



## **Emotional Intelligence and Its Impact on the Emotional Factors among Nurses**

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### **Authors' contributions**

*This work was carried out in collaboration between all authors. Authors MSK and EJ designed the study. Author MSK wrote the protocol, collected the data, performed the statistical analysis and wrote the first draft of the manuscript. Authors AE, GC, DK and EJ managed the analyses of the study and the literature search. All authors read and approved the final manuscript.*

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### **ABSTRACT**

**Aims:** Emotional intelligence (EI) has been extensively studied in workplace settings. In the nursing field, however, the research data is limited. This study aimed to estimate the EI of nursing personnel in public hospitals in Cyprus, determine which factors were associated with EI, and examine how EI correlated with the emotional state (i.e., anxiety, stress and depression).

**Study Design:** The study design was cross-sectional.

**Place and Duration of Study:** The population under examination was derived from a reference population of nursing staff working in public hospitals in Cyprus between April and May of 2016.

**Methodology:** A total of 585 nurses completed the Greek Emotional Intelligence Scale (GEIS), consisting of 52 items measuring four basic emotional skills (expression and recognition of emotions, control of emotions, use of emotions to facilitate thinking, and caring and empathy), and the Depression, Anxiety, and Stress Scale (DASS 21), as well as questions regarding demographic, socioeconomic and occupational characteristics.

**Results:** The EI total mean score was 184.30. The nurses aged 36–50 years old had the highest EI scores (mean = 191.5,  $p = .000$ ), with a positive effect on the EI coming from years of service ( $>12$  years,  $p = .01$ ), leadership positions ( $p = .003$ ), being married ( $p = .02$ ) and having children ( $p = .001$ ). The overall EI scores had a moderate negative correlation with the emotional state of the nurses (depression  $r = -.454$ ,  $p = .000$ ; stress  $r = -.415$ ,  $p = .000$ ; anxiety  $r = -.390$ ,  $p = .000$ ).

**Conclusion:** The present study revealed suboptimal EI scores and confirmed the negative relationship with the emotional state of nurses. Based on the literature, the EI can be developed; therefore, suitable programs could substantially improve the emotional skills in nursing personnel.

*Keywords: Emotional intelligence; nursing personnel; stress; anxiety; depression.*

## 1. INTRODUCTION

Emotional disorders, such as depression, anxiety and stress, constitute the most common diseases of this century, despite the improvements in technology and the subsequent benefits it has offered [1]. The professional environment plays a significant role in the physical state of the individual [1-3]. Moreover, the hospital environment is extremely stressful due to its specific peculiarities [4,5].

Nursing personnel are regarded as a professional team with increased stress, anxiety and depression [1,6] due to their daily routine, which is particularly demanding since they are forced to cope with pain, sadness and death [7]. Stress also comes from the fatigue from an increased workload, as well as an inability of the nurse to cope with the emotional needs of the patients and their families, and the fact that many of their tasks are tedious [5,7,8].

Emotional Intelligence (EI) is perceived as a new relevant concept that has appeared in the literature over the past few decades. However, according to Goleman [9] its origins stem from antiquity with Aristotle, who studied the value of emotions in the field of interpersonal relationships. EI in the nursing field is considered to be particularly important for the existence and understanding of emotions, since it is considered to be a predominant element with regard to the maintenance of essential human relationships [10,11]. EI is associated with nursing on many levels, such as decision-making, the clinical environment and intraprofessional relationships [12-14]. Therefore, emotions play a central role in the ability of individuals to understand and assimilate emotional processes by allowing the

mitigation of the negative effects of stress and the consequential improvement of the level of health [15]. Emotionally intelligent nurses can manage their thoughts and feelings in harmony [10].

In recent years, the study of negative emotions among nurses has been particularly intense. The intense interest is significant because this emotional state adversely affects the physical and mental health of health care professionals by reducing their performance. Concurrently, this emotional state burdens the nurse with additional costs [16]. Unfortunately, the patients also suffer, since a nurse with increased stress can treat his or her patients with coldness, indifference, apathy and frustration [17]. However, the role of EI in the development of the nursing profession has not yet been adequately studied. The existing findings show that emotions play an important role in a profession that requires not only technical expertise but mainly relies on the psychological and physical care of human beings [8].

