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EMOTIONAL INTELLIGENCE OF MEDICAL STUDENTS AND NEED FOR TRAINING

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ABSTRACT

Introduction: Emotional Intelligence (EI) is essential for a competent physician. The present study was taken up to see the need for training in EI among medical students as a group. It was hypothesized that analysis of the individual scores obtained from the students could give a scoring of the whole group and show if training is needed.

Aim: To measure Emotional Quotient (EQ) of the First year MBBS students in 18 areas of EI.

Objectives: To assess the EI of the study subjects, to provide the students with an EQ map of their own, to compare the EI in both the genders and to assess the need for professional training of medical students in EI.

Results: Self-skills analysis showed that 74.4% of the girls and 75.5% of the boys were in Caution/Vulnerable group while for social-skills it was 45.6% and 53.1% respectively. This brought out the need for training in EI. Gender did not have any significant effect on self or social skills. There was statistically significant association between self-skills and social skills ($p < 0.0001$).

Conclusion: The study proved that there was a need for training in emotional handling of self-skills and social skills among the medical students.

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INTRODUCTION

Emotional intelligence can be defined as the ability to monitor one's own and other people's emotions, to discriminate between different emotions and label them appropriately and to use emotional information to guide thinking and behavior (Goleman, 1998). The word Emotional Intelligence (EI) appeared first in 1985 (Payne, 1983) and Emotional Quotient (EQ) in 1987 (Beasley, 1987). Currently, there are three main models of EI: Ability model, Trait model and Mixed model (Kluemper, 2008; Martins *et al.*, 2010) and multiple sets of questionnaire to test EI. To decide which EI assessment is most appropriate for a given use, the evaluations by the Consortium for Research on Emotional Intelligence in Organizations is helpful (Sharmila, 2015). The medical graduate is expected to be emotionally stable, empathetic to patients, good in counseling the distressed relatives, a good public relations manager with leadership qualities while facing some of the worst scenarios in the society.

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Students from various backgrounds are entering the medical college with absolutely no screening regarding their emotional intelligence (EI). Neither is there any structured training for the above said roles (Hojat *et al.*, 2002). Hence they are left to learn by experience, ending up either too distanced from suffering as a self protection or too aggressive in stressful situations causing consumer problems. Mostly the personal characteristics developed in life and the learning from the role models in medical school guided majority of doctors in situations that warranted use of emotions. The need for emotional management is becoming evident in a consumer society. This was keenly felt in the business world and companies have been giving specific stress on EI (Goleman, 1998; Payne, 1983; Cooper and Sawaf, 1997). It is only recently that the word EI has started getting associated with medical profession. It is known that a high emotional quotient (EQ) is associated with higher learning and performance (Joshia *et al.*, 2012) as well as interpersonal skills and ability to relate to the patients, but the need for training is still doubted (Imran *et al.*, 2013). One could argue that the unit family system and the digital world from which the present student for MBBS come could warrant a need for training. This has not been studied so far.

The review of literature showed that there was no difference in the EI scores of first year and final year students, when done at the same time and compared, which proves that medical curriculum does nothing about improving the EI scores during the 4 years (Dixit *et al.*, 2014). But there is no study or ongoing programs to see the effect of training in the same students from first year to final year, comparing their own scores over the 4 years. It was hypothesized that a guided self analysis could help students to know where they stand in the various areas of emotional intelligence, and if needed, they can either improve by themselves or with professional help/mentoring thus getting prepared for the future roles (Goleman, 1998). Analysis of the scores obtained by the students could also give a scoring of the whole medical student group and show if training is needed.

Aim of the study was to measure EQ of the First year MBBS students in 18 areas of emotional intelligence.

The objectives were:

- To assess the EI of the first year medical students
- To provide the students with an EQ map of their own, with which they can understand themselves with guidance and improve with professional help, if so desired.
- To compare the EI in both the genders
- To analyze the scores of the total group in each of the 18 areas to see if there is a need for professional training of the group of medical students.

