The Effect of an Emotional Intelligence Training Program on Nursing Students' Stress Management

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Abstract

Background: Emotional intelligence has been suggested as a protective factor for stress, and it has the potential to enable individuals for better coping with stress. **Aim of the study:** Investigate the effect of emotional Intelligence training program on nursing students' stress management. **Research design:** A quasi-experimental research design was used to carry out this study. **Setting:** The study was conducted at Beni-Seuif technical health institute. **Sample:** A simple random sample technique of 175 nursing students enrolled in academic year (2024-2025) constitutes the study sample. **Tools of data collection**: Data for this study was collected using three tools namely: Emotional intelligence knowledge questionnaire, trait emotional intelligence questionnaire, perceived stress scale. **Results:** (30.3%) of nursing students had satisfactory knowledge regarding total emotional intelligence before the intervention which improved significantly to (93.1%) immediately after the program and decreased in follow up phase to (92 %). Also (21.7%), of nursing students had low emotional intelligence level before the program which increased at the post intervention phases, reaching (80.6%). In addition, more than four-fifths (81.7%) of the studied technical nursing students gained a low level of stress during the post-test phase, followed by the phase of follow-up test (80%) as compared with the phase of the pre-test (33.1%). **Conclusion:** Emotional intelligence training program had a positive large effect size on stress management among the studied technical nursing students. **Recommendations:** Intervention programs are recommended for nurses to enhance their emotional intelligence skills and improve their coping abilities, thus reducing their level of psychological burnout.

Keywords: Emotional intelligence, Nursing student, Stress management

Introduction

Emotional Intelligence is defined as the "ability to recognize the meaning of emotions and their relationships and to use them as a basis for reasoning and problem solving "and also has mentioned about its five components; self-awareness, emotional management, motivation, empathy and resolving conflict/management relations. Nursing students are considered to be emotionally intelligent and successful when they can adapt to all these five dimensions of EI **(Cox, 2022).**

Emotional intelligence enables complex processing of one's emotions, guiding thought and action. According to the Four Branches Model formulated by Mayer and Salovey, four specific interrelated domains intervene in emotional competence: Perceiving emotions, emotional facilitation of thinking, understanding emotions and emotion regulation. Perceiving emotions refers to the perception, identification,

appraisal and expression of emotions, both one's own and of others. Emotional facilitation of thinking establishes a two-way relationship, in which emotions have a relevant role in facilitating thinking. Emotional understanding involves analyzing emotions, knowing how to recognize them and label them verbally, as well as interpret them within a given context **(Cleary, et al., 2023).**

Nursing students are required to manage numerous clinical situations, adapt to the different teaching styles, work independently toward objectives, and manage conflicts during community health nursing practice. In addition, some aspects of academic work may be considered highly stressful such as taking exams and practicing nursing procedures in health care settings. These situations require high levels of emotional management. It is the responsibility of educators to equip them in the best way possible not only providing knowledge, so curriculum designers should consider implementing components designed to help students develop

their emotional intelligence **(Victoroff, et al.,2023).**

Nursing education aims to develop nursing students' knowledge and skills for professional nursing roles and during nursing education, nursing students face academic stress and also stress during their clinical practice. Nursing students' common stressors are academic load, followed by interface worries, clinical concerns, personnel problems, year of study, availability of time, engagement in patient care, and so forth **(Ahmed, et al., 2021).**

Stress management is critical for academic and professional success. Developing emotional abilities aided students in effectively coping with stress and maintaining a healthy mental condition. Scholars have grown more interested in the frequency of academic stress among university students over the past several years. It has long been recognized that nursing education is strongly connected with stressors **(Kamara, et al.,2024).**

The relationship between emotional intelligence and stress has been demonstrated in various studies and it has been investigated that students with high emotional intelligence have lower perceived stress ,In addition, it has been indicated that as the emotional intelligence levels of students increase, they can cope better with stress **(García-Martínez, et al., 2021).**

Improving nursing students' EI, help in preparing them for successful entry into nursing practice and survival in this emotionally demanding profession. Instructions in the art of EI during nursing education could equip newly graduated nurses with soft skills that required in order to successfully managing the challenges they face in a stressful healthcare environment, resulting in better self and patient outcomes. Ability to work effectively in team means the ability to recognize and respond appropriately to one's own and others' feelings and the ability to motivate oneself and others. Emotional intelligence is the ability to maintain and control situation, people and events make excessive demands **(Ayed, 2025).**

Significance of study:

Students in the selected study setting cannot face stressful situations, also they suffering from many signs and symptoms of stress as uncontrollable or threatening angry, nervous, or anxious and trouble thinking. World Health Organization (WHO) has branded the stress as "Health Epidemic of the 21 century" (Fink, 2017). Many studies found that, nursing students have high level of stress compared to other students (Shadifat, et al., 2018), as nursing is known to be a stressful profession, as it necessitates constant interaction with different individuals in an environment that is described as highly stressful (Algaralleet al., 2019).

