



EXPLORING NURSES' EMOTIONAL INTELLIGENCE IN A TERTIARY HOSPITAL IN EMIRATES HEALTH SERVICES (EHS) UNITED ARAB EMIRATES

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Abstract :

Purpose: This study aimed to explore nurses' emotional intelligence in health services hospitals in the United Arab Emirates. **Methods:** A descriptive cross-sectional survey was conducted in a healthcare hospital in the United Arab Emirates. A convenient sample of 250 nurses was included using a simple random sampling technique, where all direct care nurses who spend more than 50% of their time in direct patient care were selected. The online survey included four sections: basic data of nurses. Descriptive statistics, T-test, ANOVA, and regression analysis were conducted to analyze the data. **Results:** Regression analysis showed that gender, years of experience, and unit specialization type all had a significant impact on emotional intelligence among nurses (p -value < 0.001), accounting for 46% of the variance in emotional intelligence scores. In contrast, neither educational level nor age had a statistically significant influence on emotional intelligence scores. **Conclusions:** Gender, years of experience, and unit specialization type all influence nurses' emotional intelligence, which is critical to professional competence in nursing.

Keywords: Emotional Intelligence; Nurses; Emirates

I. INTRODUCTION

The emotional intelligence (EI) concept emerged more than 20 years ago and remains relevant today. It is the ability to monitor or handle one's own emotions as well as the emotions of others. Emotional intelligence involves recognizing feelings, self-monitoring or awareness, and understanding how emotions affect relationships and how they can be managed. Also, motivation, empathy, and social skills can all be impacted by EI (Codier & Codier, 2017; Raghubir, 2018). EI has been widely considered in professions such as business, management, education, and, in the last ten years, nursing practice as it is essential in a profession that requires technical expertise and psychologically oriented care (Raghubir, 2018 & Landa & López-Zafra, 2010).

According to research, there is an association between emotional intelligence and positive patient outcomes, including clinical outcomes, patient satisfaction, and the ability to form therapeutic relationships. It has been linked to team performance and morale, including positive conflict resolution. In addition, emotional intelligence has an impact on nursing retention, job satisfaction, and engagement (Codier & Codier, 2017; Raghubir, 2018). Even though EI is fundamental to nursing practice and has the potential to impact all aspects of working life in commonly stressful and emotionally charged healthcare settings, it is noticed that there have been few studies that look into nurses' emotional intelligence, some studies show that it does not seem that registered nurses are familiar with the idea of emotional intelligence or how to cultivate and apply it in the workplace (Heydari et., 2016). As a result, this study explores the level of emotional intelligence among nurses in a tertiary hospital (Al Qassimi Hospital) at EHS.

II. LITERATURE REVIEW

Emotional intelligence is defined as a set of four abilities, according to the most thorough definition: a) the ability to accurately recognize, appraise, and express emotion; b) the ability to access and/or generate feelings when they aid thought; c) the ability to comprehend emotions and emotional knowledge; and d) the ability to regulate emotions to foster emotional and intellectual development (Michelangelo, 2015). Goleman (1995) also defines emotional intelligence as five dimensions: 1) Emotional awareness refers to the ability to understand one's own emotions as well as how those emotions affect others. 2) Emotional regulation; the ability to redirect disruptive impulses and think before acting. 3) Motivation: the desire to pursue goals with zeal and tenacity; the ability to persevere in the face of adversity. 4) Empathy: the ability to sense and understand the emotions of others; and to anticipate and consider the needs of others when making decisions. 5) Social skills: the ability to manage relationships, appropriately listen and respond, and inspire others (Ugoani & Emenike, 2015).

Nursing being one of the most challenging professions depends greatly on EI. Interacting and responding to human needs is not as easy as it seems, nurse-patient therapeutic relationships demand that nurses possess and acquire EI skills along the way in delivering

high-quality patient care (Heydari et al., 2016). Moreover, understanding emotions is about being able to understand how different emotions relate to one another, how they can change based on the situations they encounter, and how their feelings alter over time (Papadogiannis et al., 2009). Recently, the importance of nurse's emotional intelligence in patient healthcare outcomes has been highlighted. Many recruiters now consider emotional intelligence when hiring Nurses (Liu et al., 2017). Therefore, the development of emotional intelligence skills in nursing is important as EI nurses are more compassionate, empathic, resilient, caring, and able to manage emotions in others, they are more likely to be able to care for themselves, and thus their patients (Kooker et al., 2007; Nightingale et al., 2018). Thus, assessing nurses' EI levels methodically is important, as it provides valuable insight into improving the quality of nursing care (Heydari et al., 2016).

