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Investigating the Relationship Between Emotional Intelligence and Coping with Stress Styles Among Operating Room Technologists

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ABSTRACT

Introduction:*Emotional intelligence is the individual differences in identifying, processing and regulating emotions and coping styles refer to cognitive and behavioral actions for managing or reducing stressors in professions such as the operating room. Therefore, this study was conducted to determine the level of emotional intelligence and its relation to coping with stress styles among the operating room technologists of the educational hospitals of Iran University of Medical Sciences in the year 2016-2017.*
Method: *The present study is a descriptive-analytical study, in which 200 of the operating room technologists with associate and bachelor level of education participated in the study, who were selected random stratified sampling method. The instruments used in this study were three questionnaires of demographic information questionnaire, Bradberry& Greaves' Emotional Intelligence questionnaire and Endler& Parker stress coping styles questionnaire. Data were analyzed by descriptive statistical methods, chi-square and Fisher test using SPSS version 19 software.*
Results: *The results of this study showed that the majority of the operating room technologists (71.5%) had moderate emotional intelligence and the dominant style of them was problem-oriented style. There was a significant correlation between emotional intelligence and coping with stress ($p<0.001$), So that technologists who applied the problem-oriented style, had a higher level of emotional intelligence. There was a significant correlation between emotional intelligence and gender ($p<0.001$) and education ($p=0.034$), so that men had higher emotional intelligence than women and emotional intelligence in people who had bachelor's degree was more than that in people who had associate degree. There was no significant relationship between coping with stress style and individual-occupational variables.*
Conclusion: *The emotional intelligence of the majority of the operating room technologists were at moderate level and their dominant style was problem-oriented style. As skills of emotional intelligence and type of using coping styles can be developed through education, it is recommended that educational classes and workshops to be held periodically to improve the level of emotional intelligence and selecting the suitable type of coping style suitable by the operating room technologists.*

Keywords: *emotional intelligence, coping with stress style, operating room technologist*

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INTRODUCTION

Nowadays, stress is considered as an everyday phenomenon in people's lives and the type and nature of their job is one of the main causes of this stress in their lives; meanwhile nursing profession, especially nursing in the operating room is classified as one of the stressful jobs (Linnemann et al. 2015; Hashemi M 2012). The environment of the operating room is a high-risk environment and equipped with advanced technology in which several teams of specialists are trying to provide effective and safe treatment for patients; in this environment there are many stressful factors, such as: contagious diseases, injuries caused by needle contamination and sharps instruments, physicians' inappropriate treatment in the presence of others, inaccessibility of equipment, technical factors related to the complexity of the surgical procedure; sometimes these factors occur simultaneously (Arora et al. 2010; AsadiFakhr&Asadi 2017; Undre et al. 2007). Since stress in the operating room may lead to a performance drop in teamwork, increase medical errors, reduction in the quality of care provided to patients and endangering the health of technologists; therefore, it can be said that stressors are a threat to both teamwork and patients because teamwork is the principle of maintaining the patient's safety in the operating room and severe stress has an increasingly negative and destructive effect on it (Arora et al. 2010; Hendren 2010; Hull

et al. 2011; Trivellas et al. 2013b). So, managing this stress in terms of its severity and prevalence is of great important.

Effective coping styles can be usedin stressful situations to manage job stress that these styles are a set of people's behavioral and psychological efforts which lead to achieving more mastery in their work and thereby, can help reduce stress (Arora et al. 2010; Saklofske et al. 2012). The effect of stress on people depends on their ability to apply coping styles, and coping styles can convert stress conditions into balanced positions by reducing the negative effects of stress (Findik et al. 2015; Sheu et al. 2002).

Two highlighted coping styles include the problem-oriented and emotion-oriented style. In the problem-oriented style, the aim is to solve the existing problem; so the individual is directly focused on it and actively tries to resolve stressful situations while the emotion-oriented style emphasizes controlling emotions caused by stressors. Other scholars have introduced another style which is the third style called avoiding style in which the person tries to avoid stressful situations by engaging with others or doing another work (Endler 1997; Endler& Parker 1990; Feifel&Strack 1989; Folkman&Lazarus 1980; Latack&Havlovic1992; Lazarus&Folkman 1984).

