



Effect of Emotional Intelligence Training Program on Critical Thinking Skills and Self-Esteem of Nurse Students

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ABSTRACT

Introduction: Emotional intelligence is an important aspect at work and life that can leads people to effectively think and act toward any situations they face which affect their self - esteem.

Aim: This study aims at measuring the effect of emotional intelligence training program on critical thinking skills and self-esteem of nurse students.

Design: A quasi-experimental design was used.

Setting: The study was conducted at Abbassia school of Nursing for girls.

Subject: all third year nurse students. Their total number is sixty.

Tools of data collection: Emotional intelligence knowledge questionnaire, emotional intelligence questionnaire, critical thinking questionnaire and self-esteem scale.

Results: 18.3% of nurse students had satisfactory knowledge regarding total emotional intelligence before the intervention which improved significantly to (96.7%) immediately after the program and decreased in follow up phase to (38.3 %).Also, more than half of nurse students had low emotional intelligence level before the program which increased at the post intervention phases, reaching (51.7%), (66.7%) respectively. In addition, more than one quarter of nurse students had moderate critical thinking skills level (26.7%) at the pre intervention phase. It increased at the post intervention phase, reaching (83.3%) and decreased in follow up phase to reach (66.7%). Minority of nurse students had high level of self-esteem (1.7%). The percentage had increased significantly at the post intervention phase, reaching (63.3%) and decreased in follow up phase to (36.7%).

Conclusion: The improvement of nurse students emotional intelligence enhanced their critical thinking skills and self-esteem.

Recommendations: Creating emotionally friendly teaching environment for nurse students, integrate emotional intelligence courses into the nursing curriculum to increase nurse students development, and enhance education by critical thinking approach.

Keywords: *Critical thinking skills, Emotional intelligence, Nurse Students, Self-esteem*

INTRODUCTION

Emotional intelligence is typically used with the best thinking about feelings and thoughts and by which conflict can sometimes be resolved and integrated. Emotional intelligence is a term that is evolving as a result of this thoughtful combination of emotion and thought. The skills needed to be more resilient and make positive life changes can be acquired through emotional intelligence training (Udeh & Ezeokafor, 2022).

Being emotionally intelligent includes being able to control one's own emotions, comprehend the feelings of others, demonstrate empathy, adjust to changing circumstances, and communicate emotions with others, all of which are critical abilities for nursing profession (Cheshire et al., 2020).

Critical thinking helps nursing students become better equipped to respond appropriately in urgent circumstances. This ability allows them to anticipate their patient's requirements and provide the finest care possible. In order to make informed judgements about how to provide patients with high-quality care while also taking into account the opinions and feelings of patients and their families, nursing students should have the abilities of critical thinking and emotional intelligence. Critical thinking development and emotional intelligence development are ongoing, cumulative processes. Researchers states that critical thinking provides a vital link between intelligence and the emotions, and seeks to determine the quality of emotional intelligence (Ragab et al., 2021).

Nurse students who will work as first-line healthcare providers must be emotionally intelligent, critical thinkers, innovative, and self-directed in order to make sound decisions and handle clinical problems. Because nurses are expected to protect and promote people's well-being and improve their quality of life, nursing students must be aware of their own feelings and thoughts before assisting patients. This necessitates nursing students acquiring emotional intelligence skills that will prepare them for skilled nursing practise and assist them in their practical environment (Kou et al., 2022).

Significance of the study

Saleh, (2021) Recommended that conduct workshops about emotional intelligence and self-awareness to nursing students. Nurse students with high emotional intelligence can manage their feelings, emotions, make goal-oriented decisions and become cooperative and effective members on a health team (Imani et al., 2019).

The researcher - as nurse teacher at the study setting observed that nurse students fear from socialization with other, their refusal from participating in programs and social activities, taking no account of the circumstances of others and difficulty or inability to express their feeling & emotions which affect their engagement in different activities and society .So that the nurse students need to understand and comprehend the importance of emotional intelligence for their life and work. And it is reflection their critical thinking skills and self-esteem.

