

In the current study, we assessed EI using Schutte emotional intelligence scale or the Assessing Emotions Scale. It measures EI as a trait. The scale composed of 33 statements which measures EI in terms of positive affect, emotions of others, emotions of self, happy emotions, non-verbal emotion, and emotion management[14].

The aim of our study is to assess the emotional intelligence in medical students and to investigate if there is any gender difference in EI. We also studied the difference in the response for statements related to positive effect, emotions of others, emotions of self, happy emotions, non-verbal emotion & emotion management in relation to gender.

Materials and Method

It is an observational, survey based study, conducted in the Dept. of Physiology, ESIC Medical College and Hospital, Gulbarga, Karnataka. EI was assessed by using Schutte Self Report Emotional Intelligence Test (SSEIT). The survey was conducted among first year students, between 18 to 21 years of age. The objective and importance of the survey were explained to the students. Students were assured of anonymity and confidentiality of their participation in the study. A total of 278 students voluntarily participated in the survey. Total number of male and female students participated were 104 and 174 respectively. The survey was conducted after obtaining approval from institutional ethical committee for human studies. The students were instructed to carefully read through the statements and score them on the Likert's scale from 1 to 5. One indicates strongly disagree to 5 indicating strongly agree. Three of the thirty three statements viz. 5, 28 and 33 are reverse-scored. Total score less than 111 will be considered to be low and scores above 137 is considered to be high[15]. The data was analyzed using R statistical package. Student's t test was used to identify the difference in means between the genders.

Results

The mean and SD of the age between two genders were similar. The mean and SD of age in years for male is 19.12 ± 0.69 and that of female is 19.09 ± 0.61. A total of 59 (21%) students were found to have very high EI. 196 (71%) students were found to have average EI. 23 (8%) students were found to have low EI. (Figure 1)

Among the male students, 78 (75%) of the students were having average EI score, 19 (18%) had high EI score and 7 (7%) had very low EI score. Among the female participants, 118 (68%) students were found to have average EI score, 40 (23%) had very high EI score and 16 (9%) had score less than 111 which is low EI score. (Table 1) & (Figure 2).

Table 1: Gender difference in distribution of EI scores

S. No.	Gender	EI < 111	EI-111 to 137	EI > 137
1.	Male	6.73 %	75 %	18.27 %
2.	Female	9.20 %	67.82 %	22.99 %

The mean of the total score is 127.85 ± 13.35 and it represents score in a normal range. There was no gender difference in the total scores. The results also show that

six domains which SSEIT measures viz., positive effect, emotion of others, happy emotions, own emotions, non-verbal emotions and emotional management were not statistically significant. (Table: 2).

Table: 2 Gender difference in component traits of SSEIT score

S. No.	Component traits	Statements in SSEIT	Male (n = 104) Mean ± SD	Female (n = 174) Mean ± SD	p value
1.	Total score (SSEIT)	1-33	127.91 ± 12.45	127.79 ± 14.24	0.94
2.	Positive Effect	2, 3, 6, 10, 17, 20, 23	28.89 ± 3.99	29.56 ± 4.04	0.18
3.	Emotion-Others	4, 18, 26, 27, 29, 30, 32	26.44 ± 3.64	26.61 ± 3.74	0.71
4.	Happy Emotions	12, 13, 14, 31	15.78 ± 2.57	15.55 ± 2.65	0.48
5.	Emotions Own	8, 9, 19, 22	16.3 ± 2.56	15.89 ± 2.69	0.21
6.	Non-Verbal Emotions	5, 15, 25	10.69 ± 2.3	10.72 ± 2.07	0.92
7.	Emotional Management	1, 21, 24, 28	15.41 ± 2.57	15.57 ± 2.81	0.64

Discussion

We found that EI was similar in both genders. The traits measured by the SSEIT questionnaire were also found to be similar in both genders. Earlier reports have shown that females have high EI than males. In another report, males were found to have higher EI[6].We found that EI and the traits measured by SSEIT is similar in both genders. Over 90% of the total population participated in the study have EI scores which were in normal range or very high. Less than 10% of the total study population were found to have very low EI. High EI is found to be associated with good physician-patient relationship, compassionate and empathetic patient care, higher knowledge, and leadership quality, ability to work in team and good communication with the patient[8, 16, 17].

As 80% of the study population were having average or low EI, it is imperative that there is a need to have a mechanism in place so as to train the medical students towards improving their EI. It can be achieved by assessing EI and training the medical students using EI skills workshop, courses on handling emotion, workshops on personal and interpersonal skills, and practice of yoga can be made as part in education programme.