Aim of the study:

This study aims at investigating the effect of an emotional intelligence training program on nursing students' stress management.

Research hypnosis:

Nursing students' stress management improves after implementing an emotional intelligence training program.

Subjects and Method

This study aims to investigate nursing students' attitude toward nursing

Research Design:

A quasi-experimental design was used to carry out this study.

Setting:

This study was conducted at Beni-Suief Technical Health Institute that include five academic department namely (medical analysis division, medical radiology division, nursing division, health association division, medical registration division), and the study was conducted at the nursing division, first and second academic year.

Sample:

The total population at technical health institute is 300 nursing student which are distributed into 160 student at first year and 140 in second year. The sample size was calculated using the following equation: Sample size was determined by using Yamane, formula (1976) to assess the sample size of staff nurses.

n = N/ (1+N (e)2)

N= is the total number of nursing student.

n = is the sample size.

e is coefficient factor = 0. 05.

1= is a constant value.

The sample size of staff nurse at technical health institute is 300 / (1+300× (0. 05)² = 171 nurses. The sample was increased to 175 to avoid attrition error.

A simple random sample technique of nursing students were selected to achieve study purpose, distributed as (90) nursing students from the first year, (85) from the second year.

Tools of data collection:

Data for this study was collected using three tools namely: Emotional intelligence knowledge questionnaire, trait emotional intelligence questionnaire, perceived stress scale. Personal characteristics including age, sex, residence, number of family members, number of sibling, degree at joining the institute and desire at joining the institute were collected too.

Too I: Emotional intelligence knowledge questionnaire. This tool was developed by the researcher after the reviewing of relevant literature **(Cookfair, 2012 & sheela, 2003)**. The questionnaire sheet used to assess nursing students' knowledge regarding emotional intelligence. It contains (15) mcq regarding concept of emotional intelligence, the importance of emotional intelligence for nursing students, the models of emotional intelligence, the components of emotional intelligence, influences of emotional intelligence, and skills of emotional intelligence.

Scoring system:

This tool consisted of (15 quetions) with a total grade (15). One grade was given for correct answers, and zero grade for wrong answers. The total responses were calculated and catagorized as the following:

Satisfactory knowledge: If the total score was equal or more than 75%, it means equal or more than 12 points.

Unsatisfactory knowledge: If the total score was less than 75%, it means less than 12.

Tool II: Trait Emotional Intelligence Questionnaire (TEIQue) .

It was developed by **Petrides & Furnham, (2008)** and modified by researcher. It aimed to assess global trait of emotional intelligence. It contains (45) items grouped under five domains which as follows: intrapersonal competencies (13items), interpersonal competencies (11items), adaptability (8 items), managing emotions (7items) and general mood (6 items).

Scoring system:

It used a 5-point Likert scale that assesses nursing students' responses as (1) Never, (2) rarely, (3) some-times (4) Most of the times, & (5) all the time.   The total score ranges from (45- 225). The total grades for each item were summed up and then converted into a percentage score. They were classified into three level as the following (statistics). Low level, if the total score is less than 60%. Moderate level, if total score is equal or more than 60 % to less than 75%. High level, if total score is equal or more than 75%.

Tool III: Perceived Stress Scale

Perceived Stress Scale (PSS) was developed by **Cohen, et al., (1983)** and it is adopted by the researcher. after reviewing of the relevant literature **(De Croon, 2004)**. This scale aimed to assess stress level among nursing students. It contains (56) items grouped under eight dimensions as follows: Academic achievement (5), Psychological field (8), Relationships with parents and siblings (10), Relationships with colleagues/ teacher/ and administrators (17), Financial and economic matters (3), Emotions/ feelings/ and fear (5), Social sphere (5), Relationships with opposite sex (3).