MATERIALS AND METHODS

This descriptive study was done among first year MBBS students with the help of a professional expert in conducting the EQ test. After obtaining ethical committee clearance, a date and time was fixed for conducting the test and all students present on the day were included after obtaining their verbal consent. A validated and globally accepted Emotional Competence Inventory 2.0 (ECI) (Goleman, 1998) and a pre-tested testing scale was used for data collection. The ECI is a 360-degree tool designed to assess and develop the emotional competence of individuals based on 18 competencies organized into two clusters such as Self Skills (self-awareness, and self-management) and Social Skills (social awareness and relationship management). Questionnaire administration and interpretation of EQ mapping was done after a talk by the expert Clinical Psychologist present. The EQ map scoring grid was modeled on AIT and Essi Systems of integrated testing by Q-Metrics, California (1996). The scoring grids were prepared, consisting of scores to the answers in 18 areas, on a Likert scale and plotting of the same on the EQ Map.

The 18 areas of emotional competencies studied were

- Emotional self awareness –ESA
- Emotional self confidence – ESC
- Emotional resilience and self regulation- ERSR
- Strength to handle stress- SHS
- Emotional trustworthiness- ETW
- Innovation and adaptability, Ability to change- IAOC

- Achievement motivation, innovate towards excellence - AMITE
- Emotional commitment, aligning with goals - ECAG
- Initiative and optimism, pro-activity and persistence - IOPP
- People skills Empathy - PSE
- Developing others - DO
- Service orientation, recognizing - SOR
- Accepting diversity, accepting people - ADAP
- Art of influencing, effective tactics of persuasion - AIETP
- Communication, listening openly - CLO
- Conflict management, negotiating and resolving disagreement - CMNRD
- Leadership - LEAD
- Building bonds and networks - BON

Out of these 18, first 9 are self-skills and the rest 9 are social skills. The EQ map was then explained to the class and they were able to analyze themselves with regard to where in the map was their score and as to the areas needing improvement. The EQ map was kept by the students and the scoring sheet was returned for analysis. This was converted to a master sheet and analyzed by SPSS version 20. Data from the score sheets were analyzed by gender, and also by self or social skills of the group to look for effect of gender and any need for training. The social and self-skills were also compared. Computation of two separate multivariate analysis of covariance was done. The expert also spoke at the end of the session on how to continue to self-evaluate and improve. Professional help was made available in the subsequent days purely on the request of the students via the principal.

RESULTS

The ECI scores are from 0-35, categorized as Caution (0-9), Vulnerable (20-24), Proficient (25-29) and Optimal (30-35). Those in 0-24 (Caution and Vulnerable) and 25-35 (Proficient and Optimal) were clubbed together for analysis as Group I and Group II. Those in Group I would need to work at moving up on the EQ Map, by self-training or with expert mentoring. It was empirically set that if 35% of the study subjects fell in group I, then there could be a need for training of the whole of medical students.

The 18 areas EI were divided into Self Skills (9 Areas) and Social Skills (9 Areas) for the analysis. 139 students out of the total 150 (92.66%) attended the session. There were 90 girls and 49 boys, which was representative of the percentage of boys and girls in the class. Out of the 11 absentees there were proportionate number of boys and girls (7 and 4 respectively). On assessing the self-skills, 74.4% of the girls and 75.5% of the boys fell into the Group I (Table 1). Since >35% of study subjects fell in Group I, it meant the medical students might need professional training in self-skills (based on the empirically set criteria). Pearson Chi square test showed that gender did not have any statistically significant effect on self skills of the study population (p value = 0.890). The analysis of social skills showed that 45.6% of the girls and 53.1% of the boys were in the Caution or vulnerable area of EI in social skills (Table 2).

Table 1. Distribution of students according to Gender and Self Skill code

			Self Skill code		Total
			Group I	Group II	
Gender	Female	Count	67	23	90
		% within Gender	74.4%	25.6%	100.0%
	Male	Count	37	12	49
		% within Gender	75.5%	24.5%	100.0%
Total		Count	104	35	139
		% within Gender	74.8%	25.2%	100.0%

(Group I = Caution & vulnerable, Group II = Proficient & Optimal) p value = 0.890