Aim of the study

This study aims at measuring the effect of emotional intelligence training program on critical thinking skills and self-esteem of nurse students

Research hypothesis

Improving nurse students emotional intelligence will enhancing their critical thinking skills and self-esteem.

SUBJECTS AND METHODS

The study setting

The study was conducted at Abbassia School of nursing for girls affiliated to general secretariat for mental health, Ministry of Health. It's located in El-Orouba, Nasr City, Cairo Governorate, in Egypt. Nursing school are a five-year system, consisting of three years of study at school first, second & third year the study in Arabic language which included basic nursing & medical departments , while (fourth & fifth year) in English language at Health Technical Institute in Ambaba (Nursing Department) which included fundamental of nursing, medical surgical& critical nursing, child health nursing, maternal

and newborn health nursing, community health nursing, mental health nursing and nursing administration . Then the student should spend obligatory six months as an internship.

Subject of the study

Convenient sample included all third year nurse students at Abbassia School of nursing for girls during the period of data collection in year (2020/2021). Total number of nurse students is sixty.

Tools of data collection

Four tools were used for data collection, namely

Emotional Intelligence Knowledge questionnaire, Emotional Intelligence Questionnaire, and critical thinking skills Questionnaire, and self-esteem scale.

These tools were used three times throughout the study intervention phases

First Tool: Emotional Intelligence knowledge questionnaire

It consisted of two parts as follows:

Part I: It aimed at collecting data regarding personal data of study subjects including: age, residence, family number, ranking between family, preparatory score, hobbies, types of hobbies, and reason to join school

Part II: This part was developed by the researcher based on review of related literature (Shipley et al., 2010, Goleman, 2011, Cookfair, 2012, Badrosadat, 2013, Shutte, & Thorsteinsson, 2013, Andrei, 2016, Jordan, 2016). It consists of 20 questions in the form of multiple choice questions (MCQ) (8 items), true / false (7 items) and matching (5 items). The questionnaire covered areas as definition, importance, models, Characteristics of emotional intelligence person, dimensions of emotional intelligence, and strategies to improve emotional intelligence.

Scoring system

For each question, a score "1" was given for a correct answer and "zero" for incorrect one. For each area of knowledge the scores of the items

were summed- up and the total divided by the number of the items, giving a mean score for the part. This score were converted into percent scores. Subjects knowledge was considered satisfactory if the percent score was 60% or more and unsatisfactory if the score was less than 60%.

Second Tool: Emotional Intelligence questionnaire

This tool was adopted from Eldidi (2005) based on Salama (1986) & Bar-On (1997). It aimed to measure emotional intelligence level among nurse students. It consisted of 75 items grouped under five dimensions as follow: self- awareness, managing emotions, motivating one self, empathy, and handling relationship. Each dimension consisted of 15 items.

Scoring system

Responses of subjects were measured by 5 point Likert scale as follows: 1=Never,2= Rarely,3= Sometimes,4= Often, and 5= Always. For each dimension, the scores of the items were summed-up and the total score was divided by the number of the items for giving a mean score for the part. The scores were converted into percent score. High emotional intelligence level if the score above 75% and moderate level if the subject had total score ranged from 60 to 75%, and low level if the subjects had total score less than 60% (Eldidi, 2005).

Third tool: Critical thinking questionnaire

This tool aimed to measure critical thinking skills of nurse students. It was adopted from Ragab (2018) based on Mohammed et al., (2004). It consisted of 76 items grouped into twelve sub scales as follow: Tendency to evaluate external subjects, Correct use of language in listening writing and reading, Tendency to discern matters, Tendency to discuss matters objectively, Caring about judgment of certain Phenomena, Tendency to reach conclusion correctly, Caring about observation of matters and subjects , Openness and flexibility in dealing with matters , Identify relations from subjects , Tendency to avoid rumors in judgments ,Adaptation to new situations and providing in innovative solutions.

