

Role of Emotional Intelligence in Healthcare Industry

Shama Kadadi*, Shankargouda R. Bharamanaikar**

ABSTRACT

There is a rising need to understand the role of physicians' Emotional Intelligence (EI) in the health care industry. The purpose of this study was to explore the relationship between physicians' EI and patient satisfaction. Physicians' EI was measured using a self-report assessment of Geno's EI Inventory developed by Gignac (2010) and patient satisfaction by Patient Satisfaction Questionnaire-III developed by Hays et al. (1987). There was a high positive and significant correlation between physicians' EI and patient satisfaction. The EI scores of female physicians were higher than male physicians. The study found that the physicians' EI predicted patient satisfaction. These results are helpful to medical practitioners in enhancing their EI abilities to increase their performance for achieving superior healthcare outcome. The present study suggests that physicians' must undergo EI training to enhance their EI abilities along with clinical skills to perceive patients' emotions and manage them in a better manner.

Keywords: *Emotional Intelligence, Health Care Industry, Patient Satisfaction, Physician*

INTRODUCTION TO THE STUDY

Patient or customer satisfaction is important to the success of healthcare organizations as it is important in business settings. Measuring patient satisfaction can give an opportunity to the patients to express their experiences about medical care. Patient satisfaction studies provide a chance to bring improvements in healthcare services (Fitzsimmons, 2015). Goleman (1998) discussed physicians and their interaction with patients stated that physicians' need to recognize patients' emotions like

* Assistant Professor, Hirachand Nemchand College of Commerce, Solapur, Maharashtra, India. Email: kadadishama@gmail.com

** Professor, MBA-Department, Visvesvaraya Technological University, Belagavi, Karnataka, India. Email: srbims@yahoo.com

anxiety and discomfort for better treatment. Higher EI skills are valuable for healthcare professionals, medical students and patients to overcome the stress existing in the healthcare setting (Faguy, 2012).

Physicians' interpersonal skills are generally valued by patients along with clinical skills. Patient satisfaction has become the main concern for hospitals. Physicians need to take care of a patient's biological and psychological well-being (Stratton et al., 2005). Quality patient care and friendly working relationships are attained through physicians' enhanced competencies in self-management and relationship management. Physicians' emotional competencies are enhanced by training and coaching on EI (Around-Thomas, 2004). The increased interaction between a physician and a patient assists in developing a healthy relationship between them and eventually leads to patient satisfaction (Wagner, Moseley, Grant, Gore & Owens, 2002).

The concept of EI was first introduced by Salovey and Mayer (1990, p. 189), who defined it as "the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action". After this, they developed the well-known model of EI that is the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) in 1997. Goleman (1995) got the attention of business setting and researchers through his famous book on 'Emotional Intelligence: Why it can matter more than IQ'. He is the one who popularized the concept of EI through his research article titled 'What Makes a Leader?'

EI contributes to individual success and the ability to manage relationships. The ability to manage emotions is an important factor in building a relationship between patients and doctors (Weng et al., 2008). Doctor's emotional intelligence (other's ratings) and patient-doctor relationship were correlated with patient trust. EI must be considered as one of the criteria for the selection of doctors. Due to this, doctor would be more involved in understanding and managing the emotions of their patients (Weng et al., 2008).

Exploration of EI construct facilitated to understand the implication of EI and other non-cognitive aptitudes in providing better patient care (Stratton & Murphy-Spencer, 2005). The interaction between a service provider and a customer during difficult transactions creates a sense of relatedness that generates a feeling of satisfaction towards their service provider. The higher emotional intelligence of service provider leads to customer satisfaction (Kernbach & Schutte, 2005). The EI capacity of a physician is supplementary to his clinical ability for being sensitive to the

patient's needs and emotions (Hulka et al., 1971 & Weng et al., 2008).

It is essential to identify the advantage of EI enhancement after medical student's residency program. EI may be a prime character in the medical community as well as academics and business settings (Webb et al., 2010). Physicians' communication abilities are connected with the ability to appraise and express the verbal and nonverbal messages which are factors of emotional intelligence (Stratton et al., 2005). Physicians' communication skills like treatment with respect and dignity, respect for patients' preferences and involving patients in decision making contribute in developing relationship between patient and physician (Speedling & Rose, 1985 and Clever et al., 2008).

The doctor-patient relationship aspect contributed to patient satisfaction (Stewart et al., 1979). Emotionally competent doctor's behaviour and attitude are dynamic in critical situations and adhere to improved performance. This may create an improved workplace environment, patient care and better outcome (Copperman, 2010). EI formulates a bond among a physician and a patient if the physician shows concern and empathy. The employment of EI in medical education will result in improved clinical outcomes (Arora et al., 2010). The healthcare services need to be improved to reach quality service performance and reputation. Patient satisfaction and healthcare quality are primary in improving the service performance and reputation of the healthcare setting. Burcher (2011) suggested that further research may establish a relationship between physicians' EI and patient satisfaction.

EI related research studies were carried out in business settings, schools, higher education, defence forces, public safety organization, healthcare setting, etc. The previous studies showed that an individual's EI is related to job performance, job satisfaction and well-being (Wong & Law, 2004; Cherniss & Extein, 2006; Carmeli et al., 2009). Research studies also highlight that a leader's EI is vital in increasing followers' job performance and job satisfaction (Miao et al., 2016). Wagner and Colleagues (2002) were the first who conducted a study on Physicians' EI and patient satisfaction. They found that only one subscale of EI happiness was related to patient satisfaction. Later, Weng and Colleagues (2008 & 2012b) conducted research on studies related to physicians' EI and their patient satisfaction. They found that there was no relationship between doctor's self-reported EI and patient satisfaction.

The previous research studies were conducted using medical students and residents (Jawed & Faisal, 2013). Jones (2013) established a relationship between the medical provider's EI and patient satisfaction and

medical provider's EI and patient treatment adherence, as well as patient satisfaction and patient treatment adherence. It indicates that physicians' EI plays a vital role in healthcare outcome. Inadequate number of studies related to EI in the medical profession specifies that there is a need for further research in understanding the relationship between physicians' EI and patient satisfaction. Recent research studies suggest that EI and patient satisfaction both are gaining popularity in the medical profession. There is a necessity of empirical studies to identify the role of EI skills in the health care industry. With these facts, the current study aims to examine the relationship between factors of physicians' EI and factors of patient satisfaction. The second purpose was to examine the significant differences in factors of physicians' EI across age, gender, and experience. The third purpose was to investigate the strength of association between factors of physicians' EI and factors of patient satisfaction.

LITERATURE REVIEW

There was a time when decisions related to patients were made by doctors. Later on, there was less involvement of doctors in patients' decision because of negotiation and financial transaction. There was a gap between the world of medicine and personal experiences and patient's needs. Doctors' have realized that along with technical knowledge communication skills matter a lot to bridge the gap between both. Doctors need to understand, control and cope up with overpowering emotions and anxiety of patients. Mutual participation, respect and shared decision making between both the parties mediates to builds a positive relationship (Kaba & Sooriakumaran, 2007).

EI and Healthcare Industry

According to Freshman and Rubino (2002), healthcare leaders with high EI will have the confidence to calm and strengthen their organization to adapt to the unsteadiness of a new world. Training programs can be developed to increase EI skills of leaders and administrative staff to stabilize their workforce. Oginska-Bulik (2005) explored the relationship between EI and perceived stress in the workplace and the health-related consequences in human service workers. This study found that human service employees who reported a higher level of EI experienced less perceived stress and had less negative health outcomes.

Austin, Evans, Goldwater and Potter (2005) tried to establish

conditions of EI ability to predict academic success. The result showed that there was a positive association between EI and students' attitudes with the Talking With Families and also with Physician Empathy scale. There was a positive association between EI scores and exam performance in the autumn term. Structural equation modeling showed direct effects of gender and EI on autumn term exam performance. They found limited evidence for a link between EI and academic performance.

Stratton, Elam, Murphy-Spencer and Quinlivan (2005) examined the relationship of EI and closely related construct empathy with students' clinical skills as assessed by standardized patients in an objective structured clinical examination. The results showed that the female students showed significantly higher scores on empathic concern subscale of empathy and communication skills performance subscale of clinical skills. They found an association between EI and empathy. Perspective-taking subscale of Trait Meta-Mood Scale and Empathic Concern subscale of empathy showed a negative association with student's performance on the component of comprehensive performance examination. The regression analysis showed that empathic concern subscale of empathy predicted the student's physical examination skills.

According to Pau, Rowland, Naidoo, Kadir, Makrynika,...Croucher (2007), dental students EI is inversely related to their perceived stress in multinationals. EI was an independent predictor of perceived stress when it was compared to gender, academic background, and career choice. The students with high EI were better in managing stress. EI can be included as selection criteria during admissions for a dental course and EI interventions for enhancing their abilities to manage stress.

Grewal and Davidson (2008) research on EI has potential benefits in medical education. Training physician and students to develop EI skills helps to create caring and better working environment to achieve excellence in medical education. The present confusions in EI concepts can be overcome through further research on EI. They compared SREIT scale with MSCEIT scale and concluded that MSCIEIT being ability scale of EI is a more objective scale than the SREIT scale.

