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OPEN ACCESS JOURNAL ISSN: 2148-6832

MSD Medical Science and Discovery
2018; 5(6):229-33

Research Article Doi: 10.17546/msd.427121

The effect of emotional intelligence on anger management among anesthesiologists, surgeons and internal medicine physicians

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Abstract

Objective: Anger management among health professionals can lead to chaos in the hospital or operating room if administered poorly. Aim of the study is to investigate the effect of emotional intelligence level on anger control in physicians.

Material and Methods: Emotional intelligence (Reuven Bar-On) and anger control questionnaire (Spielberger) were performed on the voluntary physicians.

Results: The 188 voluntary physicians (internal medicine physicians n = 67, surgeons n = 64, anesthesiologists n = 57) were included in the study. Emotional intelligence and continuous anger scales did not differ between the three groups whereas the scores of external anger in surgeons and internal anger (repressed anger) in anesthesiologists were higher. Stress endurance in the surgical group, problem-solving and empathy in anesthesiologists and social responsibility in the internal physicians group were prominent. A positive correlation was observed between emotional intelligence and age, hobbies, physical activity and anger control, while there was negative correlation with external anger scores. Total group was divided into two groups in terms of age. In the group over 35 years old, the scores of continuous anger and external anger were lower, whereas the emotional intelligence was higher.

Conclusion: We conclude that emotional intelligence is effective in anger management. Higher age, more occupational experience, being more activities and having hobbies may be associated with better emotional intelligence and anger management in anesthesiologists and surgeons under stress in the operating room and internal physicians as well.

Keywords: Emotional intelligence, Anger management, Anesthesiologists, Surgeons, Physicians

Introduction

Emotional intelligence (EI) is the ability to understand the feelings of the person himself and the people around him and manage them appropriately (1). Psychologist and author Daniel Goleman (2) popularized EI in the 1990s. He found that successful Fortune 500 leaders were distinguished by high EI. High EI persons seemed to perform better on the job and were effective leaders.

They also have higher mental health and less burnout scores. Goleman defined EI by five components: motivation, empathy, self-awareness, self-control and social skills (2).

Successful physicians should not only have high intelligence quotient, but must be able to successfully apply the information in patient care and, also work in harmony with their team and colleagues. This is possible with the development of emotional intelligence (1).

Aristoteles said that 'Anybody can become angry - that is easy, but to be angry with the right person and to the right degree and at the right time and for the right purpose - that is not within everybody's power and is not easy.'

As known, anger is a normal emotion but can cause chaos if administered poorly in the operation room. It is well known recognized that patient safety and quality of care depend on good communication and teamwork. Among surgeons and anesthesiologists anger management has gained great importance in recent years (3).

The aim of our study is to determine association of emotional intelligence in physicians working in different specialties with anger management. We also hypothesize that emotional intelligence may be associated with age, hobbies, physical activity and marital status.

Received 25-05-2018 **Accepted** 27-06-2018 **Available Online** 30-06-2018
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http://dx.doi.org/10.17546/msd.427121

Material and Methods

After the approval of the ethics committee (12.05.2017-E.27933) , emotional intelligence and anger control questionnaire was performed on the voluntary physicians (surgeon, anesthesiologist, and internal medicine) who work at university and state hospital in our city. Physicians who completed the study questionnaire were assigned to groups according to the specialties. Physicians who had worked general surgery, urology, obstetrics and gynecology, otorhinolaryngology, ophthalmology, orthopedics, neurosurgery, thoracic surgery and cardiovascular surgery were included in surgery group. Pulmonary diseases, cardiology, nephrology, public health, family medicine, dermatology, and oncology physicians were chosen as the internal medicine group. The last physician group was anesthesiologists. For the emotional intelligence questionnaire, emotional intelligence inventory developed by Reuven Bar-On (4) was adapted to Turkish by Acar (5). The Bar-On EQ scale consists of 133 questions. During adaptation study Acar et al. (5) reduced question number to 88 due to cultural differences. The 5-point Likert scale was used to evaluate up. (1 = Absolutely not, 5 = Absolutely agree). Mean scores of Likert scale was used for assessment of each parameter. Cronbach's Alpha internal consistency reliability coefficient $\alpha = 0.92$. Scores were given on the following 5 composite scales comprising 15 subscale scores (4-6).

The Cronbach-alpha reliability scores of "Continuous Anger and Anger Expression Scale" developed by Spielberger (7) and also adapted to Turkish by Özer (8) were determined between 0.73 and 0.84. Anger expression scale was collected in 3 topics; Internal anger (repressed anger) , external anger and anger control ".

Statistical analysis

The Kolmogorov-Smirnov test was used to assess the normality of numeric variables. For the numeric variables that were normally distributed, comparison between groups was made by independent samples t test and one way ANOVA, and descriptive statistics are presented as mean±standard deviation.

