The Relationship between Nurses' Emotional Intelligence and their SafetyPractice for Elderly Patients

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ABSTRACT

Background: Emotional intelligence helps to provide the better care for elderly patients and continuous monitoring of their performance regarding the importance of the patient safety. Those have great impact on their health**. Aim of study:** The study aimed to assess the relationship between nurses' emotional intelligence and patientsafety for elderly. **Research Design:**Descriptive, correlational research design was used in the study.**Setting:**The study was conducted in the Intensive Care Units at Beni-Suef University Hospital. **Sample**: Convenience sample of all staff nurses who work with elderly patients in ICU at Beni-Suef University Hospital and has inclusion criteria experience more than one year at the intensive care units .**Tools**: Two tools for data collection were used; first tool: emotional intelligence scale that aims at measuring components of emotional intelligence of nurses caring for elderly patients and second tool: Nurses' Practice Observation Checklist. **Results:**, the great majority of them (91%) had moderate level of self awareness, more than half (60%) of them had low level of managing emotions, and about two thirds (65%) of them had high level of social skill. there was statistically significant positive correlation (r=0.126, p= 0.05) between total emotional intelligence and total safety practice among study participants. **Conclusion:**. there was statistically significant positive correlation between total EI and total safety. **Recommendations:** Programs of In-service training for nurses on EI skills are recommended. Further studies to link the level of clinical performance and patient safety with measured emotional intelligence in nurses
Keywords; **:** Emotional intelligence, Elderly patient, nurses safety practice

Introduction

People who were above 65 years had higher risks to be frail with the low and limited ability. It was one of the most differences between elderly patients and young people. With the development of the society, the number of the population in the world is increasing rapidly nowadays. This phenomenon has led the significant problem of the whole world. Old people was defined as "an individual aged 65 or above." The population

of the old people above 65 years old in the world will increase more than three times until 2050. The definition of old people was defined that "frail people were those who were unable to look after themselves easily due to illness, disability or lack of strength" (**1**).

Emotional Intelligence is extremely important to understand the distinctive characteristics between emotions and EI. Emotion is a natural instinctive state of mind that derives from our current and past experiences and situations. Emotions originate in our environment, circumstances, and knowledge, as well as our moods, and relationships. Our feelings and experiences influence our emotions. Conversely, EI is the ability, skill, and awareness to no, recognize, and understand those feelings, moods, and emotions, and use them in a positive way(**2**)

Emotional intelligence which was introduced by Mayer and Salovey in the early 1990s refers to the ability to harness(**3**)**,** understand, and recognize emotional expressions for managing relationships. This intelligence develops people's awareness of emotions that facilitate opinions with reception, evaluation, and expression of emotions(**4**)**.**In general, the basic characteristic of emotional intelligence include perception, understanding, and controlling emotions (**5**)**.**

Significance of study

EI is viewed as a unique and practical construct in nature (6). Therefore, EI has gained a considerable amount of attention at both the national culture and international business levels (7).

Nurses play a great role in caring for elderly patients where they deal with using their emotional intelligence to provide the better care for elderly patients and continuous monitoring of their performance regarding the importance of the patient safety. Those have great impact on elderly health. So, the current study aims to assess the relationship between nurses' emotional intelligence and patient safety for elderly. So, this study aims to assess the relationship between nurses' emotional intelligence and their safety practice of intelligence which can affect the nurse-patient elderly patients.

Aim of the study

Assessment the relationship between nurses' emotional intelligence and patient safety for elderly in Beni-Suef University Hospital through the following objective.

1. Assessing nurses' emotional intelligence
2. Assessing nurses' safety practice
3. Finding the relationship between nurses' emotional intelligence and their safety practice for elderly patients

Research questions: What is the relationship between nurses' emotional intelligence and their safety practice for elderly patients?

Research design:

A Descriptive, correlation research design was utilized

Setting:

This study was conducted in the intensive care units ICUs at Beni-Suef university hospital. (Intensive care unit - cardiac care unit- neurological care unit- neurosurgery care unit - chest Intensive care unit t – medical intermediate care unit and tropical intermediate care unit) Intensive care unit is located in third floor. It consists of   five rooms it contains 19beds However, cardiac care unit is located in the fifth floor. It consists of one room it contains 12 beds. neuro surgery care unit is located in the first floor It consists of one room it contains 11 beds. tropical intermediate care unit is located in sixth floor It consists of one room it contains 8 beds , Medical intermediate care unit is located in fifth floor ,consists of one room which contains 10 beds, Neurological care unit is located in fifth floor ,consists of one room which contains 8 beds, chest Intensive care unit is located in seventh floor , consists of one room it contains 10 beds, These units are having both sexes male and female, having flow of older adults seeking the foundation service.