Coping styles used by nurses differ according to their individual and psychology characteristics and their cultural factors and emotional intelligence as a personality trait helps them to select the appropriate managerial approach in unpleasant situations (Kulbe 2001; McNulty et al. 2016; Shih &Susanto 2010).

Emotional intelligence is a type of social intelligence and is a skill that prepares a person to have an effective interaction with the society and life and to succeed in life (Bar-On 2010; Sarabia-Cobo et al. 2017). Goalman introduced emotional intelligence as a successful factor in the field of work and also a part for the effectiveness of teamwork (Goleman 1995; Goleman 1998). In fact, emotional intelligence helps in people's job performance through stress management and controlling emotions (Lopes et al. 2006). Studies indicate that people with lower emotional intelligence lack the ability to understand and manage their emotions in difficult situations, which results in unbalanced behaviors and aggravation of negative emotions and a reduction in their occupational performance, as a result, this matter can endanger patient safety in clinical care environments, such as the operating room. On the other hand, enhancing emotional control through emotional intelligence helps in adopting effective coping strategies in case of facing stressful conditions (Kim & Han 2015; Trivellas et al. 2013a). Therefore, given that work in the operating room is a type of teamwork and on the other hand, emotional intelligence has a positive relationship with team performance, improvement of emotional intelligence in different people is essential especially in nurses and nurses in the operating room who are continuously confronting stressful situations (Littlejohn 2012; Quoidbach&Hansenne 2009).

Therefore, considering that the operating room is a team environment and risky at the same time with stressful situations; these situations can potentially affect all team members and cause medical errors, poor quality of patient care, endangering the health of technologists as well as the safety of patients and according to the importance of using coping styles to reduce the existed stress in the operating room and the role of emotional intelligence, researchers stated to investigate the level of emotional intelligence and its relationship with coping styles in the operating room technologists of the educational hospitals of University of Medical Sciences in Iran.

STUDY METHOD

The present study is a descriptive-analytic study which deals with determining the level of emotional intelligence and its relationship with stress coping styles in the operating room technologists of the educational hospitals of Iran University of Medical Sciences in 2016-2017. The sample size in this study was 200 people working in the operating room of educational hospitals of Iran University of Medical Sciences with an operating room nurse associate or bachelor's degree who were selected random stratified method. This sample number was obtained with 95% confidence and 80% test power using the following formula.

$$R = 0.3 \qquad \omega = \frac{1}{2}\ln\frac{1+r}{1-r} = \frac{1}{2}\ln\frac{1+0.3}{1-0.3} = 0.202$$

$$N = \frac{\left(Z_{1-\alpha/2} + Z_{1-\beta}\right)^2}{\omega^2} + 3 = \frac{(1.96 + 0.84)^2}{(0.202)^2} + 3 = 200$$

The entry criteria for entering this study were all the operating room technologists with an operating room nurse associate or bachelor's degree who had at least one year of working experience in the operating room environment. Data were collected using three types of questionnaires: the demographic information questionnaire, the Bradberry& Greaves' Emotional Intelligence questionnaire and the Endler& Parker stress coping styles questionnaire and all of the questionnaires were completed by the participants and with informed consent.

1- Demographic information questionnaire: This questionnaire contains questions in the field of gender (male / female), marital status (single / married), age (by year), work experience (by year), degree of education level (associate degree in operating room / bachelor degree in operating room), shift work (morning / evening / night / morning - afternoon / afternoon -night / in rotation).