Table 2. Distribution of students according to Gender and Social skill code

			Social skill code		Total
			Group I	Group II	
Gender	Female	Count	41	49	90
		% within Gender	45.6%	54.4%	100.0%
	Male	Count	26	23	49
		% within Gender	53.1%	46.9%	100.0%
Total		Count	67	72	139
		% within Gender	48.2%	51.8%	100.0%

p value = 0.398

Table 3. Association between Self Skill code and Social skill code

			Social skill code		Total
			Group I	Group II	
Self Skill code	Group I	Count	66	38	104
		% within Self Skill code	63.5%	36.5%	100.0%
	Group II	Count	1	34	35
		% within Self Skill code	2.9%	97.1%	100.0%
Total		Count	67	72	139
		% within Self Skill code	48.2%	51.8%	100.0%

p<0.001

As this is more than 35% of the whole class, it again meant that they need to put in an effort at self training or have professional training or mentoring. Pearson Chi square test did not show any statistically significant effect of gender on social skills (p value = 0.398). Comparison of the self skills and the social skills among study subjects showed that 63.5% of those students in Group I in self skills were in Group I of social skills, whereas only 2.9% of those in Group II of Self Skills were in Group I of Social Skills. 97.1% were in Group II of Social Skills too (Table 3). This association was found to be statistically significant. (p value <0.0001)

DISCUSSION

Emotional Intelligence (EI) and Emotional Quotient (EQ) are new concepts with regard to medical students. It is assumed that they are all possessing high Intelligence Quotient (IQ) and thus would be able to manage well in life as a doctor. In fact IQ and EQ are like an iceberg, with IQ being the visible part and EQ being 'under water' or invisible.

The invisible part can bring much harm if not kept under control. Those with high intelligence can be condescending, critical, inhibited, uncomfortable with emotions or emotionally bland. EI consists of perception of emotions within oneself and others, being able to control and when needed, express clearly the emotions, being able to understand and manage the emotions of others.¹¹ For a graduate doctor this will translate as ethical conscience, empathy in everyday behaviour, communication skills and capability for conflict resolution. Those with high EI are committed to people and communities, empathetic, caring, and comfortable with self and others. These are much needed in today's consumer society but also becoming rarer and as such training may be needed. Medical profession deals with much more delicate situations where human life and relationships are concerned, where the emotions are expected to be very volatile and the wrong handling of the moment may end in consumer courts or worse still in mob violence. Hence, awareness regarding EI needs to be spread among the students and teachers of medical science.

Recently much research is going on in this area, but no one has so far looked into the need for training. It was empirically set that if 35% or above of the total students were in group I scoring in either self skills or social skills, then the class would need training in EI. On analyzing the self skills it was seen that 74.4% of the girls and 75.5% of the boys were in group I. Similarly 45.6% of the girls and 53.1% of the boys were in group I for the social skills. This brought out the need for training in EI. Gender did not have any significant effect on self or social skills. On comparing the self and social skills, it was quite clear that if self skills were low, social skills also could be low. This could be because a certain amount of self skills are needed to be able to handle social skills in emotional areas. This was proven by a test of significance.

Hojat *et al.* (2002) has defined the physician empathy and tried to measure its components and studied its relationship to gender. His finding that self skills are better in women and social skills are better scored by men physicians could not be applied to the present study group. In Lahore they realized the lack of EI in present generation and did a study using the Schutte Emotional Intelligence scale, on the first year and final year students (Imran *et al.*, 2013). They found that the overall mean scores for medical students both on emotional intelligence and empathy was significantly lower than that found in previous literature, highlighting that medical students do not appear to fare better than average people in EQ. Women showed statistically significant higher scores on appraisal of emotions, regulation of emotions, empathic concern scale & personal distress scale. According to Sanjay Dixit *et al* study, social awareness was found to be least in 1st professional students. Post graduate students were found to have lowest self-awareness and lowest self-management (Dixit *et al.*, 2014). A comparative study of first years and final years did not show any significant difference, proving that the medical curriculum did not help in EI. Abe *et al.* (2013) found that expressing one's feelings and listening to others increases emotional intelligence in their pilot study of Asian medical students. This is suggestive that there are measures of improving EI. Hence doing the test on first year students and guiding them may give them time to make appropriate changes during the student life itself.

Conclusion

The present study was taken up to see the need for training in EI as a group. The study proved that there was a need for training in emotional handling of self skills and social skills among the medical students.

Implication: The project is hoped to be an ongoing one, by which the students and faculty become sensitized to the issue of training in EI and a module could be worked out.

Limitations: The questionnaire was adapted from Business Management Development program (MDP). A new questionnaire more suited to the new generation 'would-be-doctors' need to be developed and validated for generalization.

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