

The Effect of Emotional Intelligence Educational Program on Head Nurses' Leadership Practice by Nursing Staff

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Abstract

Background: Effective leaders with high emotional intelligence could help the people they lead to raise their own level of emotional intelligence, potentially resulting in more effective organizational climate. **The study aimed to** assess the effect of emotional intelligence educational program for head nurses on their leadership practice as reported by nursing staff. **Research design:** A quasi- experimental design was utilized to conduct this study. **Setting:** This study was conducted at Benha University Hospital in all inpatient units (57). **Sample:** Consisted of two groups, (57) head nurses and all available subordinate nurses at the time of the study (150). **Tools of data collection:** Three tools were used in the present study for data collection: Emotional intelligence knowledge questionnaire, Emotional intelligence questionnaire level and Leadership practice inventory. **Results:** Head nurses' emotional intelligence level enhanced after implementation of emotional intelligence educational program as reported by themselves and by their staff, with no statistically significant differences between them throughout program phases. Head nurses' leadership practice enhanced after implementation of emotional intelligence educational program as reported by themselves and by their staff with no statistically significant differences between them throughout program phases. **Conclusion:** There was a highly positive statistically significant correlation between head nurses' emotional intelligence knowledge, emotional intelligence level, and level of leadership practice throughout the educational program phases. This finding supported the hypotheses of the study. **Recommendations:** Promotion program for head nurses have to include emotional intelligence, also this study needs to be replicated with a diverse range sample from health sector across private and public sectors.

Keywords: Emotional Intelligence (EI), head nurses, nursing staff, Leadership practice.

Introduction

Emotional Intelligence (EI) is the ability, skill and awareness to know, recognize and understand feelings, moods and emotions, and used them in a positive way. EI is learning how to manage feelings and emotions, and use that information to behave and act, including making decisions, solving problems, self-management and leading others (Moore et al., 2018).

Emotional intelligence is defined as the awareness of an individual of his emotions

and other's emotions and the ability to recognize and control them to promote emotional and intellectual growth (Cejudo et al., 2018).

The importance and role of emotional intelligence in the long-term are good interpersonal relationships within organizations, which increase creativity, solving problems and help to influence the overall profitability and success of an organization (Baesu, 2018). Effective leaders used their emotions to convey their messages.

When leaders feel excited, enthusiastic and active, they may be more likely to energize their subordinates and convey a sense of efficacy, competence, optimism, and enjoyment. Therefore, successful leaders must be emotionally intelligent (**Bevis, 2019**).

Managers with low emotional intelligence could create only an atmosphere of fear and anxiety in the organization which leads to short-term and ephemeral productivity. Meanwhile, managers with high self-awareness and self-management could create a trustful and fairly environment and almost free of conflict and damaging competition with accurate perception of emotions control and management as well (**Bikmoradi et al, 2018**).

There are five components or dimensions of emotional intelligence at work classified to self-awareness, self-regulation (or management), self-motivation which described as personal competencies related to knowing and managing emotions in one's self. The remaining two dimensions, empathy (Social awareness), and social skills (Relationship management) which described social competencies related to knowing and managing emotions in others (**Matheri et al., 2018**).

Leadership is intrinsically an emotional process, whereby leaders recognize followers' emotional states, attempt to evoke emotions in followers, and then seek to manage followers' emotional states accordingly. Leaders increase group solidarity and morale by creating shared emotional experiences. Also, the ability of leaders to influence the emotional climate can strongly influence performance (**Nedjm, 2019**).

Leadership practice is defined as a product of leader knowledge, skills, and interactions between people and their situations. These interactions of any particular action are critical in understanding leadership

practice. There are five distinct practices of leadership namely; Challenging the process, inspiring a shared vision, modeling the way, enable others to act, and encouraging the heart (**Wicker, 2020**).

Emotional intelligence facilitates the dimensions of leadership practice by impacting the elements of leadership effectiveness, developing a collective sense of goals and deciding a way to achieve them, inculcating the importance of knowledge and emphasizing on the need to exhibit appropriate work-related behavior in the followers, spawning a sense of excitement, enthusiasm, confidence and optimism in organization, facilitating the environment for cooperation and collaboration and inspiring flexibility in the decision-making process (**Miao, 2018**).

Staff nurses that believe that their leaders are unconcerned to their staffing needs, do not value the advancement of their workers and do not invest enough in staff training, their overall performance will be affected poorly (**Healy 2017**). Nurse leaders with high intellectual who have more ability to make strong effects on workers in their organization, provide regular training and access to information needed to accomplish their tasks, increase their job satisfaction, perception of trust and respect, improve overall performance and increase staff nurses' commitment (**Aljarameez, 2019**).