2- Bradberry& Greaves' Emotional Intelligence questionnaire: These tools has 28 questions and 4 subscales including self-awareness (questions 1-6), self-management (questions 7-15), social awareness (questions 16-20) and relationship management (questions 21-28). For scoring the test, a 6-point Likert scale from 1 (never) to 6 (always) was used. The total scores that a subject gains in each of the phrases forms the total score of the test (Ganji et al. 2006). In this questionnaire, a score higher than 80 indicates a high level of emotional intelligence, a score between 60 to 80 indicates an average level of emotional intelligence and a score below 60 indicates a low level of emotional intelligence (Nazi Dizje 2012). The validity and reliability of this questionnaire has been confirmed by Ganji et al in Iran and the reliability coefficients obtained between two turns of implementation has been reported for fields of self-awareness (0.73), self-management (0.87), social awareness (0.78), relationship management (0.76), the total score of emotional intelligence (0.90) that all of the coefficients obtained are significant at the 0.99 level. To determine the validity, this test was performed in a group of 97 people along withBarOn' emotional intelligence test and the correlation coefficient was 0.68 which is still significant at the 0.99 level (Ganji et al. 2006). In the present study, the reliability of these tools was obtained above 0.75 for all four domains using internal consistency method and with calculating Cronbach's alpha.

3- Endler& Parker stress coping styles questionnaire: these tools are designed by Endler and Parker and have 48 questions and three problem-oriented (16 items), emotion-oriented (16 items) and avoidance-oriented coping styles (16 items). The avoidance-oriented style is divided into two dimensions of social engagement with 5 questions and distraction with 8 items. The method used for scoring these tools is based on five

point Likert scale from one (never) to five (very much). The score of all the phrases related to the sub-scales should be added to obtain the score of each coping style (problem-oriented, emotion-oriented, and avoidance-oriented) which the higher score shows the individual's dominant style (Ghoreyshi Rad2010). Khosroshahi et al in their research reported the coefficients of Cronbach's alpha for the problem-oriented coping style (0.89), emotion-oriented style (0.85) and avoidance-oriented style (0.80) (Khosroshahi&Khanjani2013). Also, the validity of this questionnaire has been announced in Iran by Ghoreyshi Rad for the scale validity of 0.83 and for the problem-oriented (0.85), emotion-oriented (0.55) and avoidance-oriented (0.83) subscales(Ghoreyshi Rad 2010). In the present study, the reliability of these tools was above 0.80 for all three styles based on the internal consistency method and by calculating Cronbach's alpha.

In order to carry out the research, after the final approval of the proposal and obtaining the code of ethics, the researcher received the required introduction letter from the faculty of Paramedicine for presenting to the educational hospitals of Iran University of Medical Sciences and after referring to the research environment, the required explanations in the field of conducting this research was presented to obtain permission from the management of educational centers and nursing offices. After referring to the operating room and by explaining the purpose of the research for technologists, their informed consent to participate in the research was obtained and they were ensured that their information is confidential; the relevant questionnaires were distributed and gathered at the end of the work shift. Questionnaires were collected from 7 educational hospitals of Iran University of Medical Sciences during a 5 month period. Descriptive and inferential statistical methods including frequency distribution tables, central indexes and dispersion, Chi-square test and Fisher test were used to analyze the samples of the research. Data analysis was carried out using spss 19 software.

FINDINGS

200 technologists of the operating room were present in this study with an average age of 32.25 years; 154(77%) of them were women and 46 (23%) of them were men. From this number, 118 (59%) were married and 82 (41%) were single. In terms of work experience, over half of the population 111 (55.5%) people had1 to 6 years of work experience, 44 (22%) people had 7-13 years of work experience, and the rest, 45(22.5%) people had work experience of more than 13 years. In terms of degree of education, 146 (73%) people had an operating room bachelor's degree and 54(27%) people had an associate degree. In terms of the majority of work shifts, 110 (55%) people had rotation shifts (morning, evening, morning-evening, and night), 26 (13%) people worked in morning shift and 41(20.5%) people had morning - evening Shifts and 23(11.5 %) people worked in other shifts (evening, night, evening-night shifts).

In terms of the frequency of emotional intelligence level, 143 (71.5%) of the operating room technologists had an average level of emotional intelligence, 48 (24%) technologists had high level of emotional intelligence and the remaining 9(4.5%) had low emotional intelligence. In investigating the frequency of the type of coping style used in stressful situations the results indicate that 152 (76%) technologists of the operating room used the problem-oriented style, 36 (18%) of them used the emotion-oriented style and the remaining 12 (6%) used the avoidance-oriented style to deal with stressful situations.