Nurses are at high risk of stress in severe or complex patient care situations, which can negatively affect their health and professional performance. Some studies have found positive correlations between emotional intelligence and nursing practice as nurses with high emotional intelligence can cope more effectively with the challenges of clinical nursing practice and improve occupational health (Codier & Codier, 2017; Raghubir, 2018).

A large number of researchers around the world have suggested that training in emotional intelligence should be a part of nursing training since it is significantly beneficial to their individual, professional, and social well-being, which facilitates effective decision-making, reduces stress in difficult situations in clinical practice (Başoğlu, 2016; Hua et al., 2019). Furthermore, there is an increasing interest in assessing the relationship between emotional intelligence and nurses' demographics.

Several studies have found a positive correlation between emotional intelligence and age, with older nurses reporting higher levels of emotional intelligence. An American study involving 405 nurses aged between 22 and 70, found that EI increased slightly with age as the authors suggest that emotional intelligence develops cumulatively as a consequence of life experiences. Findings in more recent literature suggest that age is not a predictor of EI. This is a premise that will be investigated in this research study (Cabello et al., 2016; Stami et al., 2018). On the other hand, an Australian study concluded that EI is higher among women (Cabello et al., 2016; Stami et al., 2018). In addition, educational level has been identified as another demographic factor that influences EI, significant correlation was found between EI and educational level. Nurses with higher levels of education demonstrated greater EI (Stami & Dominique, 2018). Analysis of the literature shows that several different assessments have emerged to measure levels of emotional intelligence. These tests are generally divided into two types: self-report tests and ability tests. It is believed that Ability EI tests measure constructs associated with an individual's theoretical understanding of emotions and emotional functioning. In contrast, self-report tests often ask direct questions about personal interests, values, symptoms, behaviors, and traits or personality types (Arunachalam & Palanichamy, 2017).

The researchers suggest that self-report tests are the most popular because they are easier to administer and score. In such tests, respondents respond to questions or statements by rating their behaviors (Khan & Kamal, 2010). In this study, we will use a self-report test: the Emotional Skills and Competence Questionnaire (ESCQ) (Takšić et al., 2009).

III. SIGNIFICANCE OF STUDY

There is a large body of evidence showing that emotional intelligence improves job satisfaction, reduces stress, and decrement burnout levels, and facilitates a positive work environment. Nursing is an area in which emotional intelligence may be pivotal, as it can enhance patient outcomes, decision-making, critical thinking, and general well-being. Therefore, developing emotional intelligence skills among nurses is just as important as developing clinical nursing skills (Angelna, 2020). In our facility nurses work in stressful conditions and face many challenges in communicating with patients and providing care in the clinical setting. We believe that by developing their EI skills, they will be able to address these issues and deliver enhanced care to their patients. Research suggests that demonstrating EI skills in relationship management and social skills can lead to higher nurses' satisfaction at work. Emotionally intelligent nurses also have a positive impact on patients, their families, and their colleagues (White & Grason, 2019).

Despite the importance of EI in the nursing profession, few studies have been carried out to study the association between the level of nurses' EI and their demographic information. The understanding between these associations may assist nursing managers and the organization in developing effective strategies to improve nurses' EI to meet the needs of their patients and nursing staff, along with achieving the organizational goals (Ng & Raymond, 2014). As a result, this study will assess nurses' emotional intelligence, correlate it with demographic data, and create training programs accordingly.

IV. PURPOSE OF THE STUDY

The purpose of this study is to explore the level of Emotional Intelligence (EI) and the association between it and demographic data among nurses in a Tertiary Hospital (AL Qassimi Hospital in Emirates Health Services (EHS) in the United Arab Emirates.

1. Explore the nurse's level of emotional intelligence skills
2. Describe the demographic characteristics of nurses.
3. To predict demographic characteristics that affect emotional intelligence to determine the controllable and uncontrollable factors affecting EI levels.

V. METHODS

5.1 Study Design

A descriptive, cross-sectional survey design will be conducted between February 2022 and April 2023 to measure emotional intelligence among staff nurses in Al Qassimi Hospital (AQH) and predict demographic characteristics that affect emotional intelligence.

5.2 Study Setting

Al Qassimi Hospital is located in Sharjah, Northern Emirates it is considered one of the main hospitals in the Emirates Health Services (EHS). Al Qassimi Hospital has 232 inpatient beds and is an accredited training center for medical training for undergraduate and graduate students, it employs 734 Nurses.