Birks, Mc Kendree and Watt (2009) tried to examine a relationship between healthcare students EI and their perceived stress. There were no differences in the level of EI among professional categories, age, and gender. EI acted as moderator of a level of stress. There was no change in students EI in autumn and summer terms. They concluded that EI research is still in infancy, and further research is needed to understand the role of

EI in moderating stress or other outcomes in healthcare services.

A review study on emotional intelligence in medicine included 16 articles. Out of those, four articles were related to medical students and professionals. Three out of four studies identified that female participant EI scores were higher than the male. In the same study, they also identified the effects of EI on age and experience. In one study on medical students, they found that EI level of third-year medical students decreased as compared to first-year medical students. In another two studies conducted on clinicians, they found that EI increases with age and experience (Arora et al., 2010).

Arora, Russ, Petrides, Sirimanna, Aggarwal, Darzi and Sevdalis (2011) explored the relationship between trait EI and medical undergraduates performing an unfamiliar surgical task. They found positive inter-correlations between mean HR and maximum HR and inter-correlations between STAI before and after the task. There was a positive association between Global trait EI scores and well-being factor with STAI during the task. The sociability factor of EI correlated with mean HR during a surgical task.

Abe, Evans, Austin, Suzuki, Fujisaki, Niwa and Aomatsu (2013) investigated the suitability of EI measurement tool that is TEIQue-SF suitability on Asian medical students. They found that TEIQue-SF was a reliable measure for Asian medical students. The mental health workshop showed a quick impact on male students and non-Japanese medical students. They concluded that mental health-related workshops help in a better expression of feelings and listening to others in the early years of medical training.

According to Chew, Zain and Hassan (2013) EI has a predictive ability in academic performance in overall continuous assessment of medical undergraduates (first & final year) in Malaysian University. Imran, Aftab, Haider and Farhat (2013) concluded that medical students EI helps to attain patient-centred practice, effective communication with patients and patient satisfaction. As a result, EI should be included in the medical curriculum of Pakistan. Gupta, Koolwal and Gehlot (2014) conducted a study on first-year medical undergraduates in India and highlighted that the increased level of EI of medical students leads to the decreased stress level. There were no significant differences in student's EI across male and female students.

Physicians' EI and Patient Satisfaction

Wagner et al. (2002) were the first to study the relationship between EI of physician and satisfaction of their patient. The results showed female physician scored higher on EQ-i scale. There were no significant differences in satisfaction scores by gender/resident or faculty status of the physician. Only one subscale, the happiness of EI was related to patient satisfaction. The results found a limited relation between Physicians' EI and patient satisfaction. The study suggested decreased Physicians' happiness may decrease patient satisfaction.

Weng et al. (2008) explored the associations among EI, patient trust and patient-doctor relationship using multisource and multi-level approaches. The nursing director's ratings for the patient-physician-relationship were positively correlated with patient trust. The three-factor of physician EI rated by nursing directors showed a positive association with the patient's trust. It indicated Physicians' EI, years of experience and ratio of patient follow-up visits had a positive effect on patient trust. The patient's trust had an impact on patient satisfaction which was mediated by the patient-physician relationship. They found that ratings of physician EI rated by nursing directors had a positive correlation with physicians' experience and age.

Weng et al. (2011a) investigated the association of emotional intelligence and empathy with the patient-surgeon relationship. They also evaluated patient satisfaction with surgeons and patient perceptions of their own health before and after surgery. They found that surgeon's age and EI scores had significant and positive effects on the patient-surgeon relationship and on patient satisfaction towards their surgeon before surgery. Surgeons with more years of experience showed higher EI scores. Surgeons with higher EI can have a better patient-surgeon relationship on the patient-rated patient-surgeon relationship. Patients of surgeons with a higher level of empathy had better self-perceived health status. Patients with better self-perceived health status had a higher level of satisfaction with their surgeons 2 weeks after surgery. Better perceived health status in patients is positively associated with higher patient satisfaction with their surgeons.

Weng et al. (2011b) examined relationships among doctor's EI, patient satisfaction, doctor burnout and doctor job satisfaction. They found that higher EI was correlated with less burnout. Less doctor burnout was correlated with higher job satisfaction and patient satisfaction. They showed that EI is a significant factor in understanding doctor's work related issues.

Jones (2013) examined the relationship between medical provider's EI level and patient satisfaction and patient adherence to a prescribed plan of care. Age showed a significant predictive ability of EI than the training level. Older resident physicians showed higher EI level than the younger ones. The study on resident physicians' EI in men and women across three specialities suggested that EI has got latent power in graduate medical education. Perdue (2016) examined a relationship between EI, job satisfaction and burnout of 8038 registered dietitians in the United States. The result indicated that the dietitians showed a higher level of EI. They found a relationship between job satisfaction and decreased burnout. Similarly, they found a positive association between EI and job satisfaction.

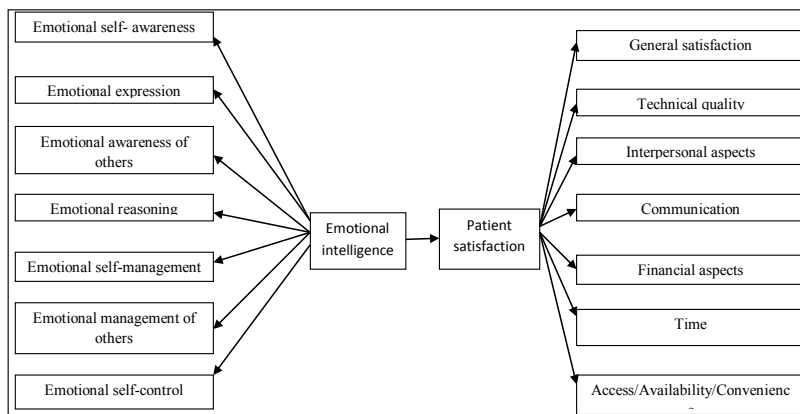


Fig. 1: Theoretical Model of Physicians' EI and Patient Satisfaction

Conceptual Framework

There are different constructs of EI from Salovey and Mayer (1990) to Gignac (2010). The present research adopted the EI concept proposed by Gignac (2010). It incorporated EI factors namely: (i) emotional self-awareness, (ii) emotional expression, (iii) emotional awareness of others, (iv) emotional reasoning, (v) emotional self-management, (vi) emotional management of others and (vii) emotional self-control. This scale also has the advantage of measuring EI total. The patient satisfaction with reference to medical care employed seven subscales and overall satisfaction towards the physician. It included patient satisfaction subscales namely: (i) general satisfaction, (ii) technical quality, (iii) interpersonal aspects, (iv)

communication, (v) financial aspects, (vi) time spent with doctor and (vii) access/availability/convenience.

The field of EI is growing and a quantifiable number of studies is being carried out in the healthcare industry. The concept of EI is beneficial in achieving an individual's job satisfaction, job performance, reduced perceived stress, reduced employee burnout, etc. EI is also valuable in case of healthcare leadership effectiveness. The current study helps in identifying EI as an important characteristic in the healthcare industry. In addition, the relationship between physicians' EI and patient satisfaction is worth understanding.

The previous studies state that a healthcare provider has to maintain balance between clinical skills and emotional aspects (Stratton, 2005). The present study gives insights into the importance of emotional aspects which build a relationship between a physician and a patient. The investigation of these two variables- physicians' EI and patient satisfaction will highlight the significance of physicians' emotional intelligence in patient satisfaction.

Research Questions

Research Question 1: What is the degree of relationship between factors of physicians' EI and factors of patient satisfaction?

Research Question 2: Whether the factors of physicians' EI would differ across age, gender and experience?

Research Question 3: What is the predictive ability of factors of physicians' EI for factors of patient satisfaction?

METHOD OF STUDY

Research Design

The purpose of the present study was to explore the relationship between Physicians' EI and patient satisfaction. Therefore to meet this objective the present study adopted exploratory research design. As the study is exploratory in nature quantitative methods are employed. The exploratory design was adopted because the basic objective of the study was to investigate and obtain clarity about the problem situation. The present study is an attempt to understand the relationship that exists between variables. There are two quantitative methods namely survey method and

experimental method (Chawla & Sondhi, 2011, pp. 49, 51). Based on review of previous studies exploratory method was found to be suitable.

Measurement Tools

Geno's Emotional Intelligence Inventory

Genos Emotional Intelligence Inventory (Genos EI) developed by Gilles E. Gignac (2006) is used to measure EI of physicians. It comprises of seven factors with 70-item in which 20 negative items were reverse coded. Each factor is represented by 10-item and scored on five points Likert scale with almost never = 1, seldom = 2, sometimes = 3, usually = 4 and almost always = 5. The scale included a normative sample of age 18-76 which requires 20-25 minutes to complete. It is useful for both professional as well as research purpose. This scale is available online (www.genosinternational.com) and paper-based format is also available (Genos EI Technical Manual, 2010).

This scale showed reliability from 0.94 to 0.97. Gignac (2006) also carried out test-retest reliability for this assessment. The scale demonstrated factorial validity for all seven subscales with fit indices: CFI = 0.948, RMSEA = 0.066, SRMR = 0.037 and TLI = 0.932 with face validity, concurrent validity, and discriminant validity. The scale psychometric qualities were studied in Australia, the United States of America, South Africa, England, New Zealand, Hong Kong and Singapore. The mean subscales reliabilities were calculated by considering American, Asian, Australian, Indian and South African samples. The range of mean subscales reliability was from 0.71 to 0.85. The Genos EI scale reliability on Indian sample (n = 174) was $\alpha = 0.95$ (Gignac, 2010, p. 45). The results of this scale showed that there were no considerable significant difference in EI across age and gender (Genos EI Technical Manual, 2010).