The results of the relationship between individual-occupational variables and emotional intelligence are shown in Table: 1, and about the relationship between individual-occupational variables and the type of style used to cope with stress, no significant relationship was found between any of the individual-occupational variables and the type of style used to cope with stress,(Table: 2)

Table1: distribution of the frequency of emotional intelligence levels based on the individual-occupational variables in operating room technologists

individual-occupational variables		emotional intelligence level						Total		p-value
		low		average		high				
		N	(%)	N	(%)	N	(%)	N	(%)	
gender	Male	0	0	25	54.3	21	45.7	46	100	*P<0.001
	Female	9	5.8	118	76.6	27	17.5	154	100	
Education level	Associate of operating room	3	5.6	45	83.3	6	11.1	54	100	*P=0.034
	Bachelor of operating room	6	4.1	98	67.1	42	28.8	146	100	
age	35≥	9	6.4	95	67.9	36	25.7	140	100	**P=0.071
	35<	0	0	48	80	12	20	60	100	
Marital status	Single	6	7.3	52	63.4	24	29.3	82	100	**P=0.070
	married	3	2.5	91	77.1	24	20.3	118	100	
Work experience	1-6	6	5.4	76	68.5	29	26.1	111	100	**P=0.084
	7-13	3	6.8	28	63.6	13	29.5	44	100	
	13<	0	0	39	86.7	6	13.3	45	100	
Working shift	Morning	0	0	23	88.5	3	11.5	26	100	**P=0.138
	Morning - evening	3	7.3	28	68.3	10	24.4	41	100	
	In rotation	3	2.7	78	70.9	29	26.4	110	100	
	The other shifts***	3	13	14	60.9	6	26.1	23	100	

*:p<0.05= level of significance
**:p>0.05 =lack of the significance level
***The other shifts: (evening, night, evening-night shifts)

Table 2: Frequency distribution of different coping styles in terms of individual-occupational variables among operation room technologists

individual-occupational variables		type of coping style						Total		p-value
		problem-oriented		emotion-oriented		avoidance-oriented				
		N	(%)	N	(%)	N	(%)	N	(%)	
gender	Male	39	84.8	7	15.2	0	0	46	100	**P=0.108
	Female	113	73.4	29	18.8	12	7.8	154	100	
Education level	Associate of operating room	41	75.9	7	13	6	11.1	54	100	**P=0.119
	Bachelor of operating room	111	76	29	19.9	6	4.1	146	100	
age	35≥	106	75.7	28	20	6	4.3	140	100	**P=0.189
	35<	46	76.7	8	13.3	6	10	60	100	
Marital status	Single	63	76.8	13	15.9	6	7.3	82	100	**P=0.680
	married	89	75.4	23	19.5	6	5.1	118	100	
Work experience	1-6	84	75.7	21	18.9	6	5.4	111	100	**P=0.985
	7-13	34	77.3	7	15.9	3	6.8	44	100	
	13<	34	75.6	8	17.8	3	6.7	45	100	
Working shift	Morning	19	73.1	7	26.9	0	0	26	100	**P=0.149
	Morning - evening	28	68.3	10	24.4	3	7.3	41	100	
	In rotation	86	78.2	18	16.4	6	5.5	110	100	
	The other shifts***	19	82.6	1	4.3	3	13	23	100	

*:p<0.05= level of significance
**:p>0.05= lack of the significance level
***The other shifts: (evening, night, evening-night shifts)

About the relationship between the level of emotion intelligence and type of coping style, Fisher's test showed that there is a significant relationship between emotional intelligence and stress coping styles (P <0.001), so that those with problem-oriented coping styles had a higher level of emotion intelligence (Table: 3)