Scoring system:

It used a 3-point Likert scale that assesses nursing students' responses as (1) Never, (2) Some-times, (3) all the time. Stress scale questionnaire consisted of 8 dimension and (56 items) with a total score of (168). The total grades for each item were summed up and then converted into a percentage score. They were classified into three levels *as* the following

(statistics). Low level, if the total score is less than 60%. Moderate level, if total score is equal or more than 60 % to less than 75%. High level, if total score is equal or more than 75%.

Ethical consideration:

An official permission to conduct the proposed study obtained from the Scientific Research Ethics Committee. Participation in the study was voluntary and subjects given complete full information about the study and their role before signing the informed consent. The ethical considerations was included explaining the purpose and nature of the study, stating the possibility to withdraw at any time, confidentiality of the information where it was not be accessed by any other party without taking permission of the participants.

Tool validity:

The developed tool of data collection was formulated and submitted to five experts in nursing administration from different universities to assess the content validity and to judge its clarity, relevance, comprehensiveness, understanding, and applicability.

Tool Reliability:

The reliability of tools was estimated using Cronbach's alpha to measure the internal consistency of the tools. It was found that the reliability for emotional intelligence questionnaire was 0.998, indicating excellent reliability and the reliability for knowledge regarding emotional intelligence was 0.964, indicating excellent reliability. And stress was 0.996, indicating excellent reliability.

Pilot study:

The pilot study was conducted on (18) nursing students who represent 10% of total study subject to examine the clarity of questions and time needed to complete the study tools. The aim of pilot study was to test the clarity of tools language, It feasibility and in order to estimate the time needed to fill in data collection forms .It took 45-60 minutes for three tools.

Field work:

Data collection of the study was started from October 2023 and completed in April 2024, it took about seven months. The study was conducted through the following four phases.

Phase 1: Assessment phase

The actual field work started at first semester at academic year 20232/2024, the researcher distributed pre-test, questionnaire sheet to the study subjects at their classrooms to assess their knowledge regarding emotional intelligence after explained the aim and nature of the study. Each participant filled in the questionnaire sheet and backs it to the researcher. This sheet was distributed three times throughout the study pre, post program and after three months of the program implementation. The first distribution was at October 2023.

Phase 2: Program planning

The Program was constructed by the researcher after review of the related literature and based on the assessment of the knowledge questionnaire. The time allowed for achieving the program was 6 hours. The components of the program include sessions about introduction to program, EI concept, and importance of emotional intelligence, components of emotional intelligence.it took two weeks (from the beginning of November2023).

Phase 3: Program implementation

The program was implemented in the classrooms at Technical health Institute. The program was implemented throughout seven months from (October 2023 to April 2024), nursing students were divided into four groups, and each group has one session /week.

In the first session the researcher explained the aim of the study, program objectives, plan and content. At the beginning of each session, the objective of the session was explained. Feedback was done about the previous session and at the end of each session. The teaching method used during the implantation of the program were lecture, group discussion, brain storming, role play, group activities, it took about 6 weeks from middle of November 2023 to the end of December 2023. The researcher distributed a booklet about content of the program to all participants on the study. And At the end of the last session, a post test was held to assess nursing students, knowledge

regarding emotional intelligence after the program.

Phase 4: Follow up

Three month after the implementation of the program the researcher assessed the effect of emotional intelligence training program through using the same tools which used in pre and post program. It was in April 2024.

Administrative design:

Before starting the study, an official letter was submitted from the dean of Beni-Suief technical health institute to take their approval to conduct the study and collect data. The letter contained the aim of the study and forms of data collection tool. Then, the researcher met the nursing student to explain the aim of study, to obtain their approval and cooperation for data collection.

Statistical Design:

Data entry and analysis were performed using SPSS statistical package version 26. Categorical variables were expressed as number and percentage while continuous variables were expressed as (mean ±SD). Chi-Square (x2) was used to test the association between row and column variable of qualitative data.

ANOVA test was used to compare mean in normally distributed quantitative variables in more than two groups. Pearson correlation was done to measure correlation between quantitative variables. For all tests, a two-tailed p-value ≤ 0.05 was considered statistically significant, P-value ≤ 0.01 was considered highly statistically significant. While p-value> 0.05 was considered not significant.