Patient Satisfaction Questionnaire - III

Third generation Patient Satisfaction Questionnaire (PSQ-III) assesses favourable and unfavourable opinions related to a medical outcome. It is developed by Hays, Davies and Ware, (1987). It is based on two versions of patient satisfaction questionnaires namely- Patient Satisfaction Questionnaire-I (Ware, Snyder, & Wright, 1976) and the revised one as Patient satisfaction Questionnaire-II (Ware, Snyder & Wright, 1976 and Ware et al., 1983).

Firstly, the favourably worded item was precoded, later on, the precoded favourable item were recoded, so the higher item scores specifies

greater satisfaction. The PSQ-III is 51 - item measurement tool. Out of 51 - item; 26 - item are favourably worded, 24 - item are unfavourably worded and one item is not scored which refers to a belief about a crisis in healthcare. The scale reliability estimates were from 0.77 to 0.89 in the Medical Outcome Sample (MOS) baseline sample. The 'item no. 30 in PSQ-III refers to beliefs about a crisis in healthcare' and is not used in the current study to measure patient satisfaction (Hays, Davies & Ware, 1987). The remaining 50 - item of this scale were distributed in the following subscales: the general satisfaction (6 - item), technical quality (10 - item), interpersonal aspects (7 - item), communication (5 - item), financial aspects (8 - item), time spent with provider (2 - item) and access/availability/convenience (12 - item).

Data Collection Procedure

Convenience sampling method was adopted for participants' selection. The physicians' details were collected from the IMA directory, Solapur. References of physicians were collected from Director Damani Blood Bank, Solapur. The data was collected from April 2012 to January 2016. The personal interview method was employed for data collection. The researcher took prior appointment from physicians and sometimes from receptionists through telephonic communication. The importance of the study was explained to the respondents during telephonic communication as well as before eliciting data through questionnaires.

Due to their busy schedule, 105 physicians did not fill the questionnaire completely and 17 physicians did not return the filled questionnaire. The researcher visited minimum three times and maximum eight times to collect the filled questionnaire from the physicians. Because of heavy rush in the hospital physicians were facing a shortage of time for filling the questionnaire. Soon after collection of filled questionnaires from physicians, permission was sought from physicians to meet their patients. Three patients of each physician were selected for filling the patient satisfaction questionnaire.

Data Analysis Procedure

Data analysis was carried out using the Statistical Package for Social Science (SPSS- 20). The valid data of 300 physicians and 900 patients were considered for reliability analysis. Karl Pearson's coefficient of correlation computation was used to examine the relationship between physicians' EI and patient satisfaction. Analysis of Variance (ANOVA)

computation was used to identify a significant difference in physicians' EI across gender, age, and experience. Multiple regression analysis is used to examine the predictive ability of physicians' EI factors for patient satisfaction.

RESULTS AND DISCUSSION

Reliability analysis was performed to check the internal consistency of the scales. It is performed for both the scales: Genos EI and PSQ-III using Cronbach alpha calculations. The item which shows corrected item correlation of .3 and above were included in the present study. Table 1 presents the scale reliability analysis, number of the item included in the present study and item related to demographic details of physicians and patients. Geno's EI scale demonstrates reliability of .94 and its factor reliabilities were ranging from 0.65 to 0.74. Patient satisfaction scale displayed reliability of .92 and its factors reliabilities were from 0.53 to 0.74. The Geno's EI scale reliability is at par with the expected reliability. The same procedure is adopted for patient satisfaction scale. The PSQ-III scale reliability result is also at par with the expected standards. The 50 items of Geno's EI scale and 40 items of PSQ-III scales are used for data analysis. Only these items are considered for further analysis to answer the research questions.

Reliability Analysis

Table 1: Scale Reliabilities of EI, EI Factors, Patient Satisfaction and Patient Satisfaction Subscales

Variable	Respondent	Measurement Scale	Item as Per Scale	Item After Reliability Analysis	α as Per Scale	α in This Study
EI	Physician	Genos EI (2010)	70	50	0.95	0.94
ESA			10	8	0.84	0.71
EE			10	6	0.67	0.66
EAO			10	8	0.83	0.71
ER			10	7	0.60	0.72
ESM			10	5	0.72	0.65
EMO			10	9	0.80	0.74
ESC			10	7	0.76	0.65

Variable	Respondent	Measurement Scale	Item as Per Scale	Item After Reliability Analysis	α as Per Scale	α in This Study
PS	Patient	Ware's	51	40		0.92
GSAT			6	4	0.88	0.65
TECH			10	7	0.85	0.69
INTER			7	5	0.82	0.64
COMM			5	5	0.82	0.63
FINAN			8	7	0.89	0.62
TIME			2	2	0.77	0.53
AACs			12	10	0.86	0.74
Demo-graphic variables	Physician	Gender, age, experience, education and specialization	5	3		
	Patient	Gender, age and follow-up visit	3	3		

Note: ESA = emotional self-awareness, EE = emotional expression, EAO = emotional awareness of others, ER = emotional reasoning, ESM = emotional self-management, EMO = emotional management of others, ESC = emotional self-control, EI TOTAL = emotional intelligence total, GSAT = general satisfaction, TECH = technical quality, INTER = interpersonal aspect, COMM = communication, FINAN = financial aspects, TIME = time spent with doctor, ACCs = Availability/Cost/Convenience, PS = patient satisfaction

Demographic Details of Physicians and Patients

Table 2 depicts the descriptive statistics of physicians and patients. It showed that the number of male physician participants is 207 (69%) and that of female participants is 93 (31%). The physicians' age group range is from 26 to 75 years of age. The maximum number of physicians' participants (101) was from the age group of 36 to 45 years and the minimum number of participants (11) was from the age group of 66 to 75 years. The physicians were from freshers to fifty years of experience. The maximum number of physicians which was 111 (37%) were from 0 to 10 years of experience followed by 83 (28%) participants from 11 to 20 years of experience, 57 (19%) participants from 21 to 30 years of experience, 42 (14%) participants from 31 to 40 years of experience and very few participants that is 7 (2%) were from 41-50 years of experience.

Table 2: Demographic Details of Physicians

Physicians Demographics	<i>n</i>	%
Gender		
Male	207	69
Female	93	31
Age		
26-35	78	26
36-45	101	34
45-55	61	20
56-65	49	16
66-75	11	4
Experience		
0-10	111	37
11-20	83	28
21-30	57	19
31-40	42	14
41-50	7	2

Table 3: Correlations Between Physicians' EI and Patient Satisfaction

	GSAT	TECH	INTER	COMM	FINAN	TIME	AAC	PS
ESA	0.52**	0.58**	0.52**	0.57**	0.55**	0.51**	0.56**	0.65**
EE	0.50**	0.57**	0.47**	0.57**	0.51**	0.46**	0.55**	0.62**
EAO	0.54**	0.61**	0.54**	0.60**	0.56**	0.46**	0.55**	0.66**
ER	0.54**	0.62**	0.56**	0.56**	0.53**	0.47**	0.57**	0.66**
ESM	0.50**	0.57**	0.53**	0.55**	0.50**	0.48**	0.51**	0.62**
EMO	0.57**	0.62**	0.57**	0.64**	0.58**	0.47**	0.58**	0.69**
ESC	0.45**	0.53**	0.49**	0.52**	0.48**	0.67**	0.50**	0.61**
EI TO- TAL	0.62**	0.70**	0.63**	0.69**	0.67**	0.60**	0.65**	0.77**

** Correlation is significant at the 0.01 level

Note: ESA = Emotional Self Awareness, EE = Emotional Expression, EAO = Emotional Awareness of Others, ER = Emotional Reasoning, ESM = Emotional Self-Management, EMO = Emotional Management of Others, ESC = Emotional Self-Control, EI TOTAL = Emotional Intelligence Total, GSAT = General Satisfaction, TECH = Technical Quality, INTER = Interpersonal Aspects, COMM = Communication, FINAN = Financial Aspects, TIME = Time Spent With Doctor, AAC = Access / Availability / Convenience, PS = Patient Satisfaction

There was a positive and significant correlation between physicians' EI and patient satisfaction ($r = .77, p < .01$). The correlation analysis revealed a high positive association between physicians' EI and patient satisfaction. Results show that the physicians' awareness of their feelings and frame of mind, non-verbal messages, the accent during communication and the influence of one's emotional awareness on major conclusions and effective handling of issues at work contribute to patient satisfaction. It also indicates that the methods employed by physicians to express their thoughts and experiences related to work, developing confidence in others through positive responses and the combination of words uttered at right time add to patient satisfaction.

Furthermore, it highlights that the physicians' ability to understand the importance between clinical and emotional details in decisions, pass on clinical matters to patients kind-heartedly, retaining one's positive mood and fine-tune their own emotions quickly when new problems arise help in meeting patient satisfaction. It also considers the physicians' capacity to induce positive mood in others, normalize patients when they are frustrated, showing empathy to patients and their optimistic thinking are important factors which contribute to patient satisfaction.

Physicians' EI scores demonstrated a positive and significant association with general satisfaction ($r = .62, p < .01$), technical quality ($r = .70, p < .01$), interpersonal aspects ($r = .63, p < .01$), communication ($r = .69, p < .01$), financial aspects ($r = .67, p < .01$), time spent with doctor ($r = .60, p < .01$), access/availability/convenience ($r = .65, p < .01$).