Table 3: distribution of the frequency of emotional intelligence according to various stress coping styles among operating room technologists

emotional intelligence level	type of coping style						Total	
	problem-oriented		emotion-oriented		avoidance-oriented			
	N	(%)	N	(%)	N	(%)	N	(%)
low	0	0	6	16.7	3	25	9	4.5
average	108	71	26	72.2	9	75	143	71.5
high	44	29	4	11.1	0	0	48	24
Total	152	100	36	100	12	100	200	100
Fisher test	*P<0.001							

*:p<0.05= level of significance

DISCUSSION

The results of this study showed that the majority of operating room technologists (71.5%) had an average level of emotion intelligence which is in line with the research findings of Basogul et al on nurses (Başoğul&Özgür2016), Tofighi et al on emergency nurses in icu, ccu and Dialysis (Tofighi et al. 2015), Ghaderi and Shamsi, Delpasand et al and Ghaderi et al (Delpasand et al. 2011; Ghaderi et al. 2015a; Ghaderi&Shamsi2015b) However, the research results of this study is inconsistent with the findings of Rostami et al in which the emotional intelligence of nurses in Kermanshah was reported at a good level (Rostami et al. 2016). In agreement with these results, it can be said that since the emotion intelligence skills increase through practice and repetition, some of the emotion intelligence skills such as cognitive re-evaluation, showing anger in an appropriate manner and active listening because of the nature of technologists' profession will be strengthened in them and thus increases the level of emotion intelligence.

In the present study, the problem-oriented style was the dominant style of the majority of operating room technologists (76%), which is compatible with the findings of Biranvand et al on nurses working in Jundishapour Hospital of Ahvaz (Biranvand et al. 2015) and also the research of Lim et al in a review that was conducted on the type of applying stress coping styles among Australian nurses and found that in most studies, nurses used problem-oriented coping styles more than emotion-oriented styles (Lim et al. 2010). In line with these results, it can be said that since room technologists in form of a team are directly in touch with patient safety, the findings of the present study indicate that they are trying to solve the problem and eliminate or reduce stressors along with other team members to provide safe and desirable care to patients instead of avoiding stressful situations or creating emotional behaviors.

In investigating the relationship between emotional intelligence and the type of coping style we found that there is a significant relationship between emotional intelligence and stress coping styles so that individuals with a problem-oriented coping style had a higher level of emotional intelligence which is in line with the research results of Kim and Han on emotional intelligence and nursing students' styles of coping with stress which showed that emotional intelligence is positively related to the problem-oriented coping style (Kim& Han 2015) and also, with the results of Por et al studies (Por et al. 2011) and Sarabia-Cobo et al studies (Sarabia-Cobo et al. 2017) who showed that there is a relationship between emotional intelligence and nurses' problem-oriented style. In line with the research results of this study, it can be said that technologists with higher level of emotional intelligence are more likely to use the problem-oriented style through controlling and understanding their feelings.

In this study, the level of emotional intelligence was significantly higher in men compared to women; these results are in line with the research results of Ghaderi et al who showed that emotional intelligence and all its dimensions, except the social awareness scale, are higher in male students than female students and the study of Delpasand et al (Delpasand et al. 2011; Ghaderi et al. 2015a). Our findings in this study are not compatible with the research results of Biranvand et al and the research of Ghaderi and Shamsi who did not show a meaningful relationship between emotional intelligence and gender (Biranvand et al. 2015; Ghaderi&Shamsi 2015b). This contradiction could be due to the difference in the level of emotional intelligence in various instruments, the type of study population and particularly cultural factors because the amount and nature of this difference in emotional intelligence behavior of men and women are affected by them (Ghaderi et al. 2015a).

In this study, the emotional intelligence of bachelors were significantly higher than technicians that in this regard Benson et al showed that the mean score of the total emotional intelligence in nursing students increases with their academic year (Benson et al. 2010). Also, the research results of Ghaderi et al showed higher levels of average emotional intelligence and its scales except the social awareness scale in master degree students compared to undergraduatestudents (Ghaderi et al. 2015a).