Sample:

Subjects in this study were100 nurses-inclusion criteria experience more than one year at the intensive care units   - providing   care for geriatric patients.

Tools of data collection

Two data collection tools were used to carry out the current study namely:

Tool I: Emotional intelligence scale sheet, consists of two parts as the following

Part 1: demographic characteristic to collect data about nurses' socio-demographic characteristics which includes: age, gender, marital status, qualification … etc.

Part 2: emotional intelligence scale that developed by (**8**) **Scoring system: the responses pertaining to EI dimensions were given on five – point liker scale, compromising the following options**

35-50	This area is a strength for you.
18-34	Giving attention to where you feel you are weakest will pay dividends.
10-17	Make this area a development priority.

Tool II: Nurses' Practice Observation Checklist This tool aims at evaluating nurses' safety practice for elderly patient developed by (9)

Tools Validity:

Face and content validity of the study tools was assessed by jury group consisted of five experts , three of them were professors and assistant professors of nursing administration at faculty of nursing , Ain-shams University and two of them were professors at community health nursing ,faculty of nursing Banha University, the expertise reviewed the tools for clarity , relevance, comprehensiveness, simplicity and applicability minor modification was done.

Field work

Data were collected in 4 months from first of June 2021 to the end of september2021. The investigator visited the study setting for three days weekly. The investigator filled the observational checklist in the morning, afternoon and night shifts during actual nurse's work and documented steps of care for the patients in the previous mentioned settings. The Nurses performance Checklist was used prior to administration of the questionnaire to ensure the maximal realistic observations of the nurse's performance and minimize the possibility of bias. The nurse's practice was observed by the investigator while they were caring for patients.

Each nurse was observed by the investigator during practice using the observational checklist it took about 30-45 minutes. Then, The Assessment nurses' knowledge questionnaire was filled by the nurses who providing care for patients it took about 30-35 minutes.

Administrative Design

An official letter requesting permission to conduct the study was directed from the dean of the faculty of nursing Beni-Suef University to director of Beni-Suef University hospital to obtain their approval to carry out this study. This letter included the aim the study and photocopy from data collection tools in order to get their permission and help for collection of data from nurse director and head nurses.

Ethical Consideration

oral consent was obtained from the study subjects, the purpose and the nature of the study was explained to them before conducting the study. The subjects were assured that all information will be confidential and will be used for the research only to assure the confidentiality of the participants. Participants were assured that their participation in the study is voluntary and they can withdraw from the study without rational.

Statistical Design:

The collected data were organized, tabulated and statistically analyzed using SPSS version 25 (Statistical Package for Social Studies) created by IBM, Illinois, Chicago, USA. Frequency distribution was done for description of all items of data collection tools. For numerical values the mean and standard deviations were calculated. The correlation between study variables was calculated using Pearson's correlation coefficient. One-way ANOVA test and independent t test were utilized to assess the relationship between the study variables and participants' personal data.P value is significant at ≤ 0.05 and highly significant at ≤ 0.001 but insignificant at 0.05

Results

Table (1): Nurses socio-demographic characteristics' (n= 100).

Socio-demographic		No.=%
Age	20< 30years	33
	30< 40years	55
	40< 50years	5
	>50 year	7
	Mean± SD	32.15 ± 2.43
Gender	Male	31
	Female	69
Marital status	Single	20
	Married	78
	Divorced / widow	2
Qualification	Diploma	19
	Institute	13
	Bachelor's degree	49
	Post graduate studies	19
Years of Experience	1< 5 years	10
	5<10years	51
	10< 15 years	31
	≥15 year	8
	Mean± SD	8.76 ± 1.27
Job title	Technical Nurse	26
	Specialized nurse	74