Eta square (η2) is used to measure the effect size. Additionally, it is exploring the effect of emotional Intelligence training program on stress management among nursing students. The referential framework for identifying the effect size for Anova-test value (*Cognitive and Brain Science Unit, 2021*) and (*Lakens, 2013*).

Effect size η2	Interpretations
0.01 to < 0.06	Small
0.06 to < 0.14	Median
≥ 0.14	Large

Results

Table (1): described demographic data of the studied technical nursing students, it shows that more than four-fifths (82.9%) of the age of the studied technical nursing students were ranged from 19- < 21 years old, with a mean age of 19.29±0.77. Moreover, the majority of (92% & 85.1%) them were female with a Male to female ratio is 0.1:1 and lived in a rural area respectively. Considering family and sibling number, more than two-fifths (46.9%&49.7%) have a family number ≥ 7 with a total mean of 6.38±1.7 and have a sibling number ≤ 2 with a total mean of 3.71±1.6 respectively. Additionally, nearly to one-third (32%) of the studied technical nursing students is ranked as the first child. As well, more than half (55.4%) of them gaining a percentage ranged from 75% - < 85% at joining to institute. Finally, more than two-thirds (66.9%) of them were joined institute based on their degree.

Table (2): clarified knowledge regarding emotional intelligence during pre, post & follow up among the studied technical nursing students. It denoted, during the post-test phase, majority **(93.1%)** of studied technical nursing students perceived a satisfactory level of knowledge regarding emotional intelligence, followed by the phase of follow-up test **(92%)** as compared with the phase of pre-test **(30.3%).** Moreover, there was a highly statistically significant difference between knowledge means regarding emotional intelligence during pre, post & three months follow up among the studied technical nursing students at F= 220 & P = 0.000.

Figure (1): demonstrated level of emotional intelligence during pre, post & follow up among the studied technical nursing students. As evident from the figure, four-fifths (80.6%) of the studied technical nursing students gained a high level of emotional intelligence during the post-test phase, followed by the phase of follow-up test (77.1%) as compared with the phase of the pre-test (21.7%). In addition to presence of difference between at $\chi2=177$, P=0.000.

Figure (2): displayed stress level during pre, post & follow up among the studied technical nursing students. It illustrated that more than four-fifths (81.7%) of the studied technical nursing students gained a low level of stress during the post-test phase, followed by the

phase of follow-up test (80%) as compared with the phase of the pre-test (33.1%). In addition to presence of difference amongthe studied technical nursing students at $\chi2$=138, P=0.000.

Table (3): Correlation among emotional intelligence, stress and knowledge regarding emotional intelligence during pre, post & follow up among the studied technical nursing students. It clarified that, there was a high statistically significant positive correlation between emotional intelligence, and knowledge regarding emotional intelligence and stress during pre, post & follow up among the studied technical nursing students at r= ranged from 0.593 to 0.879 & P= 0.000. Additionally, it describes that, there was a high statistically significant negative correlation between emotional intelligence, and stress during pre, post & follow up among the studied technical nursing students at r= ranged from -0.917 to -0.962 & P= 0.000. Moreover, it

shows that, there was a high statistically significant negative correlation between knowledge, and stress during pre, post & follow up among the studied technical nursing students at r= ranged from -0.732 to -0.914 & P= 0.000.

Table (4): revealed Effect size and η2 of emotional intelligence training program on stress management during pre, post & three months follow up among the studied technical nursing students. It calcified that implementing emotional intelligence training program had positive large effect size on stress management (lowering stress level) during pre, post & three months follow up among the studied technical nursing students at η2= 0. 269. As when Eta-square value = 0.01 to < 0.06, the effect is considered weak, when it = 0.06 to < 0.14, the effect is considered medium and when it ≥ 0.14 the effect is large. Therefore, this provides enough evidence to support research hypothesis.