The positive effects of EI with respect to the quality of nursing work and the ability to mitigate the impact of a difficult working environment via the contribution of emotional self-management and the personal stress management capacity in chaotic environments have been recognized through the results of relevant past studies [12,18,19]. According to Nooryan et al. [20] EI can be effectively used as a tool for management and dealing with stress. In the stressful environment of the hospital, it is necessary that emotional skills be developed not only to improve the health care provided, but also with respect to protecting nurses from stress and its subsequent negative health effects [21].

As a direct consequence of the above, the results of this research are particularly important since they are expected to contribute to the development of nursing science, as well as to the improvement of working conditions. If a high EI can help nurses reduce their negative emotions, it will benefit nursing personnel, patients, employers and, as a result, the entire health care system [22,23].

The aim of the present study was to add knowledge to the international literature with respect to the subject of EI in the nursing field. This research aimed to offer data, especially in the case of Cyprus, where no evidence has been provided thus far, about EI in the nursing field and its effects and associations with the emotional state of nurses, mainly with anxiety, stress and depression. The results could be utilized to develop policies and interventional or educational programs for improvement in emotional intelligence ability in nurses to potentially limit the negative effects of high stress environments on nurses. Thus, the research questions were posed as follows:

**Question 1:** Do the demographic characteristics of age, gender, marital status, children and place of residence affect the EI of nursing personnel?

**Question 2:** Do the labour characteristics, such as work history (years of service), job position and level of education, affect the EI of nursing personnel?

**Question 3:** Does EI constitute a protective parameter against anxiety, stress and depression?

A cross-sectional research design using self-completed questionnaires was expected to answer the above questions, since a questionnaire constitutes a widespread and easy-to-use data collection tool [24]. Moreover, when using questionnaires, the sample responses are more specific because their decoding process is not unclear [25].

The results of this research were expected to reveal a statistically significant relationship with respect to the parameters of gender, age, education, marital status, years of service and job. In addition, a negative relationship was expected regarding the relationship between EI and the emotional status. Overall, EI was expected to be a protective factor against anxiety, stress and depression.

## 2. MATERIALS AND METHODS

### 2.1 Research Design

A cross-sectional study was conducted between April and May of 2016, to investigate the effects of EI (independent variable) on the emotional state (dependent variable) of nurses employed in public hospitals in Cyprus. The sociodemographic data was analysed using descriptive statistics.

The categorical variables (sex, marital status, place of residence, existence of children, level of education, employee position, workplace and department) were analysed with the contribution of the relative frequency-percentage, while the numerical variables (years of service, age and number of children) were analysed by measuring the mean and standard deviation (sd). T-test and one-way analysis of variance (ANOVA) was used to compare the mean scores between groups (EI associations with the demographic and work characteristics). The correlation between EI and the emotional state was made with the Pearson correlation coefficient ( $r$ ). In addition to the above, the statistical data was processed with SPSS Statistics for Windows ver. 20.0 and  $p < 0.05$  was considered statistically significant.

### 2.2 Research Instruments

Anonymous self-completed questionnaires were used for the data collection, were of high reliability and validity, and have been used in other research papers. The first part of the questionnaire contained the sociodemographic data of the sample and characteristics of the assignment.

The Greek Emotional Intelligence Scale (GEIS) was used to measure the EI [26]. It was comprised of 52 items that measured four basic emotional skills: perception and expression, emotional management, the use of emotions for the solution of a problem, and the understanding and reflection of emotions. The items were scored based on a Likert scale ranging from 1–5 (not representative to very representative). The absolute score ranges from 52-260, consistent with low to high EI. Reliability coefficients using Cronbach's alpha in the original validation study for the four dimensions ranged between .80 and .92. [26]. The questionnaire scoring was done by the researcher himself, Mr. Tsaousis, due to the personal rights of the intellectual property protection of the questionnaire. For the

measurement of the negative emotional state, the Depression, Anxiety and Stress Scale (DASS 21) [27]. The DASS 21 constitutes the short form of the DASS 42, and the purpose of this questionnaire was the measurement of a poor emotional state. It consisted of 21 questions falling under three categories (anxiety, stress and depression). Each category had seven questions scored on a four item Likert scale. The reliability in the original validation study was very high for each subscale (Cronbach's alpha coefficients were .94, .90 and .94 for depression, anxiety and stress, respectively) [28].

## 2.3 Participants

The population under examination was derived from a reference population of nursing staff working in public hospitals in Cyprus. A representative sample of nurses from Nicosia, Larnaca, Limassol, Famagusta, Kyperounta, Paphos and from the Hospital of the Archbishop Makarios III was used for this research. Stratified for hospital and department simple random sampling was applied to collect the data. Stratified random sampling layered hospital and department was used. The criteria for entering the survey were the following: a nurse (senior nursing staff and upper nursing staff) working in any part of the hospital in inpatient care. Emergency departments and day-care centres were excluded. Overall, the survey involved 585 nurses. The sample size was determined according to the desired level for the accuracy of the results, the financial cost and the time available.