*N.B: NO.=% as n=100

Table (1) shows that more than half of the study Nurses age (55%) were 30< 40 years old, more than two thirds of them (69%) were female, more than three quarters of them (78%) were married, about

half of them (49%) had bachelor's degree, about half of them (51%) were 5< 10 years of experience, and about three quarters of them (74%) were specialized nurses
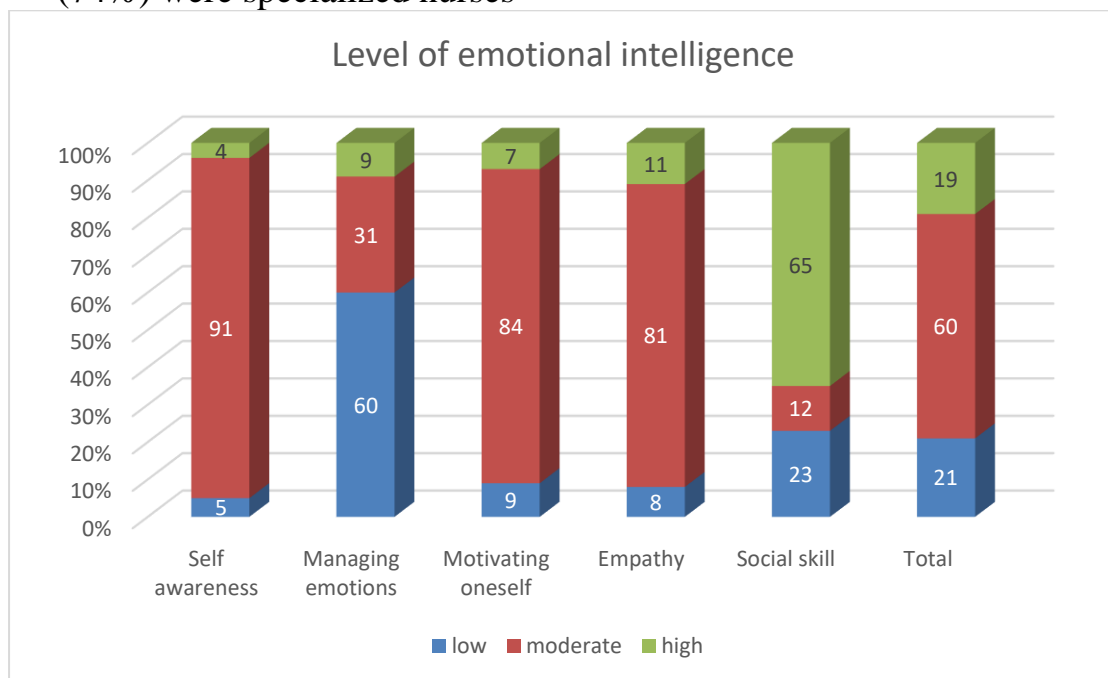
Figure (1)**: Frequency distribution of the study participants' levels of all emotional intelligence dimensions (n= 100).**

Figure (**1**)concludes that 21% of the study participants had low emotional intelligence level and had development priority, more than half (60%) of them had moderate level of emotional intelligence and need attention, only 19% of them had high level of emotional intelligence, the great majority of them (91%) had moderate level of self awareness, more than half (60%) of them had low level of managing emotions, and about two thirds (65%) of them had high level of social skill.

Table (2)**: total Nurse's   patient safety practices dimensions (n= 100).**

Dimensions	Min	Max	Mean	SD	Mean%
Adverse Drug Events	28	35	32.39	2.24	92.54
Catheter-Associated Urinary Tract Infections	20	35	26.16	4.03	74.74
Central Line-Associated Blood Stream Infections	14	26	21.80	2.66	83.85
Injuries from Falls and Immobility	19	31	24.90	3.56	80.32
Hospital-Acquired Pressure Ulcers	18	31	25.19	3.25	81.26
Preventable Readmissions	21	34	29.41	2.07	86.50
Surgical Site Infections	17	28	23.35	2.41	83.39
Ventilator-Associated Pneumonias and Ventilator-Associated Events	17	31	25.07	2.70	80.87
Venous Thromboembolisms (VTE)	19	33	23.56	3.89	71.39
Total safety	201	267	231.83	17.41	86.83

Table (2) concludes that there was high level of total safety practice (mean %= 86.83%).

Table (3): Correlation between the study participants' emotional intelligence and patient safety practice (n=100).