Table (1): Frequency distribution of demographic data among the studied technical nursing students (n=175)

Demographic data		F	%
▪ **Age (in years)**	< 19	24	13.7
	19- < 21	145	82.9
	≥ 21	6	3.4
	$\bar{x} \pm$ SD	19.29±0.77	
▪ **Sex**	Male	14	8.0
	Female	161	92.0
	Male to female ratio	0.1:1	
▪ **Residence**	Rural	149	85.1
	Urban	26	14.9
▪ **N. of family**	≤ 4	18	10.3
	5 ≥ 6	75	42.9
	≥ 7	82	46.9
	$\bar{x} \pm$ SD	6.38±1.7	
▪ **N. of sibling**	≤ 2	87	49.7
	3 ≥ 4	66	37.7
	≥ 5	22	12.6
	$\bar{x} \pm$ SD	3.71±1.6	
▪ **Ranking between sibling**	First	56	32.0
	Second	51	29.1
	Third	31	17.7
	≥ 4	37	21.1
▪ **Degree at joining to institute**	< 75 %	0	0.0
	75% - < 85%	97	55.4
	>85%	78	44.6
▪ **Joining to institute based on**	Desire	58	33.1
	Degree	117	66.9

Table (2): Frequency distribution of knowledge regarding emotional intelligence during pre, post & follow up among the studied technical nursing students (n=175)

Knowledge regarding emotional intelligence	Pre				Post				Follow				F	P Value
	Un-satisfactory		Satisfactory		Un-satisfactory		Satisfactory		Un-satisfactory		Satisfactory			
	F	%	F	%	F	%	F	%	F	%	F	%		
▪ E.I. definition	94	53.7	81	46.3	2	1.1	173	98.9	5	2.9	170	97.1	161	0.000 ***
▪ E.I. importance	111	63.4	64	36.6	5	2.9	170	97.1	8	4.6	167	95.4	204	0.000 ***
▪ Models of E.I.	108	61.7	67	38.3	9	5.1	166	94.9	11	6.3	164	93.7	158	0.000 ***
▪ components of E.I.	121	69.1	54	30.9	12	6.9	163	93.1	14	8.0	161	92.0	188	0.000 ***
▪ Effect of E.I.	114	65.1	61	34.9	14	8.0	161	92.0	16	9.1	159	90.9	145	0.000 ***
▪ E.I. skills	102	58.3	73	41.7	7	4.0	168	96.0	8	4.6	167	95.4	156	0.000 ***
▪ Levels E.I.	104	59.4	71	40.6	9	5.1	166	94.9	11	6.3	164	93.7	143	0.000 ***
Total	**122**	**69.7**	**53**	**30.3**	**12**	**6.9**	**163**	**93.1**	**14**	**8.0**	**161**	**92.0**	**220**	**0.000 *****
$\bar{x} \pm$ SD	**0.88 ± 1.0**		**6.87±0.34**		**2.33±1.8**		**6.99±0.12**		**1.93 ± 2.0**		**6.99±0.11**			
	2.69 ± 1.9				**6.67 ± 1.3**				**6.58 ± 1.5**					

*Significant $p \leq 0.05$ **Highly significant $p \leq 0.01$ F: ANOVA Test

Figure (1): Percentage distribution of emotional intelligence levels during pre, post & follow up among the studied technical nursing students (n=175)
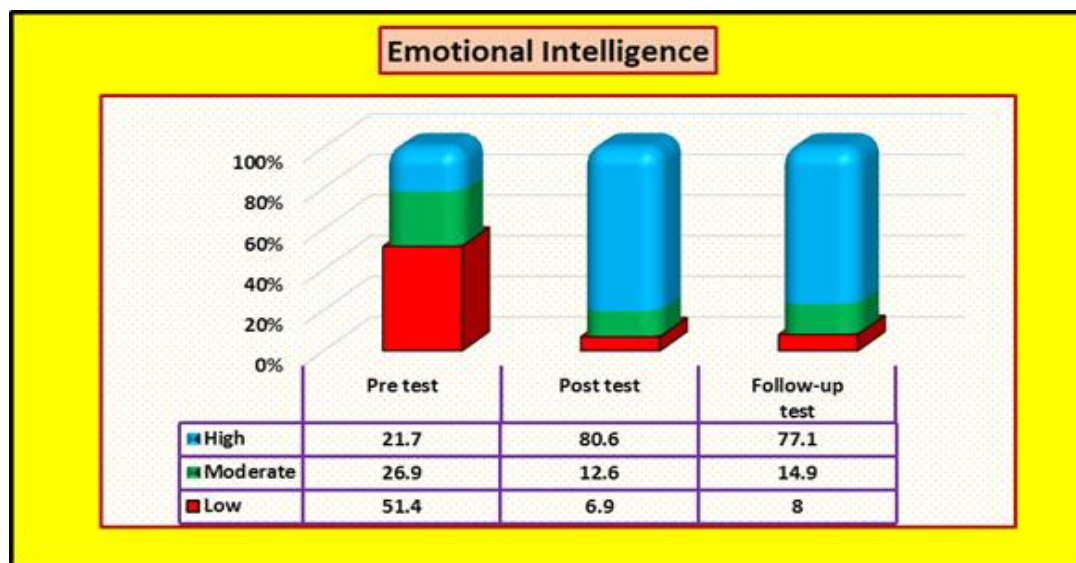