5.3 Study Participants

Non-probability convenience sampling will be used to select the eligible nurses for the current study. The inclusion criteria for nurses are all direct care nurses who spend more than 50% of their time in direct patient care. The sample size will be calculated using G power (Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. 2007), and applying the t-test will have the highest sample size. Accordingly, the sample size has a moderate effect size of 0.5, power of 0.95, and $\alpha = 0.05$, a total of 202 nurses. A larger sample

will be taken, considering the possibility of incomplete questionnaires and obtaining more reliable data for the generalization of the result.

A list of all working AQH nurses who spend more than 50% of their time caring for patients will be obtained from the Director of Nursing.

5.4 Inclusion and exclusion criteria

The study's inclusion criteria included working nurses with at least one year of work experience who spend more than 50% of their time caring for patients. On the contrary, the study's exclusion criteria will be nurses with less than one year of work experience and non-direct care nurses who spend less than 50% of their time caring for patients (Angelina, 2020).

5.5 Instrument

The Emotional Skills and Competence Questionnaire (ESCQ) will be used to collect the data in Emirates Health Services (AL Qassimi Hospital). The emotional Skills and Competencies Questionnaire was first developed in Croatian contexts, based on the emotional intelligence model's theoretical framework (Mayer & Salovey, 1997). ESCQ was translated into English by the reverse translation technique (Van de Vijver and Hambleton, 1996). The Emotional Skills and Competencies Questionnaire (ESCQ, Taki, and 2001b) currently contains 45 items divided into three subdomains:

- a) The Emotional Perception scale consists of 15 items.
- b) The Express and Label scale consists of 14 items.
- b) The Emotions Management and Regulation scale consists of 16 items.

On a 5-point scale, subjects were asked to rate items (1-never, 2-rarely, 3-sometimes, 4-usually, and 5-always) (Takšić et al., 2009).

In various studies with the Croatian version of the ESCQ, Cronbach alphas α was between 0.81 and 0.90 for the perception and Understanding scale; for the Express and Label emotions scale, the α was between 0.78 and 0.88, and for the Emotion Manage and Regulate scale, the α -measured internal consistency ranged from 0.67 to 0.78.

The ESCQ has proven to be a reliable and valid measure of emotional competence in diverse contexts, evidence-building, and convergent, divergent, and concurrent validity (Takšić, 2001b).

As a result, the form used contains data in survey areas: Demographic data, and Emotional Skills and Competence Questionnaire (ESCQ). The first category includes age, gender, years of experience, educational level, marital status, and unit specialization type (Please see Appendix B). The second category includes the Emotional Skills and Competence Questionnaire (ESCQ) consists of 45 items divided into three subscales (Please see Appendix A).

5.6 Data Collection Procedure

After obtaining ethical approval. The researchers will communicate with the hospital administration to request permission to conduct the study. Upon acceptance, the researchers select the targeted and eligible nurses, and the researchers will distribute the survey online (using Google Forms) to the nurses, and explain the nature and objectives of the study in the survey cover by email (Please see Appendix C).

The nurses will realize that they are implying consent by filling out the questionnaire. The cover letter included the purpose, risks, and benefits, as well as the rights of the nurses. After the responses are submitted, all information will be treated in the strictest confidence. After the survey is completed, it will be validated. The approach will be implemented according to a strategy developed by the researchers.

VI. ETHICAL CONSIDERATIONS

The EHS Research and Ethics Committee granted ethical approval prior to the initiation of data collection. Furthermore, we obtained written permission from the author to use the Emotional Skills and Competence Questionnaire (ESCQ). We maintained the anonymity of the nurses by assigning them identification numbers instead of using their identities to access the actual research information. We considered all ethical concepts, which included maintaining nurses' privacy and confidentiality, explaining the goal and nature of the research, using informed consent for nurses who freely agreed to participate in the study without coercion or risk, and allowing them to leave the study at any time and refuse to participate in the survey (Please see Appendix B). A computer password protects nurses' confidentiality; hence, only the lead investigator will be able to access it. The assignment of a code to the nurses ensures the confidentiality of their personal information. After completing the data analysis, we discarded the data sheet containing the code number. After the research concludes, we will retain the data for three years before erasing it.

VII. DATA ANALYSIS

The raw data was exported into Microsoft Excel 2007 format and was analyzed using SPSS version 26.0 (SPSS, Inc., Chicago, IL, USA). The research variables were described using frequencies, percentages, arithmetic means, standard deviations, and confidence intervals (CI). Stepwise Multiple regression analysis was used to investigate the influence of demographic factors on emotional intelligence (EI), with models evaluated for possible multicollinearity using the variance inflation factor (VIF), and the adjusted R^2 value was used to judge the goodness of fit. The differences in the EI scores due to demographic characteristics were examined by a one-way analysis of variance and an independent samples t-test. Statistical significance was considered to be if the p-value was less than .05.