Scoring system

Responses of subjects were measured by 5 point Likert scale as follows: 1= Strongly Disagree, 2= Disagree, 3= Slightly agree, 4= Agree, and 5= Strongly Agree. For each dimension, the scores of the items were summed- up and the total score was divided by the number of the items for giving a mean score for the part. The scores were converted into percent score. The subjects were considered had high Critical thinking skills if the total percent score was above 75% and moderate level if the study subject total score ranged from 60 to 75% and low if the score less than 60% (Ragab, 2018).

Fourth tool: Self-esteem scale

It was adopted from Eid (2002). It aimed to measure self –esteem level of nurse students. It consists of 22 items.

Scoring system

Responses of subjects were measured by 4 point Likert scale as follows: 1= Not applicable at all, 2 =Apply to a little, 3= Applies to fairly, 4= Apply a lot. For each dimension, the scores of the items were summed- up and the total score was divided by the number of the items giving a mean score. The scores were converted into percentage score. The subjects were considered high self-

esteem levels if the total percent score was above 75% and moderate level if the study subject total score ranged from 60 to 75% and low if the score less than 60% (Eid, 2002).

II-Operational Design

The operational design for this study involves three phases namely: preparatory phase, pilot study and fieldwork phase.

Preparatory phase

This phase started at the beginning of April to August, 2020. It extended for eight months, before constructing the program. During this phase the researcher reviewed the current and past, national and international related literature concerning the subjects of the study, using text books, articles, periodical journals and websites. This review was helpful in developing the data collection tool, and the preparation of the training program subjects (Separated booklet).

Tools reliability

The reliability test was done to ensure the consistency, determine how strongly the attributes were related to each other and to the composite score. The reliability test as described in the following table:

TABLE : Reliability statistics of data collection tools:

Tools	No. of Items	Cronbach's Alpha
Emotional intelligence knowledge questionnaire	19	0.872
Emotional intelligence	75	0,71
Critical thinking skills	76	0,769
Self-esteem	22	0,93

A-Pilot study

A pilot study was carried out in the middle of October 2020, it aimed to examine the applicability and clarity of language, testing the feasibility and suitability of the designated tools, estimating the amount of time required to complete the questionnaires, and identifying potential challenges and issues that may arise

during the period of data collection. Six randomly selected nursing students, who made up 10% of the study's participants, received tools. These six nursing students were a part of the study's primary sample. Analysis was done with the data from the pilot research, but no changes were made. Each nurse student took 20 to 30 minutes to complete the questionnaires.

C. Field work

Data collection of the study was started from November, 2020 and was completed by August, 2021. It involved four phases: assessment, planning, implementation, and evaluation.

Phase I (assessment)

During the first semester of the school year 2020–2021, the study's actual fieldwork got underway. This phase took place in November 2020 for one month. This stage involved getting official approval from the study setting's director to carry out the study and collect the data after the researcher had explained its purpose. Subsequently, based on the instructions provided verbally by the researcher, the knowledge questionnaire was distributed to the study subjects in their classes to evaluate their knowledge. Every participant completed the questionnaire and immediately returned it to the researcher. Three times during the course of the study—before the program began, after it had begun, and three months later—this instrument was made available. The researcher then made three weekly visits to the study site between the hours of 11:00 and 2:00, giving the subjects of the study the tools and instructing them to complete them. Each nurse student took 20 to 30 minutes to complete the questionnaires. The researcher collected five to eight sheets each day and verified their completeness. The identical approach was used both immediately following the program and three months later (follows up).