For the numeric variables that were not normally distributed, comparison between two groups was made by Kruskal Wallis test and descriptive statistics are presented as median (minimum-maximum values). To analyze the categorical data, a chi-square test was used and descriptive statistics are presented as frequency (%).The Spearman's rank correlation looked for a relationship between total EQ and age, hobbies, physical activity, continuous anger, internal anger and external anger scores. The p values below 0.05 were considered statistically significant.

Results

Questionnaire forms were given to 205 physicians.14 physicians did not want to fill out the questionnaire, and 3 physicians's in completed the questionnaire and they were extracted. Emotional intelligence and anger control questionnaire performed on the 188 voluntary physicians (internal medicine physicians n = 67, surgeons n = 64, anesthesiologists n = 57). Both residents and specialist physicians were participated in the questionnaire. Gender, marital status, hobby and physical activity were different in three physician groups. Emotional intelligence and continuous anger scales did not differ between the three groups. The scores of external anger in the surgical group and the scores of internal anger in anesthesiologist group were highest (Table 1 and 2). Stress endurance in the surgical group, problem-solving and empathy in anesthesia group and social responsibility in the internal physicians group were more (Table 2).

A positive correlation was observed between EI and age, hobbies, physical activity, and anger control while there was negative correlation with external anger scores ($p= 0.024$, $p=0.044$, $p=0.041$, $p=0.001$, and $p=0.037$ with respectively).

The 188 volunteers were also divided into two groups, over and under 35 years of age. In the group over 35 years old, the scores of continuous anger and external anger were lower, but the emotional intelligence was higher (Table 3).

Table 1. Emotional intelligence, demographics and social features of anesthesiologists, surgeons, and internal medicine physicians.

	Anesthesiologists (n=57)	Surgeon (n=64)	Internal medicine physicians (n=67)	P value
Gender; Female	52.6	25	34.3	0.001
Male %	47.6	75	65.7	
Hobby; Absent	8.8	29.7	25.4	0.014
Present %	91.2	70.3	74.6	
Marital status				
Single	21.1	32.8	44.8	0.019
Married %	78.9	67.2	55.2	
Physical activity				
Absent	31.1	39.1	37.2	0.07
Present%	78.9	60.9	62.7	
Age (year)	37.8 ±8 .6	36.8 ±9 .6	34.0 ±8 .9	0.056
Years in the occupation	13.8 ±8 .8	11.7 ±9.8	9.7 ±9 .1	0.125
Emotional intelligence	241.3 ±20 .8	239.8 ±19.7	242.7 ±22 .1	0.782

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Table 2. Empathy, stress tolerance, problem-solving, social responsibility, and anger scores of the anesthesiologist, surgeon, and internal medicine physicians

	Anesthesiologists (n=57)	Surgeons (n=64)	Internal medicine physicians (n=67)	P value
Empathy	14(9-19)	12 (3-18)	13 (5-18)	0.041
Problem solving	12 (9-54)	11 (5-16)	11 (8-16)	0.035
Stress tolerance	19 (11-25)	22 (6-56)	18 (10-26)	0.017
Social responsibility	15 (6-19)	15 (3-18)	17 (11-21)	0.028
Continuous anger	19 (11-36)	20 (12-40)	19 (10-37)	0.052
Inner anger*	17 (12-28)	15 (12-23)	15 (11-24)	0.044
External anger*	15 (8-22)	18 (11-26)	15 (10- 22)	0.023
Anger control*	18 (11-23)	16 (15-23)	18 (12- 22)	0.033

Scores are presented as median (minimum-maximum).

Table 3. Emotional intelligence, anger scores, demographics and social features in physicians over or under 35 years of age

	Under 35 years (n=96)	Over 35 years (n=92)	P value
Gender Female	53.1	42.4	0.148
Male %	46.9	57.6	
Hobby Absent	22.9	20.7	0.727
Present %	77.1	79.3	
Marital status			
Single	52.1	14.1	0.001
Married %	47.9	85.9	
Physical activity			
Absent	36.5	29.3	0.353
Present %	63.5	70.7	
Emotional intelligence	232.7 ±21 .5	242.6 ±19.3	0.039
Continuous anger*	20 (10-41)	18 (12-36)	0.037
Inner anger*	17 (14-28)	16 (12-28)	0.204
External anger *	16 (11-26)	14 (8-22)	0.001

*Scores are presented as median (minimum-maximum).

Discussion

We concluded that the level of emotional intelligence positive correlated with age, anger control, having hobbies, and physical activity. Emotional intelligence and continuous anger scores did not differ between the three groups whereas the scores of external anger in surgeons and the scores of internal anger in anesthesiologists were highest.