Correlation analysis indicates that the physicians' EI abilities assist in meeting patients' needs and facilitating required facilities to provide complete medical care as well as the careful examination and treatment contributes to patient satisfaction. Physicians' knowledge about the latest medical developments, experience in solving medical problems, advice related to staying healthy, to avoid illness as well as trust on the clinical competencies and emotional understanding are the supreme characteristics to achieve patient satisfaction. It supports the conclusion of previous research that "exploration of the role of the EI in the development of clinical skills is justified" (Stratton et al., 2005).

Physicians' EI expertise assists in pleasing the patient by communication skill which comprises of a manner in which physicians explain the meaning of medical terms and a reason for medical tests add to patient satisfaction. Physicians' characters like the freedom given to the patients to share whatever they think important and also careful listening

abilities act as a major contributor to patient satisfaction. Physicians' communication abilities are crucial to patient satisfaction. This is supported by previous research studies conducted on patient satisfaction (Tucker & Tucker, 1985; Winsted, 2000 & Trumble et al., 2006).

Physicians' emotional self-awareness factor showed a positive and significant correlation with general satisfaction ($r = .52, p < .01$), technical quality ($r = .58, p < .01$), interpersonal aspects ($r = .52, p < .01$), communication ($r = .57, p < .01$), financial aspects ($r = .55, p < .01$), time spent with doctor ($r = .51, p < .01$) and access/availability/convenience ($r = .56, p < .01$). There was a positive and significant correlation between emotional self-awareness factor and patient satisfaction ($r = .65, p < .01$).

Results revealed that there was a moderate positive correlation between physicians' emotional self-awareness factor of EI and seven subscales of patient satisfaction: general satisfaction, technical quality, interpersonal aspects, communication, financial aspects, time spent with a doctor and access/availability/convenience subscales. There was also a moderate positive correlation between physicians' emotional self-awareness factor of EI and patient satisfaction. It highlights that physicians' self-awareness regarding their feelings; mood; body language and the tone of voice while communicating with their patients are essential in meeting patient satisfaction.

Correlation analysis results of physicians' emotional expression factor showed positive and significant association with general satisfaction ($r = .50, p < .01$), technical quality ($r = .57, p < .01$), interpersonal aspects ($r = .47, p < .01$), communication ($r = .57, p < .01$), financial aspects ($r = .51, p < .01$), time spent with doctor ($r = .46, p < .01$) and access / availability / convenience subscales ($r = .55, p < .01$). There was a positive and significant correlation between emotional expression factor and patient satisfaction ($r = .62, p < .01$).

Results showed that there was a moderate positive association between physicians' emotional expression factor of EI and general satisfaction, technical quality, communication, financial aspects and access/availability/convenience subscales. Physicians' emotional expression factor had a low positive correlation with interpersonal aspects and time spent with the doctor. This implies that the physicians' skills of expressing issues related to working in an effective manner and giving appropriate suggestions lead to patient satisfaction. It also implies that the physicians' ability to be cheerful with patients and at some point in time, expressing his/her emotions to patients also leads to patient satisfaction.

Physicians' emotional awareness of others factor demonstrated a positive and significant correlation with general satisfaction ($r = .54, p < .01$), technical quality ($r = .61, p < .01$), interpersonal aspects ($r = .54, p < .01$), communication ($r = .60, p < .01$), financial aspects ($r = .56, p < .01$), time ($r = .46, p < .01$) and access/availability/convenience ($r = .55, p < .01$). There was a positive and significant correlation between emotional awareness of others factor and patient satisfaction ($r = .66, p < .01$).

Results confirmed that there is a moderate positive correlation between physicians' emotional awareness of others factor of EI and patient satisfaction subscales which include general satisfaction, technical quality, interpersonal aspects, communication, financial aspects, and access/availability/convenience subscales. Physicians' emotional awareness of others factor had a low positive correlation with time spent with doctor subscale. Physicians' concern regarding the patients' emotions in terms of understanding the mechanism to make patients feel happy, building rapport with patients, making patients feel that they are in safe hands, creating confidence in patients, making patients hopeful and demonstration of positive approach towards patients' increase patient satisfaction.

Correlation analysis results of physicians' emotional reasoning factor and subscales of patient satisfaction were as follows: general satisfaction ($r = .54, p < .01$), technical quality ($r = .62, p < .01$), interpersonal aspects ($r = .56, p < .01$), communication ($r = .56, p < .01$), financial aspects ($r = .53, p < .01$), time spent with doctor ($r = .47, p < .01$) and access/availability/convenience subscales ($r = .57, p < .01$). It explains that there was a moderate positive and significant correlation between physicians' emotional reasoning and patient satisfaction ($r = .66, p < .01$).

Physicians' emotional reasoning factor of EI had a moderate positive association with six subscales of patient satisfaction namely general satisfaction, technical quality, interpersonal aspects, communication, financial aspects, and access/availability/convenience subscales. There was a low positive correlation between physicians' emotional reasoning factor and time spent with doctor subscale. The results imply that the physicians' concern for professional and organizational values and taking care of repercussions of major decisions on patients lead to patient satisfaction. Physicians' ability to contemplate both the technical and emotional information during decision making is related to patient satisfaction.

Physicians' emotional self-management factor showed a positive and significant correlation with subscales of patient satisfaction namely: general satisfaction ($r = .5, p < .01$), technical quality ($r = .57, p < .01$), interpersonal aspects ($r = .53, p < .01$), communication ($r = .55, p < .01$), financial aspects ($r = .50, p < .01$), time spent with doctor ($r = .48, p < .01$) and access/availability/convenience ($r = .51, p < .01$). There was a positive and significant association between emotional self-management and patient satisfaction ($r = .62, p < .01$).

Results showed that the physicians' emotional self-management factor of EI had a moderate positive correlation with six subscales of patient satisfaction which are general satisfaction, technical quality, interpersonal aspects, communication, financial aspects and access/availability/convenience subscales. Physicians' emotional self-management factor of EI had a moderate positive association with patient satisfaction. Results indicate that physicians' competence to compose mood and emotions in a positive state for dealing with activities that infuriate them at work are related to patient satisfaction.

Emotional management of others which is one of the factors of physicians' EI was positively and significantly correlated with general satisfaction ($r = .57, p < .01$), technical quality ($r = .62, p < .01$), interpersonal aspects ($r = .57, p < .01$), communication ($r = .64, p < .01$), financial aspects ($r = .58, p < .01$), time spent with doctor ($r = .47, p < .01$) and access/availability/convenience ($r = .58, p < .01$). There was a positive and significant association between emotional management of others and patient satisfaction ($r = .69, p < .01$).

Results showed that there was a moderate positive correlation between physicians' emotional management of others factor and subscales of patient satisfaction namely- general satisfaction, technical quality, interpersonal aspects, communication, financial aspects, and access/availability/convenience subscales. It shows that the physicians' approach towards others: collaboration with subordinates at work effectively; building positive surroundings; talking in an inspirational manner and methods of overcoming displeasing situations were related to patient satisfaction.

There was a significant association between physicians' emotional self-control factor with general satisfaction ($r = .45, p < .01$), technical quality ($r = .53, p < .01$), interpersonal aspects ($r = .49, p < .01$), communication ($r = .52, p < .01$), financial aspects ($r = .48, p < .01$), time spent with doctor ($r = .67, p < .01$), access/availability/convenience ($r = .50, p < .01$).

It indicates that there was a positive and significant association between emotional self-control and patient satisfaction ($r = .61, p < .01$).

The physicians' EI factor of emotional self-control had a moderate positive correlation with technical quality, communication, time spent with a doctor and access/availability/convenience subscales of patient satisfaction. There was a low positive association between physicians' emotional self-control factor and general satisfaction, interpersonal aspects and financial aspects subscales. It indicates that the physicians who are enthusiastic, determined, and organized deal with unhappy and annoying situations at work effectively and positively and eventually make their patients satisfied.

The only factor of physicians' EI namely emotional self-control had the highest (near to high positive) positive association with time spent with doctor subscale compared to other subscales of patient satisfaction. Physicians who demonstrate the firmness of mind, concern, sense of purpose and clarity of work conditions are closely associated with the patient expectation of time taken for treatment, explaining the health problem, suggesting measures to take care of physical and mental health of patients.

Research Question 2: Whether the factors of physicians' emotional intelligence would differ across age, gender and experience?

Answer: One-way ANOVA results revealed significant differences in physicians' EI and two factors: emotional self-awareness and emotional self-management across gender. Table 5 presents the ANOVA results of the physician's emotional self-awareness and emotional self-management dimensions and physician's EI across gender. The physician's EI differed across gender ($F(1,299) = 4.00, p < .05$). The EI total scores of female physicians ($M = 196, SD = 22.7$) were higher than that of the male physicians ($M = 190, SD = 23.9$).

One-way ANOVA results indicated that female physicians were quite familiar with understanding their own emotions and other emotions. Female physicians' demonstrated rational and emotional thinking in a balanced manner while managing their own and others emotions as compared to male physicians. It confirms with previous researchers' findings (Schutte et al., 1998; Ciarrochi et al., 2000; Wagner et al., 2002; Brackett et al., 2003 & 2004; Pau & Croucher, 2003; Austin et al. 2005; Oginska-Bulik, 2005 & Imran et al., 2013). Female physicians showed higher EI scores than male physicians.