In the present study, there was no significant relationship between emotional intelligence, age and work experience and is in line with the results of Delpasand et al and Landa et al, who did not find a relationship between emotional intelligence and age (Delpasand et al. 2011; Landa et al. 2008), while it is inconsistent with the results of Biranvand et al who showed a significant relationship between age, work experience and emotional intelligence and Ghaderi and Shamsi's research that showed a direct correlation between age and emotional intelligence (Biranvand et al. 2015; Ghaderi&Shamsi2015b).

In this study, there was no significant relationship between emotional intelligence, marital status and work shift which is inconsistent with the findings of Park et al (Park et al. 2014) who showed that emotional intelligence is higher in married nurses than single nurses and also, nurses with a constant shift are better at coping with stress than nurses with rotation shifts and is in line with the research results of Ghaderi and Shamsi and the research of Delpasand et al and Ghaderi et al who did not find any relation between emotional intelligence and marital status (Delpasand et al. 2011; Ghaderi et al. 2015a; Ghaderi&Shamsi2015b).

In justifying these differences it can be said that, it seems like according to the necessity of playing the role of technologists in team work it seems that work experience,age, marital status, or even shift times cannot simply be an important factor in reducing or increasing their emotional intelligence.

In this research, it was found that there is no relationship between individual-occupational variables and using the type of coping style which in fact it seems like among the operating room technologists, regardless of gender, marital status, age, work experience, educational level and work shift, using the type of coping style in stressful operating room conditions patient safety and working as a team is an issue of great importance since for providing secure care to patients, using the avoidance-oriented coping style or the emergence of emotional behaviors in a team does not seem desirable.

CONCLUSION

In the current study, the majority of operating room technologists had a moderate level of emotional intelligence and the problem-oriented coping style was the dominant style and there was a significant relationship between emotional intelligence and the type of stress coping style, so that individuals with higher emotional intelligence used the problem-oriented coping style. Considering that teamwork and communications are essential for patient care in the operating room and the use of coping styles to reduce stress which reduces the teamwork performance increases the medical error and thus endangers the patient's safety is of great importance and according to the significant relationship between emotional intelligence and the use of coping styles it can be said that emotional intelligence plays a key role in increasing the safety of patients in the operating room. Therefore, by considering that knowledge and emotional intelligence skills and stress coping strategies can be developed and improved through training, it is recommended that classrooms and workshops be held periodically for operating room technologists to enhance their emotional intelligence skills and choosing appropriate style of coping.

SUGGESTIONS

It is suggested that such research can be done on other room technologists and with a larger sample size so that we can generalize its result to the entire technology community.