VIII. RESULTS

8.1 Characteristics of the Nurses

According to the data, 53.5% of the participants were males, 46.5% were females, and 46.5% were between the ages of 31 and 40. 52.7% of the nurses had less than 10 years of experience, and more than 22.3% worked in procedural areas. 76.6% of the participants had a diploma. (Table1)

8.2 Emotional Intelligence Sub-Scales Differences Based on Demographic Characteristics

To determine if there was a significant difference between characteristics factors and EI subscales, a series of one-way ANOVAs and t-tests were applied. This study found that women participants had statistically significantly higher EI scores than men (t-value = -13.51, p-value 0.001). In contrast, the significant score difference between participants with higher and lower years of experience favored the more experienced group (t-value = -3.13, p-value 0.002). The results show that the age variable is responsible for the

statistically significant differences in EI scores; however, the differences were between nurses aged 23–30 and those aged over 40, and the differences favored participants aged over 41 years, as they had higher EI than those in other age groups ($F = 3.25$, $p = 0.041$). On the other hand, when comparing the demographic variables educational level and unit specialization type, the results showed that there were no statistically significant differences in EI due to variables including educational level and unit specialization type, considering that the alpha level was set at a significance level of .05.

Table 1 Demographic characteristics of the participants and differences in study variables (n=256)

Characteristic*	Category	Descriptive Statistics		EI	
		N (%)	M ± SD	t/F. Value	p-value*
Gender	Men	137	3.07±0.63	-13.51	<0.001*
	Women	119	3.94±0.40		
Unit Specialization Type	Medical Departments	35	3.38±0.60	1.74	0.101
	Surgical Departments	36	3.36±0.67		
	Orthopedic Departments	19	3.39±0.71		
	Cardio Department	33	3.66±0.73		
	Critical area	14	3.36±0.70		
	Procedural area	57	3.55±0.65		
	Emergency department	41	3.63±0.73		
	OPD	21	3.19±0.71		
Educational Level	Diploma Degree	196	3.43±0.70	2.51	0.08
	Bachelor's Degree	41	3.69±0.62		
	High Studies	19	3.45±0.68		
Experience Years	≤10	135	3.35±0.73	-3.13	0.002*
	>10	121	3.61±0.62		
Age	23-30 years	55	3.27±0.71	3.25	0.041*
	31-40 years	119	3.51±0.66		
	More than 40 years	82	3.56±0.70		

All the variables are categorical and are described using frequencies and percentages; t. value: Independent Sample t-test; F. value: ANOVA test; SD, Standard Deviation; *p-value: If p-value <0.05, then it is significant.

8.3 Predictors for Emotional Intelligence

F-values were calculated to validate the model and revealed statistical significance at a p-value of 0.05. For all the variables included in the model, the t-values also matched a likelihood of error below 0.05. According to the standardized coefficients, gender had the largest influence. Finally, the low VIF values and strong tolerance led to the conclusion that there was no collinearity among the variables in the model. A stepwise regression analysis was used to predict factors associated with EI; the results in Table 2 show that gender ($\beta = 0.65$, $p < 0.001$), experience years ($\beta = 0.19$, $p < 0.001$), and unit specialization type ($\beta = 0.11$, $p < 0.001$) were significant predictors for EI indicating that as the demographic factors including gender, experience years, and unit specialization type explained 46% of the variance in EI. On the other hand, the predictor's age, and educational level were not statistically significant predictors for emotional intelligence (p-value > 0.05).

Table2 Stepwise regression analysis for predicting the EI scores among nurses based on variations in demographic variables

Predictor								
	R2	F-value	p-value	B	SE	B	t- value	p-value
Step 1								
Constant	0.40	171.77	<0.001	2.19	0.10		21.07	<0.001
Gender				0.88	0.07	0.63	13.11	<0.001
Step 2								<0.001
Constant				1.76	0.14		12.62	<0.001
Gender	0.45	101.41	<0.001	0.89	0.07	0.64	13.64	<0.001
Experience Years				0.28	0.07	0.20		
Step 3				1.63	0.15			
Constant				0.89	0.07	0.65	10.79	<0.001
Gender	0.46	70.53	<0.001	0.26	0.07	0.19	13.91	<0.001
Experience Years				0.03	0.01	0.11	4.01	<0.001
Unit				1.63	0.15		2.31	0.022

SE: Standard Error; β : Standardized coefficient regression; B: Unstandardized coefficient regression; R: Multiple correlation coefficient; R2: Coefficient of determination; *If p-value <0.05, then it is significant.