## 3. RESULTS

The sample size (N) consisted of a total of 585 individuals, and their demographic characteristics are shown in Table 1. The majority of the sample consisted of women (74%) which corresponds to the reality of the nursing profession in Cyprus. In the present study, the Cronbach's alpha coefficient for the four factors of GEIS subscales ranged between .79 and .87. Similar, the alpha coefficients of DASS 21 was very high, .87, .86 and .89 for depression, anxiety and stress, respectively.

The sampling in the hospitals was representative of the public hospitals that participated in the present research. Regarding age, the mean of the sample was 33.79 years old (sd = 8.13, median = 30.00). The nursing professionals participating in this study had worked for a mean

of 10.67 years (sd = 7.94, median = 8.00). The mean number of children in the sample was two (mean = 1.9, sd = .9, median = 2.0).

Regarding the four EI categories, the mean score for the scale of recognition and expression of emotions was 29.54 (sd = 6.91). With respect to the use of emotions to facilitate thinking, the mean was 56.16 (sd = 8.84). In the scale of empathy and interest in others, the mean was 59.76 (sd = 8.06), and in emotional control, the mean was 38.84 (sd = 8.16). Finally, the overall EI score mean was 184.30 (sd = 20.23). According to the questionnaire norms, the nurses in Cyprus need improvement in all of the categories.

According to the scores of the nursing personnel in the DASS 21, it seemed that normal levels of depression, anxiety and stress were present in 59.7%, 62.6% and 69.4%, respectively. Mild to moderate depression, anxiety and stress presented in 28.7%, 27.6% and 23.6% of the participating nurses, respectively, while severe depression, anxiety and stress presented in 11.6%, 9.8% and 7%, respectively.

### 3.1 Question 1: Do the Demographic Characteristics of Age, Gender, Marital Status, Children and Place of Residence Affect the EI of Nursing Personnel?

According to the results of the present study, it seemed that the women were more likely to have the ability to recognize and express their feelings ( $p = .09$ ) as well as empathy and an expression of interest in others ( $p = .04$ ). The men seemed to have higher values in the use of emotions targeted at the facilitation of thinking ( $p = .01$ ) in alignment with obtaining emotional control ( $p = .01$ ).

The nursing professionals living in cities had higher rates in their ability to use their emotions to facilitate their thinking when compared to the nursing professionals from the provinces ( $p = .005$ ); moreover, the same situation applied to the overall EI score ( $p = .04$ ).

The married nursing professionals revealed higher total EI values when compared to the single nursing professionals ( $p = .02$ ), while the existence of children in the participant's family seemed to positively influence the recognition and expression of emotions ( $p = .001$ ), use of emotions ( $p = .04$ ), and empathy and expression

of interest in others ( $p = .03$ ), and as a consequence, the overall EI score ( $p = .002$ ). The age parameter seemed to significantly affect all of the EI categories as well as the overall EI score, with the 36–50-year-old age group recording higher EI values. The above results are show in Table 2.

### 3.2 Question 2: Do the Labour Characteristics, such as Work History (Years of Service), Job Position and Level of Education, Affect the EI of Nursing Personnel?

With regard to the relationship between EI and the level of education, the ability of an individual to obtain control over his or her feelings did not seem to be influenced by the parameter of re-education on the grounds that the nursing personnel who held only the first degree (basic education) showed higher values in the above skill when compared with the nursing personnel who held postgraduate degrees ( $p = .04$ ).

The job position of the nursing staff in the clinical sector seemed to be affected by the ability to use emotions aimed at the facilitation of thought ( $p = .005$ ), empathy and interest in others ( $p = .003$ ), and the overall score with respect to the issue of EI ( $p = .003$ ). In line with the above, the first nursing officers (workers) seemed to present

higher values in the above categories when compared to the nursing officers.

The work history (years of service) of the nursing staff affected the categories of the recognition and expression of emotions, the use of emotions aimed at the facilitation of thinking, and empathy and interest in others, as well as the overall EI score. The results are presented in Table 3.