Emotional Intelligence

	Pre test	Post test	Follow-up test
High	21.7	80.6	77.1
Moderate	26.9	12.6	14.9
Low	51.4	6.9	8

Figure (2): Percentage distribution of stress levels during pre, post & follow up among the studied technical nursing students (n=175)

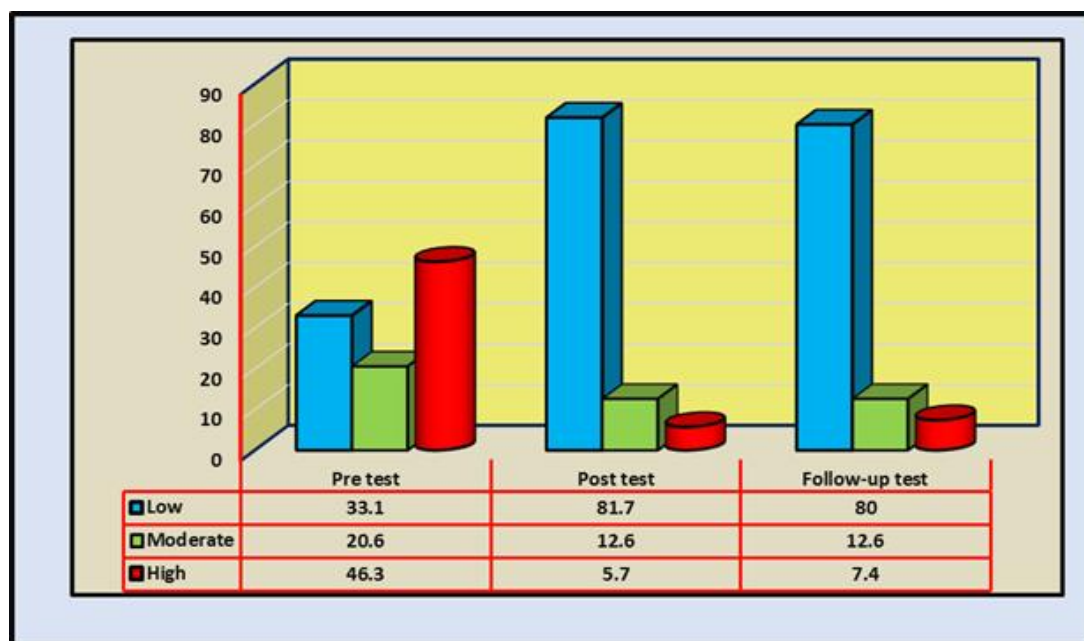|	Pre test	Post test	Follow-up test
Low	33.1	81.7	80
Moderate	20.6	12.6	12.6
High	46.3	5.7	7.4

Table (3): Correlational matrix among emotional intelligence, stress and knowledge regarding emotional intelligence during pre, post & follow up among the studied technical nursing students (n=175)

Variables			Emotional intelligence			Stress			Knowledge		
			Pre	Post-	Follow-up	Pre	Post-	Follow-up	Pre	Post-	Follow-up
Emotional intelligence	Pre-test	R	1			-0.962			0.879		
		P				0.000**			0.000**		
	Post-Test	R					-0.917			0.593	
		P					0.000**			0.000**	
	Follow-up	R						-0.920			0.795
		P						0.000**			0.000**
Stress	Pre-test	R	-0.962			1			-0.914		
		P	0.000**						0.000**		
	Post-Test	R		-0.917						-0.732	
		P		0.000**						0.000**	
	Follow-up	R			-0.920						-0.766
		P			0.000**						0.000**
Knowledge	Pre-test	R	0.879			-0.914			1		
		P	0.000**			0.000**					
	Post-Test	R		0.593			-0.732				
		P		0.000**			0.000**				
	Follow-up	R			0.795			-0.766			
		P			0.000**			0.000**			