Phase II (Program Planning)

This stage was completed in a month in December 2020. Following the completion of data collection during the assessment phase, analysis was carried out to determine the emotional intelligence demands of nursing students. 30 hours were allotted for finishing the program. The researcher created an emotional intelligence program for nursing students based on information gleaned from the analysis of assessment phase data and a review of relevant literature. Together with establishing the program's overall goal and formulating its plan and content, a broad objective was developed. Along with the study setting director,

instructional strategies were chosen, and a location for program sessions was set up. The program could be completed in 30 hours, 18 of which were theoretical and 12 practical.

Phase III (Program implementation)

This phase took Two and a half months (1st January to 4th February) and (20th February to 31st March) divided the study subjects to three groups (A,B,C) three days weekly , one sessions were offered for each group , three hours for each session. The training sessions were scheduled from 11:00 A. M to 2:00 P. M. the program was implemented in the classroom at abbassia school of nursing for girls.

In the first session the researcher explained, training program aim, objectives, plan, content and method of training program evaluation. At the beginning of each session an orientation to the new session and its aims took place. Feedback & brief summary was done at the end of each session regarding the contents presented, methods of instruction used, and level of understanding. The researcher initiated the active participation of the participants. When the program was being implemented, many teaching techniques were used. . Among these techniques were lectures, small-group discussions, role-plays, small-group exercises, and assignments, as well as examples from real-world and professional contexts.

Audio visual media was used such as data show, white board, flipcharts and videos. The researcher distributed handout of the program content sessions to be used as a memorial reference and brochure represents as a summary of all program sessions given to all participants.

Phase IV (Evaluation phase)

This phase took one month at April ,2021, implementing the program, post-test was done for all study subjects, using the same data collection tools used at assessment phase.

For follow-up, the same process was repeated three months after the post-program evaluation, using the same data collection tools. It was in the August, 2021. Coordination was done between the researcher and director of the study setting to

be enabled to collect data after following all precaution measures due to the circumstances of the spread of the Corona virus pandemic. In the learning stage, students are divided into small teaching groups, taking all precautionary measures, disinfecting the stands and classrooms daily, sterilizing and disinfecting laboratories before each laboratory or practical sessions, in addition to emphasizing the wearing of protective masks for students, members and workers. Researcher phone number was written on each questionnaire and done group on WhatsApp to facilitate clarifying any queries and identify. In each day about 2-3 sheets were collected.

Ethical consideration

Prior the study conduction, the study protocol was approved by the scientific research ethical committee of the Faculty of Nursing, Ain – Shams University. Then gaining the acceptance of administrative authorities of ethical of scientific research in general secretariat of mental health to conduct the study. In addition, oral approval was obtained from each participant. The researcher met nurse students and explain the aim of the study and its objectives and sought their approval to participate and cooperate in the study throughout training program phases. Nurse students were reassured that any obtaining information would be confidential, and used only for the purpose of research also, they were informed about their right to withdrawal from the study at any time without giving any reason.

III- Administrative design

Letters containing the aim of the study were issued from the dean of the Faculty of Nursing, Ain Shams University, to the ethical committee

of scientific research in general secretariat of mental health. Official permissions for data collection and implementation of the program were obtained. The researcher met director for ethical committee of scientific research in general secretariat of mental health for explaining the aim of the study and tools to be used for data collection throughout the training program phases and obtain their approval and seek their support during the study.

IV- Statistical design

The statistical software package SPSS 24.0 was used for data entry and statistical analysis. For qualitative and quantitative factors, respectively, the data were presented as frequencies and percentages and means and standard deviations. When it was impossible to assume that the data would have a normal distribution, the non-parametric Wilcoxon and spearman correlation test was applied. The chi-square test was used to compare qualitative variables. Instead, the Fisher exact test was performed when the anticipated values in one or more cells of a 2x2 table were fewer than 5. When the expected value in two or more cells was less than five in cross-tables greater than 2x2, the Mont Carlo test was used. A dependent variable was predicted from numerous independent factors using a multi linear regression model. The independent variables, also known as predictor variables, are typically not subject to experimental control, and any variances found in them must be acknowledged as such. Finding out which of these predictor variables may meaningfully predict the dependent variable is the main goal of multiple regression analyses.