### 3.3 Question 3: Does EI Constitute a Protective Parameter against Anxiety, Stress and Depression?

Table 4 shows the correlations between the GEIS and DASS 21. According to the statistical analysis, there was a negative linear correlation among the three examined emotional state categories (depression, stress and anxiety) and all of the relative EI categories (besides the empathy and interest in others) that did not present a statistically significant relationship with stress.

The emotional control and overall EI score seemed to have a stronger negative linear relationship with the emotional state parameter (anxiety, stress and depression) than with the other three categories. The above means that as these abilities increased, the negative feelings (anxiety, stress, and depression) were reduced.

**Table 1. Demographic and work-related characteristics**

		Sample number (N)	Percentage (%)
<b>Sex</b>	Male	152	26.0
	Female	433	74.0
<b>Age</b>	≤35	420	71.8
	36–50	131	22.4
	51+	34	5.8
<b>Marital status</b>	Single	181	30.9
	Married	379	64.8
	Divorced	22	3.8
	Widowed	3	.5
<b>Has children</b>	Yes	368	62.9
	No	217	37.1
<b>Level of education</b>	University degree	420	71.8
	Postgraduate degree	157	26.8
	Doctoral title	8	1.4
<b>Job position</b>	Nursing officer	526	89.9
	Senior nursing officer	43	7.4
	First nursing officer	16	2.7
<b>Work history in years</b>	≤6	218	37.3
	7–11	191	32.6
	12+	176	30.1
<b>Place of residence</b>	City	372	63.6
	Province	213	36.4

Table 2. Relationship between emotional intelligence and demographic characteristics

Variables			Recognition and expression of emotions	Use of emotions to facilitate thought	Empathy and interest in others	Emotional control	Overall emotional intelligence score					
			T value	T value	T value	T value	T value					
Sex	Females	Median	30.00 **	2.629	55.63*	-2.475	60.13*	1.998	38.35*	-2.426	184.11	-.370
	Males	(Md)	28.30 **		57.69 *		58.62*		40.22*		184.82	
Place of residence	City	Md	29.57	0.067	56.99**	2.804	60.17	1.391	38.98	0.635	185.70*	2.050
	Province		29.53		54.87**		59.21		38.53		182.14*	
Has children	Yes	Md	30.27**	3.365	56.74*	2.054	60.32*	2.185	38.93	0.351	186.26**	3.065
	No		28.29**		55.19*		58.82*		38.69		180.99**	
Age				F value		F value		F value		F value		F value
	≤35	Md	29.17**	10.677	55.43**	5.560	59.22**	5.064	38.39*	3.628	182.20**	10.763
	36–50		31.74**		58.10**		61.10**		40.59*		191.52**	
Marital status	51+		26.47**		58.32**		62.71**		38.32*		185.82**	
	Single	Md	28.83	1.515	55.17	2.150	58.85	1.689	38.47	0.543	181.31*	
	Married		29.91		56.48		60.17		38.87		185.44*	3.080
	Divorced		29.55		58.45		60.18		40.32		188.50*	

\*\* Statistical significance was defined as  $p = .01$ .\* Statistical significance was defined as  $p = .05$ .

**Table 3. Relationship between emotional intelligence and work-related characteristics**

Variables			Recognition and expression of emotions	Use of emotions to facilitate thought		Empathy and interest in others		Emotional control		Overall emotional intelligence score		
				T value	T value	T value	T value	T value	T value	T value		
Level of education	University degree	Median (Md)	29.65	0.615	56.00	-0.706	59.65	-0.541	39.28*	2.074	184.57	0.520
	Postgraduate degree		29.25		56.58		60.05		37.73*		183.61	
			F value	F value	F value	F value	F value	F value	F value			
Job position	Nursing officer	Md	29.51	1.515	55.83**	2.150	59.40**	1.689	38.70	0.543	183.43**	3.080
	Senior nursing officer		29.98		57.93**		62.33**		39.58		189.81**	
	First nursing officer		29.19		62.44**		64.81**		41.63		198.06**	
Work history	≤6	Md	28.74*	3.831	55.02 *	4.372	59.34 **	5.846	37.94*	2.725	181.04 **	9.656
	7–11		29.43 *		56.01 *		58.72 **		38.93*		183.08 **	
	12+		30.65 *		57.64 *		61.44 **		39.86*		189.58 **	

\*\*Statistical significance was defined as  $p = .01$ .

\*Statistical significance was defined as  $p = .05$ .