The Result of Physician's EI and Its Dimensions Across Gender

Table 4: Descriptive of Physician's EI and Dimensions of EI Across Gender

		n	Mean	SD
ESA	Male	207	30.5	4.60
	Female	93	31.9	4.38
ESM	Male	207	19.4	3.14
	Female	93	20.2	2.84
EI TOTAL	Male	207	190	23.9
	Female	93	196	22.7

Note: ESA = Emotional Self-Awareness, ESM = Emotional Self-Management, SD = Standard Deviation

Table 5: ANOVA Results of Physician's EI and Dimensions of EI Across Gender

	SS	df	MS	F	Sig.
ESA	129	1	129	6.28	0.01
	6114	298	20.5		
	6243	299			
ESM	39.4	1	39.4	4.23	0.04
	2777	298	9.32		
	2817	299			
EI TOTAL	2216	1	2216	4.00	0.04
	165177	298	554		
	167394	299			

* ANOVA is significant at the 0.05 level

Note: SS = Sum of Square, df = degree of freedom, MS = Mean Square, F = calculated value of F-statistics, Sig = Significance

Physician's emotional self-awareness dimensions differed across gender ($F(1, 299) = 6.28, p < .05$). Table 4 showed mean and standard deviation scores of physician's EI and the two dimensions of physician's EI namely: physician's emotional self-awareness and emotional self-management. The emotional self-awareness dimension scores for female physicians ($M = 31.9, SD = 4.38$) were slightly higher than those of the male physicians ($M = 30.5, SD = 4.6$). It indicates that female physicians were somewhat better than the male physicians in perceiving self-emotions, quality of dialogue and body language. Female physicians are somewhat better than male physicians in noticing one's feelings and emotions that affect decisions at work.

One-way ANOVA results showed that the physician's emotional self-management dimension of EI differed across male and female physicians ($F(1, 298) = 4.23, p < .05$). The female physicians emotional self-management scores ($M = 20.2, SD = 2.84$) were slightly higher than those of the male physicians ($M = 19.4, SD = 3.14$). It showed that the female physicians take preventive measures to keep themselves in forward-looking mood state at work, handle their anger well at workplace and cope up with stressful situations at work successfully than the male physicians.

There were no significant differences in emotional expression, emotional awareness of others, emotional reasoning, emotional management of others and emotional self-control dimensions across male and female physicians. It states that male and female physician's emotional expression, emotional reasoning, emotional management of others and emotional self-control abilities are almost similar. It signifies that both the male and female physicians are equally reasonable in their expression of emotions; decisions related to emotions; managing others emotions and controlling their own emotions.

Table 6 depicts the ANOVA results of physician's EI across different age groups. One-way ANOVA results of physician's EI portray a significant difference among different age groups ($F(4, 295) = 4.87, p < .01$). It described that EI differed across 26-35 age group ($M = 187, SD = 26.6$), 36-45 age group ($M = 200, SD = 22$), 46-55 age group ($M = 190, SD = 23.8$), 56-65 age group ($M = 200, SD = 19.6$) and 66-75 age group ($M = 206, SD = 24.3$).

Table 6: ANOVA Results of Physicians' EI and Its Dimensions Across Age

Age Group	ESA	EE	EAO	ER	ESM	EMO	ESC	EI TOTAL
<i>Mean Scores</i>								
26-35 (<i>n</i> =78)	29.5	22	32.6	26	18.9	33.6	24.7	187.4
36-45 (<i>n</i> =101)	32	23.6	34.3	27.5	20.2	35.4	26.7	199.6
46-55 (<i>n</i> =61)	29.8	22.3	33.2	26.3	19.4	33.9	25.5	190.4
56-65 (<i>n</i> =49)	32.2	23.6	35.1	27.4	19.8	35.2	26.7	200.1

Age Group	ESA	EE	EAO	ER	ESM	EMO	ESC	EI TOTAL
<i>Mean Scores</i>								
66-75 (n=11)	31.7	25	35.9	28.2	18.9	37.5	27	206.3
<i>F</i> value	5.5	4.26	3.63	2.60	2.57	2.96	3.53	4.87
Sig level	0.00	0.00	0.00	0.03	0.03	0.02	0.00	0.00

Note: F = Calculated value of F-statistics, Sig = Significance, ESA = Emotional Self Awareness, EE = Emotional Expression, EAO = Emotional Awareness of Others, ER = Emotional Reasoning, ESM = Emotional Self-Management, EMO = Emotional Management of Others, ESC = Emotional Self-Control, EI TOTAL = Emotional Intelligence Total.

The results showed that the physicians' EI scores significantly differed across physician's age. The physician's EI scores consistently increased from 46-55 age groups to 66-75 age groups. Moreover, the physician's EI scores increased from 26-35 age groups to 66-75 age groups. It signifies that the physicians' EI abilities are fairly stable from 26 to 45 years of age and later on gradually increases from 46 to 75 years of age. Physicians' EI abilities particularly increase from 26 to 75 years of age. However, there was no consistent increase in physician's EI with the increase in physician's age. Similar results were showed for all the factors of physicians' EI. Therefore, the physician's EI level does not increase with the increase in age. It indicates that physicians have a sense of balance in emotional intelligence abilities in their life span. Physicians' emotional abilities are almost stable for all age group.

Table 7: ANOVA Results of Physicians' EI and Its Dimensions Across Experience

Experience	ESA	EE	EAO	ESC	EI TOTAL
<i>Mean Scores</i>					
0-10 (n=111)	30.1	22.3	32.9	25.0	189.9
11-20 (n=83)	32.2	23.8	34.8	27.0	200.5
21-30 (n=57)	29.7	22.1	33.2	25.6	190.1
31-40 (n=42)	32.7	23.7	35.9	26.9	202.7
41-50 (n=7)	30.1	25.1	34.3	25.6	199.7
<i>F</i> value	5.41	4.23	3.91	3.67	4.25
Sig level	0.00	0.00	0.00	0.00	0.00

Note: F = Calculated value of F-statistics, Sig = Significance, ESA = Emotional Self Awareness, EE = Emotional Expression, EAO = Emotional Awareness of Others, EI TOTAL = Emotional Intelligence Total.

One-way ANOVA results of physician's EI across experience. It showed a significant differences in physician's EI across experience ($F(4, 295) = 4.23, p < .01$). The physician's EI differed across 0-10 years of experience ($M = 200, SD = 21.5$), 11-20 years of experience ($M = 200, SD = 21.5$), 21-30 years of experience ($M = 190, SD = 24.5$), 31-40 years of experience ($M = 203, SD = 20.7$) and 41-50 years of experience ($M = 200, SD = 20.7$).

The results described that the physician's EI scores significantly differed across experience. Yet, these differences were significant. The physician's EI scores significantly increased from 0-10 years of experience to 41-50 years of experience. Similarly, there was no consistent increase or decrease in the scores of four factors of physicians' EI namely: physician's emotional self-awareness, physician's emotional expression dimension, physician's emotional awareness of others and physician's emotional self-control across experience. There was no gradual increase in physician's EI with the increase in experience. Hence, physician's EI capabilities do not increase with the increase in physician's experience.

Research Question 3: What is the predictive ability of factors of physicians' emotional intelligence for factors of patient satisfaction?

Answer: Multiple regression analysis was conducted to determine the extent to which physicians' EI and its seven factors significantly predict patient satisfaction and its subscales. It was run separately for factor of physicians' EI with every subscale of patient satisfaction. Likewise, to ascertain the extent to which factors of physicians' EI predicts the patient satisfaction.

Table 8: Regression for Patient Satisfaction

Predictors	<i>B</i>	β	<i>S. E</i>	<i>T</i>	<i>Sig.</i>
ER	.829	.229	.199	4.171	0.00
EMO	.536	.187	.194	2.771	0.00
ESA	.499	.163	.178	2.796	0.00
EAO	.433	.130	.208	2.078	0.03

$R^2 = .599$, Adjusted $R^2 = .590$, $F = 62.3$, $p < .01$ & $p < .05$

Note: ER = Emotional Reasoning, EMO = Emotional Management of Others, ESA = Emotional Self-Awareness, EAO = Emotional Awareness of Others

Multiple regression computations revealed that four factors of physicians' EI predicted patient satisfaction ($F = 62.3, p < .01$). Table 8 depicts the results of multiple regression computations for patient

satisfaction. The Physicians' emotional reasoning factor ($\beta = .229, p < .01$), emotional management of others factor ($\beta = .187, p < .01$), emotional self-awareness factor ($\beta = .163, p < .01$) and emotional awareness of others factor ($\beta = .130, p < .05$) significantly predicted patient satisfaction ($R^2 = .599$). The factors of Physicians' EI predicted 59.9% variance in patient satisfaction.

Results pointed out that the predictive ability of physicians' EI factors for patient satisfaction is stated from the highest to the lowest: 1. Physicians' Emotional Reasoning Factor, 2. Physicians' Emotional Management of Others, 3. Physicians' Emotional Self-Awareness and 4. Physicians' Awareness of Others. Four out of the seven factors of physicians' EI predicted patient satisfaction. It indicates that the physicians' abilities to value patient's reactions during patient-physician communication, consideration of patient's feelings in decisions related to treatment and creation of a positive work environment contributes to patient satisfaction. In addition to the above factors, demonstration of empathy for peers and subordinates, motivating patients about the benefits of good health, being mindful of their own emotions and its role in work-related decisions and building a healthy relationship with patients based on truthful perception and appraisal of others emotions help to achieve patient satisfaction.