Studies in the healthcare industry have suggested that high EI can lead to improved doctor–patient relationships, empathy, teamwork and communication skills (1,9,10) In a study of internal medicine residents, it was observed that EI improved after an academic year, resulting in better performance and lower burnout scores [11]. Tomar et al.(12) suggested that "experience is the best teacher". Physicians become more empathic, acknowledged, problem solving, good listener, and have patience and also improve their communication skills. These qualities enrich their emotional intelligence. In accordance with the literature, there was an increase in emotional intelligence in older physicians compared to younger in our study.

Our results indicate that total EI scores is not directly affected by gender, as noted in previous studies (13-15).

We observed that physicians' physical activity and having hobbies increases their level of emotional intelligence. Exercise on a regular basis may provide emotional benefits such as self-confidence and assertiveness, more positive body image, fewer phobias, reduced anxiety, less anger, and lower levels of depression. Many psychologists and physicians suggest exercise in addition to main treatment for emotional difficulties (16). Hobbies provide experience and success outside of medicine. Hobbies can lead to creativity. Furthermore hobbies encourage interaction with other people and provide some social opportunities. Hobbies allow our brain to focus on a task and help to calm down. When we learn something and gain a new skill, we improve our self-confidence (17).

The operating room is a stressful environment which includes time pressures, rapid changing conditions and hierarchical structure. Emotional intelligence combines, protects and enriches to the operation team.

Two single-institution studies found that EI scores were above or below average for general surgery and orthopedic residents, respectively, when compared to national norms (18,19). A study conducted by Stanton et al (20) in 2011 concluded that there was no overall difference in the emotional intelligence scores when compared psychiatrists with surgeons. The study found that psychiatrists scored higher in the areas of emotional self-awareness, empathy, impulse control and social responsibility. Jensen et al. also (21) conclude that surgical residents may score higher norm for stress tolerance, because surgeons are faced with more stress factors in their workplace than in the normal population. In their study, the surgical group scored higher in the areas of self-regard, stress tolerance and optimism. Similar to these result surgeons had more stress tolerance in according to our study.

The social responsibility scores in surgeons and anesthesiologists were lower compared to the internal medicine physicians in our study. As surgeons and anesthesiologists, it may be easy to get caught up in the operating room's busy schedule and miss many social and family activities (21).

Empathy involves understanding another person's perspectives and the capacity to communicate and understanding. In our study, empathy scores were higher in the anesthesiologists compared to others groups. Anesthesiologists' have interpersonal good communication skills such as emphaty create a positive impression on surgical colleagues and patients. A communication done with empathy can act as a vocal anxiolytic (22). Hojat et al. (23) found that women were more empathic than men. In our study there were more female physicians in anesthesiology group. Higher empathy score in anesthesiologists in our study may be relevant by these factors.

Anesthesiologists and surgeons are likely to have more anger level because of closed working conditions with stressful patients for long hours. In our study, there were more external reflected anger scores in surgeons, while anesthesiologists had more inner anger scores.

Rosenstein and O'Daniel (24) investigated implications of disruptive behavior in the perioperative arena. They conclude that disruptive behavior by anesthesiologists was lower than surgeons. They mention that: 'Some surgeons seem to believe that they have the right to be rude, verbally abusive, and disrespectful to non-physicians.'

Inner anger has been associated with many physical disorders such as hypertension, coronary artery disease, cancer. Long working hours and stressful job and the psychological dynamics may have influence on depression. Indeed anesthesia specialists are higher risk among the specialists in terms of prevalence of burnout (25).

The limitation of our study was that our study group was not homogeneous in terms of specialty areas, gender and occupational year.

Conclusion

We conclude that emotional intelligence is effective in anger management. Higher age, more occupational experience, being more active and having hobbies may be associated with better emotional intelligence and anger management in anesthesiologists and surgeons under stress in the operating room and internal physicians as well.

Acknowledgments: We acknowledge and appreciate Guzel Discigil MD's valuable contribution in linguistic edit of the manuscript. This study was presented at the National Congress of Turkish Society of Anesthesiology and Reanimation (TARK 2017) for Poster Competition of Turkish-GermanAssociation of Anesthesiologists (PURSCHKE). 25-29 October 2017 Antalya/Turkey

Conflict of Interest: The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Author's Contributions: BS, SS, SAK, IKO: Research concept and design; patient examination, data collecting, analysis and interpretation of data**. SS:** Preparation of article, Revisions. All authors approved the final version of the manuscript.

Ethical issues: All Authors declare, Originality and ethical approval of research. Responsibilities of research, responsibilities against local ethics commission are under the Authors responsibilities. The study was conducted under defined rules by the Local Ethics Commission guidelines and audits.

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