**Table 4. Correlations between the Greek Emotional Intelligence Scale and the Depression, Anxiety and Stress Scale (DASS21)**

		<b>Recognition and expression of emotions</b>	<b>Use of emotions to facilitate thought</b>	<b>Empathy and interest in others</b>	<b>Emotional control</b>	<b>Total emotional intelligence score</b>
Depression	Pearson correlation coefficient (r)	-.274**	-.335**	-.126**	-.406**	-.454**
	Value (p)	.000	.000	.002	.000	.000
	Sample number (N)	585	585	585	585	585
Anxiety	(r)	-.200**	-.257**	-.104*	-.417**	-.390**
	(p)	.000	.000	.012	.000	.000
	(N)	585	585	585	585	585
Stress	(r)	-.230**	-.267**	-.034	-.510**	-.415**
	(p)	.000	.000	.409	.000	.000
	(N)	585	585	585	585	585

\*\*The statistical significance was set at  $p = .01$ .

\*The statistical significance was set at  $p = .05$ .



#### 4. DISCUSSION

One of the objectives of the present research was to assess the EI of nurses in public hospital in Cyprus and its relationship with their sociodemographic and labour characteristics. According to the results of this study, it can be said that the nursing personnel in public hospital in Cyprus need improvement in the recognition and expression of emotions, as well as the use of emotions to facilitate thought. They also need improvement in their empathy and interest in others, emotional control, and generally, with respect to obtaining and exercising EI. In the study by Ogińska-Bulik [29] in which many professions participated (among them nursing professionals), the EI ranged at moderate levels. Concurrently, similar results were obtained from nursing students in the study by Ruiz-Aranda, Extremera and Pineda-Galán [30].

With respect to gender, according to the findings of the present research, there was a statistically significant relationship between the four categories of scale and gender. The women seemed to outweigh the men in the abilities of recognition and emotional expression as well as in the skill of empathy and the expression of interest in others. Simultaneously, the men seemed to present higher values in the use of emotions aimed at the facilitation of thinking correlated with emotional control. Similar results were found by other researchers who claimed that women have increased empathy when compared to men, and therefore, can support and strengthen human relationships. They can understand complex feelings and recognize their transition from one emotion to another [11,31,32].

In the Van Dusseldorp, Van Meijel and Derksen study [33], the male nursing staff seemed to perform better in dealing with stressful situations when compared to the female nursing staff. However, in contrast to the abovementioned researchers, Montes-Berges and Augusto [19], Birks, McKendree and Watt [34], Saeid et al. [35] and Cerit and Beser [36] did not detect a statistically significant relationship between EI and gender.

Regarding the relationship between EI and marital status, the married nursing staff showed higher EI scores than the single nurses. Similar results were found in other studies; for example, Kalyoncu et al. [37] and Cerit and Beser [36] found that married people performed better in

social skills. However, Saeid et al. [35] and Sharif et al. [38] did not find statistically significant relationships between the family status and EI. In our study, the existence of children in the nurse's family seemed to positively affect the skills relative to the recognition and expression of emotions, the use of emotions in order to facilitate thought, empathy and expression of interest in others, and finally, the overall EI score.

In the present research, the age variable appeared to play an important role in the EI. Specifically, the research findings showed that the older nursing personnel had a greater ability to express interest in other people and to effectively control their feelings when compared with the younger nursing staff. Those nurses 36–50 years of age showed the highest performance in the EI scores. This finding is consistent with studies which suggest that EI reaches its peak at 50 years old [39].

The probable influence of age, from early adulthood to middle age in particular, on the development of EI has been also identified by other researchers [40-42]. Specifically, Kalyoncu et al. [37] identified the highest EI values in individuals aged 41–55 years old. In their study, as the variable of age grew, the EI developed respectively. On the contrary, Birks, McKendree and Watt [34] argued that there was no relationship between age and EI.

As far as the relationship between EI and the place of residence in the current study, it appeared that the nurses living in cities had higher rates in their ability to use their emotions in order to facilitate their thinking than the nurses coming from the provinces. Concurrently, the same situation applied to the overall EI score.

The level of education did not seem to affect the person's ability to control his or her feelings, since the nursing personnel who held only a first degree (basic training) showed higher rates when compared to the nursing personnel who held postgraduate degrees. The results of the present research correspond to the results of the study by Noor-Azniza et al. [43]. In contrast to our research results, Saeid et al. [35] identified the positive influence of education on self-management. In addition, Kalyoncu et al. [37] added that nursing personnel with higher levels of education, such as a Master's or Ph.D., showed higher EI levels. Similar findings were included in the studies by Slaski and Cartwright

[44], Ulutas and Omeroglu [45] and Por et al. [46].