Table 9: Regression for General Satisfaction Subscale of Patient Satisfaction

Predictors	<i>B</i>	β	<i>S. E</i>	<i>T</i>	<i>Sig.</i>
EMO	0.097	0.215	0.037	2.59	0.01
ER	0.112	0.197	0.038	2.92	0.00

$R^2 = 0.399$, Adjusted $R^2 = .384$, $F = 27.6$, $p < 0.01$ & $p < .05$

Note: EMO = Emotional Management of Others, ER = Emotional Reasoning

Multiple regression analysis results revealed that two factors of physicians' EI predicted the general satisfaction subscale of patient satisfaction ($F = 27.6, p < .01$). Table 9 depicts the significant results of multiple regression computations for general satisfaction subscale. The physicians' emotional management of others ($\beta = .215, p < .05$) and emotional reasoning factors ($\beta = .197, p < .01$) significantly predicted general satisfaction ($R^2 = .399$). The factors of Physicians' EI predicted 39.9% variance in general satisfaction subscale of patient satisfaction.

Results showed that the physicians' emotional management of others and emotional reasoning factors have predictive ability for general satisfaction subscale. The physicians' emotional management of other factor revealed higher predictive ability than emotional reasoning. Physicians' emotional management of others and emotional reasoning factors helps to create positive environment for others and enhances co-operation with peers. Physicians' emotional management of others and emotional reasoning factors also help the physicians to inspire patients in keeping them away from nervousness and also make the physicians kind enough to handle patients during frustrating situations. These two factors also help in giving importance to other's feelings in the decision making process, making communication effective to improve medical care and listening carefully to the information shared by patients. Physicians' emotional management of others and emotional reasoning factors make their patients feel comfortable and friendly while expressing their complications. These factors also help in describing patients in relation to clinical terms and medical tests which contribute to achieving patients' perceived general satisfaction and communication subscales of patient satisfaction.

Table 10: Regression for Technical Quality Subscale of Patient Satisfaction

Predictors	<i>B</i>	β	<i>S. E</i>	<i>T</i>	<i>Sig.</i>
ER	0.241	0.249	0.059	4.052	0.00
ESA	0.115	0.140	0.053	2.161	0.03

$R^2 = .5$, Adjusted $R^2 = .488$, $F = 41.8$, $p < 0.01$ & $p < .05$

Note: ER = Emotional Relationship, ESA = Emotional Self-Awareness

Multiple regression computations showed that the two factors of physicians' EI namely: emotional reasoning factor, emotional self-awareness factor predicted the technical quality subscale of patient satisfaction ($F = 41.8$, $p < .01$). Table 10 portrays results of multiple regression computations for technical quality subscale. The Physicians' emotional reasoning ($\beta = .249$, $p < .01$) and emotional self-awareness factors ($\beta = .140$, $p < .05$) significantly predicted the technical quality subscale of patient satisfaction ($R^2 = .5$). The factors of physicians' EI predicted 50% variance in technical quality subscale of patient satisfaction.

Results revealed that the physicians' EI factors namely: emotional reasoning and emotional self-awareness factors significantly predicted

the technical quality subscale of patient satisfaction. It identified that physicians' capabilities like making statements in a noticeable way by considering the reaction of others, detailing matters to a patient with due importance for clinical and emotional matters, self-awareness with regard to one's environment, body language, quality of expression and behaviour at workplace contribute in understanding the patients' expectations and necessities. These skills of physicians contribute to careful examination and treatment, keeping oneself updated with the recent developments in medicine and timely counselling to patients for staying healthy and fit.

Table 11: Regression for Interpersonal Aspects Subscale of Patient Satisfaction

Predictors	<i>B</i>	β	<i>S. E</i>	<i>T</i>	<i>Sig.</i>
ER	.175	.233	.050	3.494	0.00

$R^2 = .409$, Adjusted $R^2 = .395$, $F = 28.9$, $p < 0.01$

Note: ER = Emotional Reasoning

Multiple regression analysis revealed that only emotional reasoning factor of physicians' I predicted the interpersonal E aspects subscale of patient satisfaction ($F = 218$, $p < .01$). Table 11 presents the results of multiple regression computations for interpersonal aspects subscale. Physicians' emotional reasoning factor ($\beta = .249$, $p < .05$) significantly predicted the interpersonal aspects subscale of patient satisfaction ($R^2 = .409$). The factor of physicians' EI predicted 40.9% variance in interpersonal aspects subscale of patient satisfaction.

The results showed that the physicians' emotional reasoning factor of EI significantly predicted the interpersonal aspects subscale of patient satisfaction. It specifies that Physicians' skills to value others beliefs and opinions during decision making; due consideration of others thoughts and interests; taking precautions regarding patient's reactions during the course of communication contribute to achieving patients' perceived interpersonal qualities about their physicians. Physicians with higher emotional reasoning ability maintain a proper sense of balance between practical information and emotional experiences and take into consideration the views of subordinates and peers while making decisions which contribute to achieving patient's perceived interpersonal qualities about their physicians. These EI skills of physicians develop an attachment between physician and their patients as well as make the physicians

optimistic towards their patients by way of showing real concern for patients which contribute to achieving patient's perceived interpersonal qualities about their physicians.

Table 12: Regression for Communication Subscale of Patient Satisfaction

Predictors	<i>B</i>	β	<i>S. E</i>	<i>T</i>	<i>Sig.</i>
EMO	.141	.258	.042	3.339	0.00
ER	.090	.129	.044	2.061	0.04

$R^2 = .479$, Adjusted $R^2 = .466$, $F = 38.3$, $p < .01$ & $p < .05$

Note: EMO = Emotional Management of Others

Multiple regression analysis revealed that two factors of physicians' EI namely: emotional management of others and emotional reasoning factors predicted the communication subscale of patient satisfaction ($F = 38.3$, $p < .01$). Table 12 depicts the results of multiple regressions computations for communication subscale. Physicians' emotional management of others factor ($\beta = .258$, $p < .05$) and emotional reasoning factors ($\beta = .129$, $p < .05$) significantly predicted the communication subscale of patient satisfaction ($R^2 = .466$). The factors of physicians' EI predicted 47.9% variance in communication subscale of patient satisfaction.

Results showed that the physicians' emotional management factor demonstrated higher predictive ability than the physicians' emotional reasoning. It highlights that the physicians' ability to appraise others emotions, being compassionate with patients, being considerate in maintaining a balance between self and patient's emotions and meeting the patients' expectations regarding communication is the predicting factors of patients' perceived communication skills about their physicians. Therefore, physicians' emotional management of others factor is more important than Physicians' emotional reasoning factor for achieving the patients' perceived communication skills about their physicians.

Table 13: Regression for Financial Aspects Subscale of Patient Satisfaction

Predictors	<i>B</i>	β	<i>S. E</i>	<i>T</i>	<i>Sig.</i>
EMO	.145	.202	.059	2.48	0.01
ESA	.147	.191	.054	2.72	0.00
ER	.139	.154	.060	2.32	0.02

$R^2 = .417$, Adjusted $R^2 = .403$, $F = 29.8$, $p < .01$ & $p < .05$

Note: EMO = Emotional Management of Others,

ESA = Emotional Self=Awareness, ER = Emotional Reasoning

Multiple regression calculations showed that three factors of physicians' EI namely- emotional management of others factor, emotional self-awareness factor and emotional reasoning factor predicted the financial aspects subscale of patient satisfaction ($F = 29.8, p < .01$). Table 13 presents the results of multiple regression computations for financial aspects subscale. Physicians' emotional management of others factor ($\beta = .202, p < .01$), emotional self-awareness factor ($\beta = .191, p < .05$) and emotional reasoning factor ($\beta = .154, p < .05$) significantly predicted the financial aspects subscale of patient satisfaction ($R^2 = .417$). The factors of physicians' EI predicted 41.7% of the variance in financial aspects subscale of patient satisfaction.

Results indicated that the physicians' EI factors namely: emotional management of others, emotional self-awareness and emotional reasoning factors significantly predicted the financial aspects subscale of patient satisfaction. Financial aspects subscale of patient satisfaction is predicted by three factors of physicians' EI. It is quite high compared to general satisfaction, technical quality and time subscales of patient satisfaction. It showed that physicians' emotional management of others, emotional self-awareness, and emotional reasoning factors meet patient's expectation towards financial aspects.

Physicians' skill of emotional management of others showed a higher predictive ability for financial aspects followed by emotional self-awareness and then by emotional reasoning subscales. Results indicate that the physicians' abilities to encourage patients in stressful situations, resolution of emotional situations effectively, accurate appraisal of own emotions, capability to identify his own emotions and its influence on decisions at workplace, consideration of organization's standards and patients' conditions in important decisions and balance between clinical and emotional aspects related to patients. These competencies of physicians help them in understanding the patient's thoughts about medical expenses and providing treatment to a patient during financial inadequacy.