	Pearson Correlation	Adverse Drug Events	Catheter-Associated Urinary Tract Infections	Central Line-Associated Blood Stream Infections	Injuries from Falls and Immobility	Hospital-Acquired Pressure Ulcers	Preventable Readmissions	Surgical Site Infections	Ventilator-Associated Pneumonias and Ventilator-Associated Events	Venous Thromboembolisms (VTE)	Total safety
Self awareness	r	.052	.202*	.178	-.168	.201*	.126	-.136	-.154	.094	.077
	p	.606	.044	.076	.094	.045	.210	.176	.126	.352	.446
Managing emotions	r	.044	.221*	.451**	.005	.115	-.049	.076	-.369**	-.060	.082
	p	.667	.027	.000	.957	.253	.631	.451	.000	.554	.415
Motivating oneself	r	-.049	.194	.423**	-.205*	-.023	.072	-.200*	-.164	.070	.028
	p	.629	.053	.000	.041	.820	.475	.046	.103	.490	.780
Empathy	r	-.007	.208*	.329**	-.277**	.263**	.051	-.074	-.279**	.093	.063
	p	.947	.038	.001	.005	.008	.614	.466	.005	.355	.531
Social skill	r	-.034	.255*	.076	.112	.111	.194	-.048	.027	.295**	.197*
	p	.734	.010	.452	.266	.273	.053	.638	.791	.003	.050
Total intelligence	r	.000	.309**	.419**	-.165	.194	.115	-.116	-.269**	.143	.126
	p	.998	.002	.000	.101	.054	.254	.251	.007	.155	.05

*p value is significant at ≤0.05.

Table (3) illustrates that there was statistically significant positive correlation (r=0.126, p= 0.05) between total emotional intelligence and total safety practice among study participants.

Table (4)**: Relationship between the study participants' emotional intelligence and their personal data (n-100).**

Personal data		Emotional intelligence		Test result	
		Mean	SD	F /t	p
Work department	general ICU	147.90	15.19	.031	.09
	CCU	148.57	14.82		
	ICU Nauru	147.90	10.19		
	epidemic ICU	149.90	15.61		
	medical ICU	153.67	11.61		
	chest ICU	147.90	15.61		
	psychiatric ICU	145.71	16.85		
Age	20< 30years	151.00	18.61	4.551	.013
	30< 40years	143.80	11.56		
	40< 50years	156.00	0.00		
	>50 year	151.00	18.61		
Gender	Male	153.00	8.98	2.29	.00
	Female	145.71	16.36		
Marital status	Single	150.00	12.31	70	38
	Married	147.38	15.48		
	Divorced / widow	132.12	2.15		
Qualification	Diploma	137.50	6.67	64.63	.00
	Institute	175.00	0.00		
	Bachelor's degree	141.60	11.08		
	Post graduate studies	160.50	4.62		
Years of Experience	1< 5 years	152.89	5,76	2.645	.076
	5<10years	145.50	17.16		
	10< 15 years	150.00	10.86		
	≥15 year	156.00	0.00		
Job title	Technical Nurse	159.50	15.90	3.77	004
	Specialized nurse	145.00	13.20		

*p value is significant at ≤0.05, highly significant at ≤0.001.
*f: refers to one-way ANOVA test, t: refers to independent t test.

Table (4) illustrates that there were significant statistical relationships between total emotional intelligence and participants' age group(f=4.551, p= 0.013), job title (t=3.77, p= 0.004). also there were highly significant statistical relationships between total emotional intelligence and participants' gender (t=2.29, p= .00), and qualification (f=64.63, p= 0.00).

Table (5): Relationship between the study participants' patient safety practice and their personal data (n-100).

Personal data		Patient safety		Test result	
		Mean	SD	F / t	p
Work department	general ICU	232.80	20.49	.369	.897
	CCU	235.87	20.99		
	ICU Nauru	232.80	20.49		
	epidemic ICU	279.36	21.05		
	medical ICU	230.85	21.05		
	chest ICU	232.80	21.05		
	psychiatric ICU	222.71	14.99		
Age	20< 30years	219.25	12.43	30.415	.00
	30< 40years	238.60	19.43		
	40< 50years	258.00	0.00		
	>50 year	219.25	12.43		
Gender	Male	233.00	21.19	.07	.38
	Female	232.71	19.74		
Marital status	Single	239.00	5.13	1.56	.00
	Married	231.25	22.06		
	Divorced / widow	219.21	6.31		
Qualification	Diploma	237.50	2.56	103.269	.00
	Institute	202.00	0.00		
	Bachelor's degree	225.20	13.48		
	Post graduate studies	262.50	4.62		
Years of Experience	1< 5 years	237.17	11.90	13.848	.00
	5<10years	226.83	14.85		
	10< 15 years	236.33	24.93		
	≥15 year	258.00	0.00		
Job title	Technical Nurse	218.50	16.93	3.80	79
	Specialized nurse	236.38	19.27		

*p value is significant at ≤0.05, highly significant at ≤0.001.
*f: refers to one-way ANOVA test, t: refers to independent t test.