Table (4): Effect size and η2 of emotional intelligence training program on stress management during pre, post & three months follow up

Interval	Mean	SD	F Test	P value	H	η2	Effect size
Pre-test	114.90	41.1	95.9	0.000***	0.518	0.269 ***	Large effect
Post-test	71.21	27.2					
Follow up	73.23	29.9					
Total	86.45	38.8					

*Significant p ≤ 0.05   **Highly significant p ≤ 0.01   F: ANOVA Test

* Small effect size = 0.01 to < 0.06   **Medium effect size =0.06 to < 0.14   ***Large effect size ≥ 0.14

Discussion

Students who are unable to manage and conquer their stress may experience negative repercussions, particularly emotionally, such as trouble motivating oneself, dissatisfaction over unfinished chores, a decline in self-efficacy, and other negative effects ***Sudrajat et al., (2022)***. Emotional intelligence can facilitate the mechanism of coping with stress and provide the individual with an effective self-dregulation system for coping with stress. Individuals with well-developed emotional intelligence possess many qualities that enhance their emotional and intellectual growth and decision-making ***(Gratza, 2020).***

So, the current study aimed to investigate the effect of emotional intelligence training program on nursing students' stress management, for achieving this aim one research hypothesis was stated as following:

In relation to demographic data of the studied technical nursing students, the current study revealed that, more than four-fifths of the age of the studied technical nursing students was ranged from 19- < 21 years old, with a mean age of 19.29±0.77. This study finding was in agreement with ***Almansour, (2023)*** who conducted a study entitled "The level of emotional intelligence among Saudi nursing students" who found that more than half of the studied nursing students their age group was ≤ 20 years. On the contrary, this study was in disagreement with ***Ramadan et al., (2020)*** who carried out a study entitled "The effect of emotional intelligence program on nursing students' clinical performance during community health Nursing Practical Training" and mentioned that more than one quarter of the

studied nursing students their age group was 19-21 years with mean age 21.90±6.89 years.

In relation to emotional intelligence during pre, post & follow up among the studied technical nursing students, the present study revealed that, during the post-test phase, majority of studied technical nursing students perceived a satisfactory level of knowledge regarding emotional intelligence, followed by the phase of follow-up test as compared with the phase of pre-test. Moreover, there was a highly statistically significant difference between knowledge means regarding emotional intelligence during pre, post & three months follow up among the studied technical nursing students. From the researcher point of view, this result may be due to most of nursing students were the first time they knowing and hearing about the emotional intelligence and there was a positive effect of the current study intervention on nursing students total knowledge regarding emotional intelligence which prominent in posttest and follow-up.

This finding was supported by ***Ragab et al., (2021)*** who carried out a study entitled "Emotional intelligence training program and its effect on nursing students problem solving skills" and found that there was a statistically significant improvement in nursing students' knowledge regarding emotional intelligence posttest and during follow-up in comparing with pretest and was noticed that majority of the studied nursing students had satisfactory knowledge level regarding emotional intelligence during posttest and follow-up in comparing to pretest which was more than one quarter of them had satisfactory knowledge level. Also, this study was agreed with ***Ramadan et al., (2020)*** who mentioned that

minority of the studied nursing students had satisfactory knowledge pretest which improved posttest to become less than three quarters of them had satisfactory knowledge level regarding emotional intelligence.

Concerning nursing students' knowledge regarding stress during pre, post & follow up among the studied technical nursing students, the current study reported that, during the post-test phase, majority of studied technical nursing students perceived a satisfactory level of knowledge regarding stress, followed by the phase of follow-up test which was most of them as compared with the phase of pre-test which was less than one quarter of them. Moreover, there was a highly statistically significant difference between knowledge means regarding stress during pre, post & three months follow up among the studied technical nursing students. In the researcher point of view, this might be reflects the positive impact of the current emotional intelligence training program in providing nursing students with sufficient knowledge about stress and ways to manage with it and reduce or avoid it.

This result was in accordance with *Üzen Cura et al., (2020)* who carried out a study entitled "Examining knowledge, skill, stress, satisfaction, and self-confidence levels of nursing students in three different simulation modalities" and revealed that after the practices, there was a significant difference between the groups in terms of total stress knowledge in comparing with pretest.