Table 14: Regression for Time Spent with Doctor Subscale of Patient Satisfaction

Predictors	<i>B</i>	β	<i>S. E</i>	<i>T</i>	<i>Sig.</i>
ER	.072	.189	.024	3.00	0.00

$R^2 = .472$, Adjusted $R^2 = .460$, $F = 37.3$, $p < .01$

Note: ER = Emotional Reasoning

Multiple regression analysis revealed that one factor of physicians' EI namely emotional reasoning factor predicted the time spent with doctor subscale ($F = 37.3$, $p < .01$). Table 14 depicts the multiple regression computations for time spent with doctor subscale. The physicians' emotional reasoning factor ($\beta = .189$, $p < .01$) significantly predicted the time spent with doctor subscale of patient satisfaction ($R^2 = .472$). The factors of Physicians' EI predicted 47.2% variance in the time spent with doctor subscale of patient satisfaction.

Results pointed out that the emotional reasoning factor of physicians' EI significantly predicted the time spent with doctor subscale of patient satisfaction. Physicians' capability to measure others feeling in a perceptible manner, always giving precedence to the morals when making a vital assessment and communicating with patients in a respectful manner and proper balance between patient's emotions and medical problems help physicians' to recognize the time required for treatment and explaining health-related issues to patients.

Table 15: Regression for Access/Availability/Convenience Subscale of Patient Satisfaction

Predictors	<i>B</i>	β	<i>S. E</i>	<i>T</i>	<i>Sig.</i>
ER	.283	.230	.080	3.542	0.00
ESA	.185	.178	.072	2.589	0.01
EMO	.165	.169	.078	2.116	0.03
EE	.188	.139	.093	2.020	0.04

$R^2 = .439$, Adjusted $R^2 = .426$, $F = 32.7$, $p < .01$ & $p < .05$

Note: ER = Emotional Reasoning, ESA = Emotional Self-Awareness, EMO = Emotional Management of Others, EE = Emotional Expression

Multiple regression analysis revealed that the four factors of physicians' EI namely: emotional reasoning, emotional self-awareness, emotional management of others and emotional expression subscales predicted the access/availability/convenience subscale of patient satisfaction ($F = 32.7$, $p < .01$). Table 15 presents the results of multiple regression computations for access/availability/convenience subscale. The physicians' emotional reasoning factor ($\beta = .230$, $p < .01$), emotional self-awareness factor ($\beta = .178$, $p < .05$), emotional management of others factor ($\beta = .169$, $p < .05$) and emotional expression factor ($\beta = .139$, $p < .05$) significantly predicted the access/availability/convenience subscale of patient satisfaction (R^2

= .439). Factors of physicians' EI predicted 43.9% variance in access/availability/convenience subscale of patient satisfaction.

Results specified that the physicians' expertise in managing parity between professional principles and patient's emotions in case of selection of appropriate solution for complex circumstances, accurate awareness about one's own emotions and responsive non-verbal communication with patients predicts the access/availability/convenience subscale of patient satisfaction. Physicians' softness in speech, creating a supportive and caring environment for patients as well as helping patients in disappointing matters predicts access/availability/convenience subscale of patient satisfaction. Physicians' ability to create a cheerful atmosphere and expressing own experiences efficiently at work and improving beliefs at the right time predicts the access/availability/convenience subscale of patient satisfaction. This adaptability of a physician makes him/her maintain flexibility in work schedules like providing treatment on short notice, simplified process to avail medical care during emergency and assistance of specialist whenever required.

Table 16: Regression for Patient Satisfaction (A)

Predictors	<i>B</i>	β	<i>S. E</i>	<i>T</i>	<i>Sig.</i>
EI	.455	.769	.022	20.8	0.00

$R^2 = .592$, Adjusted $R^2 = .590$, $F = 432$, $p < .01$

Simple linear regression was run to compute the strength of association between physicians' EI and patient satisfaction. Table 16 depicts result of simple linear regression computation for patient satisfaction. Physicians' EI ($\beta = .769$, $p < .01$) significantly predicted the patient satisfaction ($F = 432$, $p < .01$). Physicians' EI predicted 59.2% variance in patient satisfaction. Physicians' EI demonstrated significant and adequate predictive ability for patient satisfaction.

Results indicated that the seven factors of physicians' EI: emotional self-awareness; emotional expression; emotional awareness of others; emotional reasoning; emotional self-management and emotional management of others contribute to predict patient satisfaction. It is supported by Miao et al. (2016) study conducted on meta-analysis related to leaders' EI and subordinates' job satisfaction. It indicated that physicians' EI plays an important role in contributing to patient satisfaction. Physicians' EI and its factors work like an essential input for predicting patient satisfaction.

IMPLICATIONS OF THE STUDY

There is a growing need for adopting EI abilities into the medical profession. As per the Wagner et al. (2002) statement, enhanced EI abilities of physician create a base for developing patient-physician interaction and relationship. The inclusion of EI questionnaire into the recruitment and selection process of human service employees and medical students strengthens the predictive validity of the selection process (Oginska-Bulik 2005 & Weng et al., 2008). The medical education and medical outcome quality can be improved through assimilation of EI competencies into medical education (Arora et al., 2010).

This study demonstrated that physicians' EI is a better predictor of patient satisfaction. The findings of this study imply that EI is an advantageous and useful ability which medical practitioners need to develop to understand their patient's needs and expectations which contribute in satisfying patients. Miao et al. (2016) stated that a leader's EI has predictive ability for their subordinates' job satisfaction. Organizations must conduct EI training and development programs as a part of leadership education for achieving subordinates' job satisfaction. Hence, steps must be taken to enhance the EI abilities of physicians. The physicians must undergo EI training to increase their abilities.

The healthcare service provider must confront with key components which lead to patient satisfaction. The doctors must be compelled to know the attributes which satisfy the patient in the healthcare setting (Deasi, 2011). Patient satisfaction assessment acts as a mirror image of patients' opinion towards their service providers (Rao et al., 2006). It implicates that physicians must focus on communication and interpersonal aspects along with technical quality to increase their patient satisfaction and this helps in strengthening the relationship between them.

This study also demonstrates that Genos EI may be used as a suitable tool to assess physicians' EI in the Indian context which already had similar scale reliability. Depending on the predictive ability of EI factors the training programs can be designed to develop the EI ability of physicians. Moreover, this study described that female physician were slightly higher in emotional intelligence and its two subscales: emotional self-awareness and emotional self-management. It implicates that training on EI abilities is essential for male and female physicians and both must emphasize to boost their EI abilities to sense and appreciate the patient's requirements.

CONCLUSION

This study demonstrated that EI abilities of physicians play an important role in satisfying their patients compared to previous research studies (Wagner et al., 2002, Weng et al., 2008, 2011a, 2011b). Also, the results highlighted the existence of predictive ability of physicians' EI and its factors for patient satisfaction. EI skills are essential for physicians for better understanding of patients' emotions and feelings. The physicians with enhanced EI abilities contribute to reaching higher satisfaction of their patients. EI is an important positive feature of healthcare professionals which helps in perceiving, understanding and controlling their own as well as patients' emotions. The training and development programs related to EI helps in enhancing the EI abilities of individuals (Fabio, 2002). This study suggests, EI related training programs must be conducted to increase the EI abilities of physicians. Since the increased EI abilities of physicians lead to increased patient satisfaction. It also develops a healthy relationship between patients and physicians. It might create a bond between medical practitioners and the public. EI related training can also be included in the medical curriculum to enhance the EI abilities of physicians which ultimately lead to the satisfaction of patients.

This study faced a limitation of analysis of data using structural equation modelling. The researcher of this study developed a causal model and tried to use the SEM analysis. However, the researcher faced some limitations in the calculation of Average Variance Extracted (AVE) and Composite Reliability (CR). Structural Equation modelling could have shown a moderation effect of physicians' gender, age and experience on patient satisfaction. The future study can be extended to corporate hospitals using 360° assessment for measuring physicians' EI. Physicians' EI can be assessed by his/her colleagues, superior and subordinate to avoid the possibility of overrating in self-report measurement. The future study can examine relationship between the physicians' EI, and patient satisfaction and mediation effect of patient-physician communication on patient satisfaction. It may show prominent insights on the significance of patient-physician communication in patient satisfaction.