RESULTS

TABLE 1: Personal data of study subjects (n= 60).

Personal data	N	%
Age		
<17	25	41.7
≥17	35	58.3
Residence		
Rural	8	13.3

Urban	52	86.7
Family number		
< 3	12	20.0
3-5	42	70.0
> 5	6	10.0
Ranking between family		
Big	29	48.3
Middle	22	36.7
Young	9	15.0
Preparatory Score		
<75%	21	35.0
75%-85%	19	31.7
>85%	20	33.3
Hobbies		
Yes	34	56.7
No	26	43.3
Types of hobbies (n=34)		
Drawing	17	50
Physical exercise	4	11.8
Reading	13	38.2
Reason to Join school		
Grades	8	13.3
Desire	29	48.3
Both	23	38.4

Table (1) shows that, more than half (58.3%) of nurse students had age more than 17 year, majority (86.7%) of them residence in urban area, respectively. More than, two third (70%) of them had family member ranged from 3-5, more than half (51.7%) of them had the young among their

family. Also, as regards preparatory score more than one third (35%) of them had <75 %, more than half (56.7) of them had hobbies and half (50%) of them had drawing as a favorite hobby. Meanwhile (48.3%) of nurse students choose to joint school by their desire.

TABLE 2: Total emotional intelligence knowledge percent scores of nurse students throughout training program phases (n= 60).

Total Knowledge	Pre		Post		Follow up		Pre / post Test		Pre / follow up Test	
	N	%	N	%	N	%	χ^2 (1)	P value	χ^2 (2)	P value
Unsatisfactory	49	81.7	2	3.3	37	61.7	75.328	0.000**	5.910	.015*
Satisfactory	11	18.3	58	96.7	23	38.3				

(*) Statistically significant at $p < 0.05$

(**) Highly statistically significant at $p < 0.01$

χ^2 (1): Difference between preprogram and post program

χ^2 (2): Difference between preprogram and follow up

Table (2): Illustrates that (18.3%) of nurse students had satisfactory knowledge regarding total emotional intelligence before the intervention, which improved significantly reach

to (96.7%) at the post –intervention phase. Mean while (38.3%) of nurse students had satisfactory knowledge regarding emotional intelligence at the follow up phase.

TABLE 3: Nurse Students total Emotional Intelligence Levels throughout Training Program Phases (n= 60).

Total Emotional Intelligence levels	Pre		Post		Follow		Pre / post Test		Pre / follow up Test	
	N	%	N	%	N	%	χ^2 (1)	P value	χ^2 (2)	P value
Low	58	96.7	31	51.7	40	66.7	31.707	0.000**	18.033	0.000**
High	2	3.3	29	48.3	20	33.3				

(**) Highly statistically significant at $p < 0.01$

χ^2 (1): Difference between preprogram and post program

χ^2 (2): Difference between preprogram and follow up

Table (3) reveals that more than half of nurse students had low level of emotional intelligence (96.7 %). The percentage of nurse students who having high level increased at the post intervention phase, reaching to (51.7 %), and to decrease throughout the follow up phase reach (66.7 %). Also, there were highly statistically significant improvements in studied nurse students about emotional intelligence throughout intervention phases regarding all emotional intelligence in the follow up phase as compared to the pre intervention phase.

TABLE 4: Total critical thinking skills levels of nurse students throughout training program phases (n= 60).