In relation to level of knowledge regarding emotional intelligence and stress during pre, post & follow up among the studied technical nursing students, the current study revealed that, the majority of the studied technical nursing students gained satisfactory level of knowledge regarding emotional intelligence and stress during the post-test phase, followed by the phase of follow-up test which was majority of them as compared with the phase of the pre-test which was less than one quarter of them. There was a highly statistically significant difference between total mean score of knowledge regarding total emotional intelligence and total stress during pre, post & three months follow up among the studied technical nursing students, in the researcher point of view, this could be related to that, the current emotional

intelligence training program was improve nursing students' knowledge regarding emotional intelligence, stress and stress management.

This finding was on the same line with *Gilar-Corbí et al., (2018)* who had assessed EI training intervention among trainee teachers, found that participants of the experimental group accomplish a significant improvement in perceiving and understanding emotional intelligence in university students within the curriculum. Also, this study was supported by *Kurt et al., (2024)* in their recent study entitled "Mindful awareness and perceived stress in nursing students" and reported that more than half of the studied nursing students had good awareness and perception regarding stress.

Concerning correlational matrix between emotional intelligence, stress and knowledge regarding emotional intelligence and stress during pre, post & follow up among the studied technical nursing students, the current study reported that, there was a high statistically significant positive correlation between emotional intelligence, and knowledge regarding emotional intelligence and stress during pre, post & follow up among the studied technical nursing students. Additionally, it describes that, there was a high statistically significant negative correlation between emotional intelligence, and stress during pre, post & follow up among the studied technical nursing students. Moreover, it shows that, there was a high statistically significant negative correlation between knowledge, and stress during pre, post & follow up among the studied technical nursing students. In the researcher point of view, this might be related to that high emotional intelligence leads to higher coping with stressors.

This finding was in agreement with *Ramadan et al., (2020)* who reported that there was strong positive correlation between total nursing students' total knowledge regarding emotional intelligence and total emotional intelligence level. Also, that study was agreed with *Rebello, M. (2019)* who conducted a study entitled "The relationship between emotional intelligence, perceived stress and coping mechanisms in the undergraduate nursing student" and mentioned that there was negative statistically significant correlation between emotional intelligence and perceived stress.

Contrariwise, this result was in disagreement with **Ksiksou et al., (2023)** who found a strong statistically significant correlation between the perceived stress and emotional intelligence. At the same time, the total scores of the two scales were highly correlated. As the total score of the EIS scale increased, the total score of the PSS-CP scale decreased.

Regarding effect size and η2 of emotional intelligence training program on stress management during pre, post & three months follow up among the studied technical nursing students, the present study revealed that, implementing emotional intelligence training program had positive large effect size on stress management (lowering stress level) during pre, post & three months follow up among the studied technical nursing students at η2= 0. 269. As when Eta-square value = 0.01 to < 0.06, the effect is considered weak, when it = 0.06 to < 0.14, the effect is considered medium and when it ≥ 0.14 the effect is large. Therefore, this provides enough evidence to support research hypothesis. This result was similar to **Dugué et al., (2025)** who revealed that a significant increase in stress management, and emotional intelligence and decrease in stress total level among studied students.

Conclusion

In the light of the present findings, the study results lead to the conclusion that, less than one fifth of study subjects had adequate knowledge regarding emotional intelligence before program intervention. In post program phase majority of nursing students had adequate knowledge. Also, more than half of nursing students had high stress level at preprogram phase in all stress dimensions. While in post program phase, their levels were obviously declined. Meanwhile at pre-program phase more than one third of nursing students had stress, while it decreased at post-program and at follow up program phase continued. These confirm that implementing emotional intelligence training program had positive large effect size on stress management (lowering stress level) during pre, post & three months follow up among the studied technical nursing students and provides enough evidence to support research hypothesis.

Recommendations

In the light of the study findings, the following recommendations are suggested

- Incorporation of emotional intelligence as being an important as technical ability and requiring at interview testing for new students.
- Intervention programs are recommended for nurses to enhance their level of emotional intelligence skills to improve their coping ability, and to reduce their level of burnout.
- Training program should be included in nursing curriculum of Nursing educations.
- Nurses should be encouraged to reflectively examine their own level of EI and should be educated on how to express their negative emotion towards others.
- Educational workshops and seminars with hands-on training should be conducted regularly for the nursing students to improve emotional intelligence skills. .

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