REFERENCES

- Abe, K., Evans, P., Austin, E. J., Suzuki, Y., Fujisaki, K., Niwa, M., & Aomatsu, M. (2013). Expressing one's feelings and listening to oth-

- ers increases emotional intelligence: A pilot study of Asian medical students. *BMC Medical Education*, 13(82), 1-9.
- Arora, S., Ashrafian, H., Davis, R., Athanasiou, T., Darzi, A., & Sevdalis, N. (2010). Emotional intelligence in medicine: A systematic review through the context of the ACGME competencies. *Medical Education*, 44, 749-764. doi: 10.1111/j.1365-2923.2010.03709.x
- Arora, S., Russ, S., Petrides, K., Sirimanna, P., Aggarwal, R., Darzi, A., & Sevdalis, N. (2011). Emotional intelligence and stress in medical students performing surgical tasks. *Academic Medicine*, 86(10), 1311-1317. doi: <http://dx.doi.org/10.1097/ACM.0b013e31822bd7aa>
- Austin, E. J., Saklofske, D. H., & Egan, V. (2004). Personality, well-being and health correlates of trait emotional intelligence. *Personality and Individual Differences*. doi:10.1016/j.paid.2004.05.009
- Austin, E. J., Evans, P., Goldwater, R., & Potter, V. (2005). A preliminary study of emotional intelligence, empathy and exam performance in first year medical students. *Personality and Individual Differences*, 39(8), 1395-1405. doi: 10.1016/j.paid.2005.04.014
- Birks, Y., McKendree, J., & Watt, I. (2009). Emotional intelligence and perceived stress in healthcare students: A multi-institutional, multi-professional survey. *BMC Medical Education*, 9(61).
- Brackett, M. A., & Mayer, J. D. (2003). Convergent, discriminant, and incremental validity of competing measures of emotional intelligence. *Society for Personality and Social Psychology, Inc.*, 29(10), 1-12. doi: 10.1177/0146167203254596
- Burcher, P. (2011). Emotional intelligence and empathy: Its relevance in the clinical encounter. *Patient Intelligence*, 3, 23-28.
- Carmeli, A., Yitzhak-Halevy, M., & Weisberg, J. (2009). The relationship between emotional intelligence and psychological wellbeing. *Journal of Managerial Psychology*, 24(1), 66-78.
- Cherniss, C., & Extein, M. (2006). Emotional intelligence: What does the research really indicate? *Educational Psychologist*, 41(4), 239-245.
- Chew, B. H., Zain, A. M., & Hassan. F. (2013). Emotional intelligence and academic performance in first and final year medical students: A cross-sectional study. *BMC Medical Education*, 13(44), 1-10.
- Ciarrochi, J. V., Chan, A. Y. C., & Caputi, P. (2000). A critical evaluation of the emotional intelligence construct. *Personality and Individual Differences*, 22, 539-561.
- Clever, S. L., Jin, W., Levinson, & Meltzer, D. O. (2008). Does doctor-patient communication affect patient satisfaction with hos-

- pital care? Results of an analysis with a novel instrumental variable. *Health Services Research Journal*, 43, 1505-1519. doi: 10.1111/j.1475-6773.2008.00849.x
- Copperman, K. B. (2010). Emotional intelligence and the healthcare staff: Maximizing performance and patient satisfaction. *srm(e)journal.com*, 8(1), 5-8.
- Freshman, B., & Rubino, L. (2002). Emotional intelligence: A core competency for health care administrators. *The Health Care Manager*, 20(4), 1-9.
- Gignac, G. E. (2010). On a nomenclature for emotional intelligence research. *Industrial and Organizational Psychology: Perspectives on Science and Practice*, 3, 131-135.
- Gignac, G. E. (2010). Seven-factor model of emotional intelligence as measured by Genos EI: A confirmatory factor analytic investigation based on self- and rater-report data. *European Journal of Psychological Assessment*, 26, 309-316.
- Gignac, G. E. (2010). *Genos emotional intelligence technical manual* (2nd ed.). Sydney, NSW: Genos Press.
- Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. London: Bloomsbury Publishing.
- Goleman, D. (1998). *Working with emotional intelligence*. London: Bloomsbury Publishing
- Goleman, D. (1998). What makes a leader? *Harvard Business Review*. www.hbr.org
- Grewal, D., & Davidson, H. A. (2008). Emotional intelligence and graduate medical education. *The JAMA*, 300(10), 1200-1202. doi: 10.1001/jama.300.10.1200
- Gupta, A., Koolwal, G. D., & Gehlot, S., (2014). Study of perceived stress and emotional intelligence among 1st year medical undergraduates in India. *Journal of Contemporary Medical Education*, 2(1), 63-67. doi: 10.5455/jcme.20131209094837
- Hays, R. D., Davies, A. R., & Ware, J. E. (1987). MOS Memorandum. MOS Memo. No. 866.
- Hulka, B. S., Kupper, L. L., Cassel, J. C., & Thompson, S. J. (1971). A method for measuring physicians' awareness of patients' concerns. *HSMHA Health Reports*, 86(8), 741-751.
- Imran, N., Aftab, M. A., Haider II, & Farhat, A. (2013). Educating tomorrow's doctors: A cross sectional survey of emotional intelligence

- and empathy in medical students of Lahore. *Pakistan Journal of Medical Sciences*, 29(3), 710-714. doi: <http://dx.doi.org/10.12669/pjms.293.3642>
- Jawed, H., & Faisal, A. (2013). Emotional intelligence in doctors and nurses of emergency medicine units in tertiary hospitals. *Pakistan Business Review*, 14(4), 732-743.
- Jones, D. G., (2013). *Medical providers' emotional intelligence: Relationships with patient satisfaction and treatment adherence* (Ph.D. Thesis). ProQuest Dissertations and Thesis database. (UMI No. 3576356) University of Phoenix, 157 pages.
- Kernbach, S., & Schutte, N. S. (2005). The impact of service provider emotional intelligence on customer satisfaction. *Journal of Services Marketing*, 19(7), 438-444.
- Law, K. S., Wong, C. S., & Song, L. J. (2004). The construct and criterion validity of emotional intelligence and its potential utility for management studies. *Journal of Applied Psychology*, 89(3), 483-496.
- Mayer, J. D., DiPaolo, M., & Salovey, P. (1990). Perceiving affective content in ambiguous visual stimuli: A component of emotional intelligence. *Journal of Personality Assessment*, 54(3&4), 772-781.
- Mayer, J., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. J. Sluyter (Eds.), *Emotional Development and Emotional Intelligence: Educational Implications* (1st ed., pp. 3-31). New York: Basic Books.
- Mayer, J. D., Salovey, P. & Caruso, D. R. (2002). MSCEIT, Brochure. www.mhs.com
- Miao, C., Humphrey, R. H., & Qian, S. (2016). Leader emotional intelligence and subordinate job satisfaction: A meta analysis of main, mediator and moderator. *Personality and Individual Differences*, 102, pp. 13-24.
- Palmer, B. R., Stough, C., Harmer, H., & Gignac, G.,(2009). The Genos emotional intelligence inventory: A measure designed specifically for workplace applications. C. Stough et al. (Eds.) *Assessing Emotional Intelligence, The Springer Series on Human Exceptionality*.
- Pau, A. K., & Croucher, R. (2003). Emotional intelligence and perceived stress in dental undergraduates. *Journal of Dental Education*, 67(9), 1023-1028.
- Pau, A., Rowland, M. L., Naidoo, S., Kadir, R., Makrynika, E., Moraru, R., Huang, B., & Croucher, R. (2007). Emotional intelligence and perceived stress in dental undergraduates: A multinational survey. *Journal of Dental Education*, 71(2), 197-204.

- Perdue, C. (2016). *Emotional intelligence, job satisfaction and burnout for dietitians* (Doctoral Dissertations), Walden University. Retrieved from <http://scholarworks.waldenu.edu/dissertations>
- Rao, K. D., Peters, D. H., & Bandeen-Roche, K. (2006). Towards patient centered health services in India-a scale to measure patient perceptions of quality. *International Journal for Quality in Health Care*, 18(6), 414-421.
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9, 185-211.
- Schutte, N., Malouff, J., Hall, L., Haggerty, D., Cooper, J., Golden, C., & Dornheim L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 25, 167-177.
- Stewart, M. A., McWhinney, I. R., & Buck, C. W. (1979). The doctor/patient relationship its effect upon outcome. *Journal of the Royal College of General Practitioners*, 29, 77-82.
- Stratton, T. D., Elam, C. L., Murphy-Spencer, A. E., & Quinlivan, S. L. (2005). Emotional intelligence and clinical skills: Preliminary results from a comprehensive clinical performance examination. *Academic Medicine*, 80(10), S34-S37.
- Tucker, F. G., & Tucker, J. B. (1985). An evaluation of patient satisfaction and level of physician training. *Journal of Health Care Marketing*, 5(3), 31-38.
- Trumble, S. C., O'Brien, M. L., O'Brien, M., & Hartwing, B. (2006). Communication skills training for doctors increases patient satisfaction. *Clinical Governance: An International Journal*, 11(4), 299-307.
- Wagner, P. J., Moseley, G. C., Grant, M. M., Gore, J. R., & Owens, C. (2002). Physicians' emotional intelligence and patient satisfaction. *Family Medicine*, 34(10), 750-754.
- Webb, A. R., Young, R. A., & Baumer, J. G., (2010). Emotional intelligence and ACGME competencies. *Journal of Graduate Medical Education*, 508-512. doi: 10.4300/JGME-D-10-00080.1
- Weng, H. C., Chen, H. C., Chen, H. J., Lu, K., & Hung, S. Y. (2008). Doctors' emotional intelligence and the patient-doctor relationship. *Medical Education*, 42(7), 703-711. doi: 10.1111/j.1365-2923.2008.03039.x
- Weng, H. C., Steed, J. F., Yu, S. W., Liu, Y. T., Hsu, C. C., Yu, T. J., & Chen, W. (2011a). The effect of surgeon empathy and emotional intelligence on patient satisfaction. *Advances in Health Sciences Education*, 16(5), 591-600. doi: 10.1007/s10459-011-9278-3

- Weng, H. C., Hung, C. M., Liu, Y. T., Cheng, Y. J., Yen, C. Y., Chang, C. C., & Huang, C. K. (2011b). Associations between emotional intelligence and doctor burnout, job satisfaction and patient satisfaction. *Medical Education*, 45(8), 835-842. doi: 10.1111/j.1365-2923.2011.03985x
- Wong, C. S., & Law, K. S., & Wong, P. M. (2004). Development and validation of a forced choice emotional intelligence measure for Chinese respondents in Hong-Kong. *Asia Pacific Journal of Management*, 21, 535-559.