Total critical thinking skills Levels	Pre		Post		Follow		Pre- post Test		Pre-follow Test	
	N	%	N	%	N	%	χ^2 (1)	P value	χ^2 (2)	P value
Low	44	73.3	0	0	0	0	71.515	0.000**	74.286	0.000**
Moderate	16	26.7	50	83.3	40	66.7				
High	0	0	10	16.7	20	33.3				

(**) Highly statistically significant at $p < 0.01$

χ^2 (1): Difference between preprogram and post program

χ^2 (2): Difference between preprogram and follow up

Table (4) reveals that more than one quarter (26.7%) of nurse students had moderate critical thinking level before training program which increased at the post intervention phase, reaching 83.3%. Meanwhile it was decreased in follow up phase to reach 66.7%. Also, there was highly statistically significant improvement in studied students' nurses' level about critical thinking skills throughout intervention phases.

TABLE 5:Total self-esteem levels of nurse students throughout training program phases (n= 60).

Total self - esteem Levels	Pre		Post		Follow		Pre / post Test		Pre / Follow-up Test	
	N	%	N	%	N	%	χ^2 (1)	P value	χ^2 (2)	P value
Low	57	95.0	18	30.0	31	51.7	MC	0.000**	MC	0.000**
Moderate	2	3.3	4	6.7	7	11.7				
High	1	1.7	38	63.3	22	36.7				

(**) Highly statistically significant at $p < 0.01$

MC: Monte Carlo

χ^2 (1): Difference between preprogram and post program

χ^2 (2): Difference between preprogram and follow up

Table (5) reveals that minority of nurse students (63.3%) and decreased in follow up phase reach had high self-esteem level (1.7%) before (36.7%). Also, there were highly statistically significant improvements in studied nurse students self-esteem level throughout program increased at the post intervention phase, reaching phases.

TABLE 6: Correlation between emotional intelligence knowledge and emotional intelligence, critical thinking skills and self-esteem throughout training program phases

Items	Spearman correlation	Emotional intelligence	critical thinking skills	Self-esteem
Pre				
Knowledge	R	.446	.216	-.009
	P value	0.000**	.097	.948
Post				
Knowledge	R	.057	.037	-.042
	P value	.664	.780	.751
Follow up				
Knowledge	R	.040	.029	.033
	P value	.763	.828	.804

(**) Highly statistically significant at $p < 0.01$

Tables (6) show that there was highly statistically significant correlation between emotional intelligence knowledge and score among nurse students before implementation the program.

TABLE 7: Multiple Linear Regression analysis for predictors of emotional intelligence

Multiple regression model	Unstandardized Coefficients		Standardized Coefficients	F	R square	t	Sig.	
	B	Std. Error	Beta					
(Constant)	301.193	34.288		4.19 Sig.= 0.0001*	0.14	8.78	0.0001*	
Age	-2.187	7.232	-0.032			-	0.302	0.763
Family number	-1.78	8.731	-0.024			-	0.204	0.839
Rank in family	-0.86	3.597	-0.026			-	0.239	0.811
Preparatory Score	2.107	4.372	0.052				0.482	0.631
Knowledge	2.084	0.406	0.449				5.13	0.0001*
Critical thinking	0.235	0.063	0.32				3.75	0.0001*
Self esteem	0.181	0.238	0.056				0.76	0.449

(*) Statistically significant at $p < 0.05$

Table (7) Illustrates that there was highly statistically positive effect of emotional intelligence training program on nurse students critical thinking skills and self esteem

DISCUSSION

There have been positive outcomes for nursing students with high emotional intelligence. Improvements in academic performance, nursing leadership, clinical effectiveness, and patient safety have all been linked to higher EI. It has also been linked to better personal wellbeing and stress management. Assertiveness, independence, self-confidence, self-compassion, self-esteem, and the capacity to build healthy human interactions are all skills that are taught to nursing students in the current curriculum. Decision-making and crisis management are made easier with the help of EI. Through directing goal-achievement, EI can raise self-esteem and increase life satisfaction (Hussien et al., 2020).

The present study aimed at measuring the effect of emotional intelligence training program on critical thinking skills and self-esteem of nurse students through: assessing nurse students' knowledge regarding emotional intelligence before and after the program, assessing nurse students emotional intelligence level before and after the program, measuring nurse students' critical thinking skills before and after the program, assessing nurse students self-esteem level before and after the program, and evaluating the effect of emotional intelligence training program on critical thinking skills and self-esteem of nurse students.