Practice of medicine as a profession requires high intelligence, patience, empathy & compassion. To enter in to medical school, in itself is highly competitive and individuals with higher intelligence will secure a place in medical school. Success of a medical student after graduation depends not just on his or her intellect but also on how good at he or she is in handling situation under stress while practicing medicine, which in most part is governed by how an individual reacts for a given situation and is primarily dependent on emotional intelligence. It is right time that MCI have come up with AETCOM module, whose primary aim is to create medical graduates who is having good attitude, ethics and communication skill which altogether can be improved by training the students to improve and increase EI.

Limitation: Study population consisted of first year students from a single institution and hence its finding can't be generalized. The sample size was relatively low for males. EI was assessed by using SSEIT, which is one among several ways of assessing EI. We have assessed EI in terms of trait and not as an ability. Studies may be done with senior medical graduates, through which the temporal change in EI could be assessed. Also such studies would have a greater sample size, the results of which may be generalized.

Conclusion

EI and its trait is similar in both genders. Training modules can be incorporated in graduate medical education programme to improve EI in both genders. Training on handling emotions of self and others will help medical students to achieve academically and professionally.

Conflict of Interest: There are no conflict of interest

Funding: Self

References

1. AETCOM_book. pdf [Internet]. [cited 2019 Apr 18]. Available from: https://www. mciindia. org/CMS/wp-content/uploads/2019/01/AETCOM_book. pdf

2. UG Curriculum | MCI India [Internet]. [cited 2019 Apr 18]. Available from: https://www. mciindia. org/CMS/information-desk/for-colleges/ug-curriculum
3. an_1999AnnRep. pdf [Internet]. [cited 2019 Apr 18]. Available from: http://www. acgme. org/ Portals/0/PDFs/an_1999AnnRep. pdf
4. Stewart M. Towards a global definition of patient centred care. BMJ. 2001 Feb 24; 322 (7284):444-5.
5. Webb AR, Young RA, Baumer JG. Emotional Intelligence and the ACGME Competencies. J Grad Med Educ. 2010 Dec; 2 (4):508-12.
6. 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 Educ. 2010 Aug; 44 (8):749-64.
7. Stoller JK, Taylor CA, Farver CF. Emotional intelligence competencies provide a developmental curriculum for medical training. Med Teach. 2013; 35 (3):243-7.
8. Chew BH, Zain AM, Hassan F. Emotional intelligence and academic performance in first and final year medical students: a cross-sectional study. BMC Med Educ. 2013 Mar 27; 13:44.
9. Gutiérrez-Cobo MJ, Cabello R, Fernández-Berrocal P. The Three Models of Emotional Intelligence and Performance in a Hot and Cool go/no-go Task in Undergraduate Students. Front Behav Neurosci [Internet]. 2017 Feb 22 [cited 2019 Apr 18]; 11. Available from: https://www. ncbi. nlm. nih. gov/ pmc/articles/PMC5319994/
10. Salovey, P. M JD. Mayer, J. D., and Salovey, P. (1997). "What is emotional intelligence?," in Emotional Development and Emotional Intelligence: Implications for Educators, eds P. Salovey and D. Sluyter (New York, NY: Basic Books), 3-31.
11. Salovey P, Mayer JD. Emotional Intelligence. Imagin Cogn Personal. 1990 Mar 1; 9 (3):185-211.
12. Petrides KV, Furnham A. Trait emotional intelligence: psychometric investigation with reference to established trait taxonomies. Eur J Personal. 2001; 15 (6):425-48.
13. Goleman D. Emotional Intelligence. Bantam Books; 1995.376 p.
14. Schutte NS, Malouff JM, Hall LE, Haggerty DJ, Cooper JT, Golden CJ, et al. Development and validation of a measure of emotional intelligence. Personal Individ Differ. 1998 Aug; 25 (2):167-77.
15. Schutte NS, Malouff JM, Bhullar N. The Assessing Emotions Scale. In: Parker JDA, Saklofske DH, Stough C, editors. Assessing Emotional Intelligence: Theory, Research, and Applications [Internet]. Boston, MA: Springer US; 2009 [cited 2019 Apr 19]. p. 119-34.(The Springer Series on Human Exceptionality). Available from: https:// doi. org/10.1007/978-0-387-88370-0_7
16. Allen RB. Emotional Intelligence as a Leadership Predictor [Internet]. Huffington Post. 2016 [cited 2018 Apr 8]. Available from: https://www. huffingtonpost.com/rita-balian-allen/emotional-intelligence-as_b_11072138.html
17. Romanelli F, Cain J, Smith KM. Emotional Intelligence as a Predictor of Academic and/or Professional Success. Am J Pharm Educ [Internet]. 2006 Jun 15 [cited 2018 Apr 8]; 70 (3). Available from: https://www. ncbi. nlm. nih. gov/pmc/ articles/PMC1636947/