IX. DISCUSSION

This study aims to evaluate the predictive effect of demographic factors on emotional intelligence. The mean emotional intelligence score among nurses was 3.47 out of 5. Based on the low and high mean cutoff values, we can conclude that nurses have moderate emotional intelligence. ANOVA analysis revealed differences in emotional intelligence levels among nurses, favoring those with over 10 years of experience and those over 40. The passage of time improves nurses' communication skills as they have a better awareness of patients' emotional needs and how to provide appropriate support, in addition to stress management and self-control that nurses acquire from experience and aging. Repeated situations enhance nurses' ability to deal with emotional stress, and aging increases emotional maturity, making nurses more aware of their feelings and more adept at handling personal and professional conflicts. A study by (Raieisi et al., 2019) showed that nurses over the age of 35 had higher EI than those in other age groups, as did those with more work experience, and that the differences are statistically significant. Kaufman et al. () contend that lifetime learning and accumulated knowledge help explain the favorable relationship between age and emotional intelligence. This outcome is in line with other research demonstrating increased emotional intelligence among older nurses (). This result could inspire nurses of all ages to develop their emotional intelligence at work. Our results revealed differences in emotional intelligence levels among nurses, favoring those with over 10 years of experience. Nurses with job experience face challenging situations and develop their emotional intelligence. This aligns with the findings of Al-Shammari et al. (2020), who found that as individuals gained experience, they became more aware of their emotional intelligence. To develop emotional intelligence—which will enable nurses to control their own and others' emotions, improve their capacity to convey real emotional reactions, and transmit feelings and ideas without generating conflict (Hussien et al., 2020), they must get training, practice, and experience. This contradicts the conclusions of Kahraman and Hiçdurmaz (2016) about years of experience. The mean emotional intelligence scores of nurses with 10 or more years of experience exceeded those of nurses with 2 years or less, as well as those with 2 to 5 years of experience. The current study demonstrated gender as a significant predictor of emotional intelligence and its subscales, indicating that female nurses exhibited higher emotional intelligence than their male counterparts. This may be linked to the social discrepancies between genders and their modes of emotional expression elucidating the differences in emotional intelligence among male and female nurses. Pande (2010) similarly concluded that women had superior mean emotional intelligence scores. During emergencies, males often communicate less, resulting in less assistance and empathy compared to women (Shanahan & Hofer, 2005). Similarly, sexual dynamics may inhibit the innate manifestation of resilience in women while permitting it in men (Sun & Stewart, 2007). Moreover, women value nurturing and personal interactions more than men do. Nurture and interpersonal interactions are valued more by women than by males. Conversely, gender differences in EI scores in favor of woman nurses were proven by (Shrestha et al., 2021; Zeidner & Matthews, 2016). An Australian study concluded that EI is higher among women (Cabello et al., 2016; Stami et al., 2018). Our findings indicated that gender, years of experience, and type of unit specialisation were predictors of emotional intelligence, however educational level and age were not predictors of emotional intelligence.

X. STRENGTHS AND LIMITATION

This research, using multiple regression models, is among the first in the United Arab Emirates to combine emotional intelligence and demographic factors in a single study. One drawback of this research, however, is its emphasis on direct-care nurses who devote more than half of their time to direct patient care, therefore restricting the generalizability of the outcomes. Moreover, using a cross-sectional design could induce bias and offer a one-time evaluation. These findings should be interpreted in light of the following research limitations: First, it is advisable to integrate qualitative approaches, as the only measuring instrument used here is questionnaires. The sample solely focused on health care, making the findings inapplicable to other vocational settings. Further research should include variables relevant to the work environment, beyond just demographics.

XI. CONCLUSION

The current research found that senior nurses had much greater emotional intelligence ratings compared to their younger counterparts. This significant discovery may assist nurses and management in acknowledging the need to enhance emotional intelligence via its application and practice in the workplace across all age demographics. The current study showed that nurses with more experience exhibited elevated emotional intelligence, with no discernible differences in intelligence based on their backgrounds and job attributes. These findings underscore the necessity of offering nurses suitable education and guidance programs to enhance their adaptability and emotional intelligence. This is not achievable through direct learning and academic content, but rather through practical experiences and on-the-job training.

CONFLICTS OF INTEREST

The authors declare that there is no conflict of interest.

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