The current study found that only a small percentage of student nurses had satisfactory knowledge of total emotional intelligence before the intervention in terms of emotional intelligence scores. It improved at the post – intervention phase, and less than half of them at the follow up phase. Statistics showed that these improvements were statistically significant.

The majority of nursing students may have learned about emotional intelligence for the first time, according to the researcher's perspective. This result is consistent with a study by Ahmed et al. (2022) titled "Effect of Emotional Intelligence Training Program on Burnout Among Psychiatric Mental Health Nurses," which found that the majority of the nurses under investigation had high levels of emotional intelligence at post implementation of the

program and declined to four fifth at follow up the program compared to pre-program.

Statistics showed that these improvements were significant. Moreover, this finding supported with Khrais, & Saleh, (2022) entitled " Does concept mapping improve students' emotional intelligence?" and reported that Emotional intelligence was improved significantly in nursing students who were exposed to the program than nursing students in the control group at $P < .001$.

In terms of total Emotional Intelligence levels, the current study showed that more than half of nurse students had low level of emotional intelligence at pre intervention phase. The percentage of nurse students who having high level increased at the post intervention phase and to decrease throughout the follow up phase Also, there was highly a statistically significant improvement in studied students' nurses' level about emotional intelligence throughout intervention phases regarding all emotional intelligence.

According to the researcher, this outcome may demonstrate the program's beneficial effects on raising the emotional intelligence of nursing students. This result is in line with Poonamallee et al., (2018) who conducted study about " Improving emotional intelligence through personality development: The effect of the smart phone application based Dharma Life Program on emotional intelligence" and reported that more than three quarters of the studied students had high score of EI after the training program, while before the program about half of them had high score of EI.

The current study provided evidence of the total critical thinking skills of nursing students, showing that more than a quarter of student nurses had a moderate level of critical thinking, with the majority of them having a moderate level at the post intervention phase, while this number decreased throughout the follow-up phase to reach two thirds of them. Also, there was highly a statistically significant improvement in studied students' nurses' level about critical thinking throughout intervention phases regarding critical thinking.

According to the researchers point of view, the outcome may be attributable to the new information that was provided to intern-nurse students in addition to the activities, which led to the acquisition of more knowledge about critical thinking that enhanced and retained knowledge of them immediately, and post program implementation, which was higher than follow up, as not all information is stored in the long term memory as a biological fact.

This outcome is in line with the findings obtained by Towfik et al. (2022), "Effect of Self-Learning Package about Critical Thinking on Intern-Nurses' Knowledge, Disposition and Skills," which found a highly statistically significant improvement in the study group intern-nurses' critical thinking disposition dimensions related to systematicity in the post-test and follow-up phases, respectively ($P=0.000$ & $P=0.002$). On the other hand, this result conflicts with Kanbay et al.(2017) .'s study, "Critical thinking skill and academic accomplishment development in nursing students," " and revealed that the majority of the studied nursing students had majority of critical thinking without intervention.

Related to total self-esteem, the present study displayed that minority of student nurses had high level of self-esteem. The percentage of student nurses having high level increased at the post intervention phase and decreased throughout the follow up phase. Also, there was highly a statistically significant improvement in studied students' nurses' level about self-esteem throughout intervention phases regarding self-esteem. From the researcher point of view this result may be due to impacts your decision-making process, your relationships, your emotional health, and your overall well-being. It also influences motivation, as people with a healthy, positive view of themselves understand their potential and may feel inspired to take on new challenges.

This finding is consistent with Mohamed (2019) study, "Relationship between Emotional Intelligence and Self-esteem among Nursing Students," which showed that the majority of the studied students had low self-esteem and that only 1.5% of them had a high level. It also suggested training to boost self-esteem.