The Nursing professionals with more years of experience had a better ability to recognize and express their feelings and better management over their emotions to facilitate thinking when compared to the nursing professionals with fewer years of service. Similar results were found in the studies by Humpel and Caputi [47] and Karimi et al. [48], according to which the nursing staff with more years of experience showed better emotional capacity levels.

The leading positions of the nursing professionals in this study increased the EI levels, with the first nursing officers presenting higher values. Research has suggested that the senior nursing officers with increased EI recognized both their own feelings as well as the feelings of their subordinates. They also recognized the feelings of the patients' relatives as well as those of the staff in situations of pain and sadness [49].

Additionally, the results of this research confirmed the protective role of EI with respect to a negative emotional state. This has also been confirmed by many types of research with similar research findings [22,37,48].

Gorgens-Ekermans and Brand [50] suggested that high EI levels were associated with lower stress and less professional burnout. Those researchers argued that increased emotional management, that is to say the ability of an individual to effectively manage their positive and negative emotions and to obtain emotional control (the ability of an individual to effectively control his or her emotions) played an important role in stress as well as with respect to the professional exhaustion which is often experienced by nursing staff.

Ogińska-Bulik [29] identified the relationship between EI and the perception of work-related anxiety, as well as in the prevention of mental health disorders, particularly in the symptoms of depression. In a recent crossover study by Sharma, Dhar and Tyagi [51], ethical awareness acted as a mediator between the level of tendency and the mental health of the nursing professionals. Overall, EI has been shown to play an important role in dealing with the effects of stress. Nespereira-Campuzano and Vázquez-Campo mention that emotional Intelligence is related to work stress and, specifically, the

understanding of one's own emotional states influences personal fulfillment [52]. Similarly, Lawal and Idemudia mention that self-emotion appraisal, others' emotion appraisal, use of emotion, regulation of emotion and perceived organizational support were found to have joint contributions to explaining work stress among nurses [53].

## 5. LIMITATIONS OF THE RESEARCH

An essential prerequisite for the proper conduct of this work was the provision of an adequate sample for the extraction of safe conclusions that could be generalized in the population of nurses working in public hospital in Cyprus. The main limitations of the present work were related to the fact that the results of the present survey could only be generalized in the field of nurses in the public sector, since the sample did not include nursing staff in the private sector or other health professionals, such as doctors and physiotherapists. Additionally, only nursing professionals working with hospital inpatient included in the present research, which did not include professionals employed by outpatient clinics.

Moreover, although the use of self-completed questionnaires is considered to be an easy way to evaluate the participants' personal assessments, they can easily affect the participants' objectivity. A respondent's objectivity can be affected by the influence of various factors, such as fatigue, a tendency to provide socially acceptable answers rather than real views, incomprehension of the questions, or even a bad mood [54]. According to Goleman [9], self-assessments can be influenced by individuals who want to show a good self-image or have low self-awareness in order to objectively judge their strengths and weaknesses.

## 6. CONCLUSION

It seems impossible to describe the nursing profession without a reference to the recent incorporation of the term EI into the international literature with respect to nursing science. However, based on the existing literature, the positive influence of EI on the negative emotional state of nursing professionals has been identified, and was shown in the present study. Therefore, in the "heart-breaking" environment of a hospital, it is essential to protect nurses through the development of appropriate emotional skills for this difficult working

environment. For organizations that proceed in the development of interventions that aim at increasing the EI level, these actions will offer the ability to deal effectively and decisively with stress and its consequential effects. In addition, this study revealed the need for interventions and improvement in emotional intelligence ability in clinical staff nurses in Cyprus not only to improve the quality of nursing care, but also to protect them from the negative effects of high-stress environments on their emotional status.

A substantial question in relation to future research will constitute the enhancement of EI through education, and not just through the maturation of the individual. Developing EI skills can assist in the improvement of a nurse's efficiency in their labour environment. Simultaneously, it can also help nurses to cope more effectively with their emotions by directly reducing the level of work-related stress, and indirectly through the protection of their health [55].

## ETHICAL APPROVAL

For the preparation of this paper, approval was requested and secured from the Commissioner of Personal Data Protection (No. 3.28.388), the Cyprus National Bioethics Committee (No. 2015.01.114) and the Research Promotion Committee of the Ministry of Health of Cyprus (No. 5.34.01.7.6<sup>E</sup>). The participation of the subjects in this research was entirely voluntary, and through the completion of the questionnaire, the participants were asked to provide their written consent.

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## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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