Table (5) illustrates that there were highly significant statistical relationships between total patient safety practice and participants' age group (f=30.415, p= 0.00), marital status (f=1.56, p= 0.00),qualification(f=103.269, p= .00), and their experience level (f=13.848, p= 0.00).

Discussion

The current study was designed with an aim to assess the relationship between nurses' emotional intelligence and their safety practice for elderly patients through assessing nurses' emotional intelligence, assessing nurses' safety practice and finding the relationship between nurses' emotional intelligence and their safety practice for elderly patients. The present study was a cross-sectional one that conducted on 100 nurses working with elderly patient

Regarding demographic characteristics, the current study which revealed that more than half of the study nurses were 30< 40 years old, more than two thirds of them were female. Our findings were in agreement with the reported in a similar recent study designed to test the impact of theoretically based training on the different components of emotional intelligence and coping styles in a sample of nurses working with older adults where of nurses were females, and the mean nurses' age was 42.1 ±8.16 years old *(10).*

Regarding years of experience, about half of the studied nurses had five to ten years of experience, which came in accordance with a study reported that nurses had a range of nursing experience, with 41.5% (n = 528) being within the first ten years of their career *(11).*

For older people, empathy is among the main characteristics of a good nurse *(12).* A previous review study found that it is important for nursing staff to anticipate the needs of older people in a relationship based on empathy, respect, and availability *(13).*We can explain these linear positive correlations with what was previously published that empathy is related to sensitivity, sociability, adaptability, and consideration in nursing*(14).*

In the current study, by calculating the total EI score we found that, more than half of the studied nurses had moderate level of EI and need attention, social skill was the highest EI dimension as about two thirds of the studied nurses had high level of social skill. The great majority of them had moderate level of self-awareness. More than half of the studied nurses had low level of self-managing emotions. Comparable with our findings, the results of a recent study conducted to investigate the relationship between EI and the communication skills of emergency department nurses, in that study the mean EI score was estimated to be (78.31 %) with the highest and lowest scores related to self-awareness and self-management dimensions respectively *(15).* This also was

consistent with the reported in previous studies where self-awareness score was higher than the scores in the other dimensions of EI, *(16;17; 18and19)*

In the current study, results reported a statistically significant higher EI total score among males as compared to females, this observation was similar to the reported higher EI scores among men than women, but the difference was not significant *(15).*This finding also is consistent with the results of *(20) and of (21)* studies*.* On the other hand, other studies have shown that women have better EI than men *(22), (23).*

In the current study we reported significant statistical relationship between total emotional intelligence and nurses' qualification, in line with our findings, *(15)*, reported a statistical significant differences between qualification level and EI score and also between years of experience and EI *(15)*, on the other hand, the results of current study are different from them, as we did not find a statistically significant relationship with the years of experience.In contrast to the current study, there was non-statistically significant association between EI and qualification in *(15; 24 and 25)* studies.

Previous research shows that people's communication skills develop and increase with age *(22), (15), (26),* a finding that also applies to EI. In this study, the highest EI score was among age category (40-50) years old. Consistent with our results, the reported findings that there is a significant difference in EI between different age groups, which suggests EI, and communication skills can be acquired and used over time*(15).*

The total patient safety score in the current study was (86.83%) that indicates a high level of safety practice. In line with current study findings the reported high patient safety scores in a study conducted to analyze factors influencing patient-centered care practice, patient safety competence, and patient safety nursing activities of geriatric nurses, who reported a high total patient safety score *(27),*and also consistent with the results of another study conducted to examine nursing staffs' geriatric knowledge, perceptions about interprofessional collaboration and patient-centered care, and perceived learning needs related to working with hospitalized older people, the patient safety total scores were moderately high *(28).* The current study reported that a statistically significant positive linear correlation between EI total score and patient safety total score, higher levels of EI have been associated with success in managing personal as well as professional relationships*(29).*

Conclusion

There was statistically significant positive correlation between total EI and total safety.

Recommendations

Based on the results of the current study, we recommend the following:

- Integrate EI into nursing curriculum
- Ensure training for geriatric nursing on EI skills
- Further studies to link the level of clinical performance and patient safety with measured emotional intelligence in nurses.

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