The present study illustrated that there were statistically significant correlation between emotional intelligence knowledge and score among nurse student before implementation the program. According to the researcher, this outcome may be attributable to the significance of building emotional intelligence, which is a beneficial adjunct to enhancing academic and clinical performance and lowering the risk of emotional distress for nurse students during their clinical rotations. Medical workers' stress and burnout can be reduced in a number of ways by having high emotional intelligence, which is something that nursing students need to be aware of. Better relationships between patients and doctors result from improved communication.

According to Kilic et al (2017), "Emotional Intelligence Levels of Nursing Students and Affecting Factors" and illustrated that there was statistically significant correlation between emotional intelligence knowledge and score among nurse student. Additionally, this outcome was supported by Gaballah et al. (2021), who conducted research on "Nursing Students' Emotional Intelligence and Their Self-Determination in Faculty of Nursing at Port Said University" and showed a positive statistically significant relationship between nursing students' overall self-determination and their emotional intelligence dimension at $p 0.05$.

The results of the current study demonstrated a highly statistically significant positive effect of an emotional intelligence training program on the critical thinking skills and self-esteem of nursing students. This outcome could be attributed to the fact that emotional intelligence supports students' personality development and, as a result, encourages them to think critically, make decisions, and behave professionally. They are also able to successfully apply sound judgement and reasoning to situations and circumstances while forming an emotional response to specific situations.

The current study showed that critical thinking is a predictors of emotional intelligence among nursing students Follow up intervention, this outcome matched with study by Kaya et al., (2018) who conducted study about "The relationship between critical thinking and

emotional intelligence in nursing students" and displayed that critical thinking is a predictors of emotional intelligence among nursing students. also, this result supported with Abou Hashish, & Bajbeir, (2018) entitled " Emotional intelligence among Saudi nursing students and its relationship to their critical thinking disposition at college of nursing-Jeddah, Saudi Arabia" and showed that Emotional intelligence was significantly correlated to critical thinking disposition ($r = 0.594$, $p < 0.001$) and can predict it where the regression model is significant ($F= 52.404$, $p < 0.001$).

Furthermore, according to the findings of a study by Hasanpour et al. (2018), who investigated "The relationship between emotional intelligence and critical thinking skills in Iranian nursing students" and found that there was no significant correlation between the total score of critical thinking skills and each of its components and the total score of emotional intelligence.

CONCLUSION

In the light of the study findings, it concluded that, nurse students had unsatisfactory emotional intelligence knowledge before implementing the training program while after the program implementation majority of nurse students had satisfactory emotional intelligence knowledge level. Furthermore, there were highly statistically significant differences between mean scores of nurse students total emotional intelligence throughout training program phases. Also, there were highly statistical significant differences between mean scores of nurse students in relation to total critical thinking skills throughout training program phases. The research finding concluded that there was highly statistically positive effect of emotional intelligence training program on nurse students critical thinking skills and self - esteem. These findings support the research hypnosis which stated improving nurse students emotional intelligence will enhancing their critical thinking skills and self-esteem.

RECOMMENDATIONS

In the light of the results of the study findings, it is recommended that

For management

Create a positive nurses student emotional intelligence atmosphere at classroom through empathy, healthy, social dialogue, confidence and recognition.

Open mutual communication between nurse teachers and nurse students. To facilitate expression of feeling and discuss the possible stressful situations that might happen.

Enhance nursing teachers and nursing students relationship which had positive impact in students socialization and self-esteem

For education

Nursing curricula should take into consideration the need for promoting emotional intelligence and critical thinking skills in nursing education.

Educational workshops and seminars should be conducted regularly for the nursing students on how to develop and improve emotional intelligence skills.

Emotional intelligence courses should be held in curriculum of nursing students.

For research

Effect of emotional intelligence program on nurse students academic achievement.

Effect of emotional intelligence training Program on nursing Students Clinical Performance.

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