REFERENCES

1. Arora, S.,Hull, L.,Sevdalis, N.,Tierney, T.,Nestel, D.,Woloshynowych, M.,Darzi, A. & Kneebone, R. 2010. Factors compromising safety in surgery: stressful events in the operating room. The American Journal of Surgery, 199**,** 60-65.
2. AsadiFakhr, A. &Asadi, S. 2017. Investigation of the amount of stressors in operating room nurses. Pajouhan Scientific Journal, 15**,** 27-31.
3. Bar-On, R. 2010. Emotional intelligence: an integral part of positive psychology. South African Journal of Psychology, 40**,** 54-62.
4. Başoğul, C. &Özgür, G. 2016. Role of Emotional Intelligence in Conflict Management Strategies of Nurses. Asian nursing research, 10**,** 228-233.
5. Benson, G.,Ploeg, J. & Brown, B. 2010. A cross-sectional study of emotional intelligence in baccalaureate nursing students. Nurse Education Today, 30**,** 49-53.
6. Biranvand, N.,Komili, H. &Heydari, H. 2015. Survey relationship between emotional intelligence and coping strategies to stress in nurses. Journal of Clinical Nursing and Midwifery, 4**,** 40-49.
7. Delpasand, M.,Nasiripoor, A. A.,Raiisi, P. &Shahabi, M. 2011. The relationship between emotional intelligence and occupational burnout among nurses in critical care units. Iranian journal of critical care nursing, 4**,** 79-86.
8. Endler, N. S. 1997. Stress, Anxiety and coping: the multidimensional interaction model. Canadian Psychology/Psychologiecanadienne, 38**,** 136.
9. Endler, N. S. & Parker, J. D. 1990. Multidimensional assessment of coping: a critical evaluation. Journal of personality and social psychology, 58**,** 844.
10. Feifel, H. &Strack, S. 1989. Coping with conflict situations: Middle-aged and elderly men. Psychology and aging, 4**,** 26.
11. Findik, U. Y.,Ozbas, A.,Cavdar, I.,Topcu, S. Y. &Onler, E. 2015. Assessment of nursing students' stress levels and coping strategies in operating room practice. Nurse education in practice, 15**,** 192-195.
12. Folkman, S. & Lazarus, R. S. 1980. An analysis of coping in a middle-aged community sample. Journal of health and social behavior**,** 219-239.
13. Ganji, H.,Mirhashemi, M. &Sabet, M. 2006. Bradberry-Greaves' emotional intelligence test: preliminary norming-process. J Thought Behav, 1**,** 23-35.
14. Ghaderi, M.,Nasiri, M.,Zakeri, Y. &KhedriMeirghaidi, R. 2015a. Assessment of Emotional Intelligence in Ahvaz Universities Students in 2014. Journal of Rafsanjan University of Medical Sciences, 14**,** 379-392.
15. Ghaderi, M. &Shamsi, A. 2015b. The correlation between emotional intelligence and mental health among students of Jiroft city. Journal of Health Promotion Management, 5**,** 62-72.
16. Ghoreyshi Rad, F. 2010. Validation of Endler& Parker coping scale of stressful situations. OlomeTarbiyati, 1**,** 1-7.
17. Goleman, D. 1995. emotional intelligence, New York, Bantam.
18. Goleman, D. 1998. Working with emotional intelligence, New York, Bantam.
19. Hashemi M, G. A. 2012. Assesment job stress it in nursing personal in a selected teaching hospital of North Khorasan University of Medical Sciences 2008. J North Khorasan Univ Med Sci, 4**,** 95-103.
20. Hendren, R. 2010. Linking-medical-errors-nurses-12hourshiftsHealthLeaders Media. http://www.healthleadersmedia. com/page-3/NRS-257296/Linking-Medical-Errors-Nurses- 12Hour-Shifts.
21. Hull, L.,Arora, S.,Kassab, E.,Kneebone, R. &Sevdalis, N. 2011. Assessment of stress and teamwork in the operating room: an exploratory study. The American Journal of Surgery, 201**,** 24-30.
22. Khosroshahi, J. B. &Khanjani, Z. 2013. Relationship of coping strategies and self-efficacy with substance abuse tendency among students. Knowledge & Research in Applied Psychology, 14**,** 80-90.
23. Kim, M.-R. & Han, S.-J. 2015. A study of Emotional Intelligence and Coping Strategies in Baccalaureate Nursing Students. International Journal of Bio-Science and Bio-Technology, 7**,** 275-282.
24. Kulbe, J. 2001. Stressors and coping measures of hospice nurses. Home Healthcare Now, 19**,** 707-711.
25. Landa, J. M. A.,López-Zafra, E.,Martos, M. P. B. & del Carmen Aguilar-Luzón, M. 2008. The relationship between emotional intelligence, occupational stress and health in nurses: a questionnaire survey. International Journal of Nursing Studies, 45**,** 888-901.
26. Latack, J. C. &Havlovic, S. J. 1992. Coping with job stress: A conceptual evaluation framework for coping measures. Journal of organizational behavior, 13**,** 479-508.
27. Lazarus, R. S., &Folkman, S 1984. Stress, Appraisal, and Coping, New York, Springer.
28. Lim, J.,Bogossian, F. & Ahern, K. 2010. Stress and coping in Australian nurses: a systematic review. International nursing review, 57**,** 22-31.
29. Linnemann, A.,Ditzen, B.,Strahler, J.,Doerr, J. M. &Nater, U. M. 2015. Music listening as a means of

stress reduction in daily life. Psychoneuroendocrinology, 60**,** 82-90.
30. Littlejohn, P. 2012. The missing link: using emotional intelligence to reduce workplace stress and workplace violence in our nursing and other health care professions. Journal of Professional Nursing, 28**,** 360-368.
31. Lopes, P. N.,Grewal, D.,Kadis, J.,Gall, M. &Salovey, P. 2006. Evidence that emotional intelligence is related to job performance and affect and attitudes at work. Psicothema, 18.
32. McNulty, J.,Mackay, S.,Lewis, S.,Lane, S. & White, P. 2016. An international study of emotional intelligence in first year radiography students: The relationship to age, gender and culture. Radiography, 22**,** 171-176.
33. Nazi Dizje, S. 2012. Relationship between emotional intelligence and design skills in architecture students. Journal of Technology of Education, 7**,** 109-120.
34. Park, H. S.,Ha, J. H.,Lee, M. H. & Lee, H. J. 2014. The relationship between emotional intelligence and stress coping of nurses. Journal of Korean Academy of Fundamentals of Nursing, 21**,** 466-474.
35. Por, J.,Barriball, L.,Fitzpatrick, J. & Roberts, J. 2011. Emotional intelligence: Its relationship to stress, coping, well-being and professional performance in nursing students. Nurse education today, 31**,** 855-860.
36. Quoidbach, J. &Hansenne, M. 2009. The impact of trait emotional intelligence on nursing team performance and cohesiveness. Journal of Professional Nursing, 25**,** 23-29.
37. Rostami, M.,Movaghari, M.,Taghavi, T. & Mehran, A. 2016. The relationship between emotional intelligence and coping styles of nurses in hospitals in Kermanshah University of Medical Sciences. Iranian Journal of Nursing Research, 11**,** 51-61.
38. Saklofske, D. H.,Austin, E. J.,Mastoras, S. M.,Beaton, L. & Osborne, S. E. 2012. Relationships of personality, affect, emotional intelligence and coping with student stress and academic success: Different patterns of association for stress and success. Learning and Individual Differences, 22**,** 251-257.
39. Sarabia-Cobo, C. M.,Suárez, S. G.,Crispín, E. J. M.,Cobo, A. B. S.,Pérez, V.,de Lorena, P.,Rodríguez, C. R. & Gross, L. S. 2017. Emotional intelligence and coping styles: An intervention in geriatric nurses. Applied Nursing Research, 35**,** 94-98.
40. Sheu, S.,Lin, H.-S. & Hwang, S.-L. 2002. Perceived stress and physio-psycho-social status of nursing students during their initial period of clinical practice: the effect of coping behaviors. International journal of nursing studies, 39**,** 165-175.
41. Shih, H.-A. &Susanto, E. 2010. Conflict management styles, emotional intelligence, and job performance in public organizations. International Journal of Conflict Management, 21**,** 147-168.
42. Tofighi, M.,Tirgari, B.,Fooladvandi, M.,Rasouli, F. &Jalali, M. 2015. Relationship between emotional intelligence and organizational citizenship behavior in critical and emergency nurses in south east of Iran. Ethiopian journal of health sciences, 25**,** 79-88.
43. Trivellas, P.,Gerogiannis, V. &Svarna, S. 2013a. Exploring workplace implications of Emotional Intelligence (WLEIS) in hospitals: Job satisfaction and turnover Intentions. Procedia-Social and Behavioral Sciences, 73**,** 701-709.
44. Trivellas, P.,Reklitis, P. &Platis, C. 2013b. The effect of job related stress on employees' satisfaction: A survey in health care. Procedia-social and behavioral sciences, 73**,** 718-726.
45. Undre, S.,Koutantji, M.,Sevdalis, N.,Gautama, S.,Selvapatt, N.,Williams, S.,Sains, P.,McCulloch, P.,Darzi, A. & Vincent, C. 2007. Multidisciplinary crisis simulations: the way forward for training surgical teams. World journal of surgery, 31**,** 1843-1853.