Significance of study:

The continuous globalization has created a competitive environment which demands head nurses having responsibility to be good effective leader through managing their emotional intelligence to perform their work accurately and in a timely manner. The importance of emotions in organizational settings is pervasive. Both employers and managers need to learn to understand their emotions and others' feelings, emotional

intelligence is a predictor of success. Head nurses with higher EI have a greater potential to be successful in their leader role. Emotional intelligence can be developed and trained overtime and its skill has effect on head nurses behavior which ultimately affects his/her leadership practice. Furthermore, **Naeim, (2014)** and **Mohamed et al., (2016)** in Egypt assessed the effect of emotional intelligence on leadership and found a positive correlation between emotional intelligence and leadership. Therefore, head nurses need to understand how to manage their emotions. So this study will be conduct assess the effect of emotional intelligence educational program for head nurses on their leadership practice as reported by nursing staff

Aim of the Study:

This study aimed to assess the effect of emotional intelligence educational program for head nurses on their leadership practice as reported by nursing staff.

Research Hypothesis:

1- There will be improvement in the head nurses' emotional intelligence knowledge and emotional intelligence level throughout the program.

2- There will be improvement in the head nurses' leadership practice level throughout the program.

Subjects and Methods

Research design: A quasi-experimental study design with pre-test, immediate post-test and follow up (after 3 months) assessments was carried out in the study.

Setting:

The study was conducted at Benha University Hospital in all inpatient units (57).

Subjects:

The Subjects of the study consisted of two groups, (57) head nurses and all available subordinate nurses at the time of the study (150).

Tools of data collection:

Three tools were used in the present study for data collection. It consisted of two parts:

First tool: Emotional intelligence knowledge. It consisted of two parts:

Part 1: personal characteristics: This part was concerned with the personal characteristics of the study subjects, (such as age, gender, educational level, years of experience, and attending training related to emotional intelligence.

Part 2:

Emotional intelligence knowledge questionnaire: This tool aimed at assessing head nurses' knowledge level regarding emotional intelligence through the educational program. It was developed by the researcher through relevant review of literature (**Alabdulbaqi et al., 2019; Mohamed et al., 2016 and Hussien, 2019**).

This tool comprised (33) closed ended questions that covered the emotional intelligence it was included the concept, important, factors, advantage, component, models, level, skills of emotional intelligence, positive outcome of the high emotional intelligence, negative outcome of low emotional intelligence, define each component (dimension) of emotional intelligence and its skills. Out of them 13 questions multiple choice questions, 10 questions match questions and answers, while the response of last 10 questions was true and false.

Scoring system: Each question was granted two points for the correct answer, and one for

the wrong one. The total score for all questions was 66. Total scores were expressed as percentages. If the score was 60% or more it was considered satisfactory and unsatisfactory if less than 60%. (Hussien, 2019)

Second tool: Emotional intelligence questionnaire level: This tool was developed by (Goleman, 1998, and modified by Hussien, 2019). It was aimed at assessing head nurses and their staff nurse emotional intelligence level. The total number was (50) items. It consisted of five dimensions which was self-awareness (10 items), Self arrangement (10 items), self -motivation (10 items), empathy (10 items) and social skills (10 items).

Scoring system: The responses were measure on (5) point Likert scale ranging from (strongly disagree (1) to strongly agree (5). The scores of items were summed-up and the total divided by number of the items. The calculation of the mean and standard deviation was done. These scores were converted into a percent score. In addition, Emotional intelligence was considered unsatisfactory if the total percent score was less than 60% and satisfactory if the total score was 60% or more (Mohamed et al., 2016).

Third tool: Leadership Practice inventory: This tool adopted by (Kouzes and Posner, 1988 and modified by Naiem 2014). It was aimed at assessing head nurses' practice regarding leadership by head nurses and their staff. It consisted of (30) items grouped into five dimensions: Challenging the process (6 items), inspiring a shared vision (6 items), enabling others to act (6 items), modeling the way (6 items), and encouraging the heart (6 items).

Scoring system: The responses were measure on 5-point Likert scale: (1) "Rarely;" (2) "Once in a while;" (3) "Sometimes;" (4)

"Fairly often;" and (5) = "Very frequently". The scores of items were summed-up and the total divided by number of the items. The calculation of the mean and standard deviation was done. These scores were converted into a percent score. In addition, Leadership Practice was considered unsatisfactory if the total percent score was less than 60% and satisfactory if the total score was 60% or more (Naiem 2014).

Validity of study tools: Two types of validity tests were used in this stage, face validity and content validity. Face validity was aimed at determine the extent to which the tools represent all facets of Emotional intelligence knowledge, emotional intelligence questionnaire, and leadership practice inventory. Content validity was conducted to determine whether the three tools cover the appropriate and necessary contents.

It was done by jury group, who consists of five experts; one of them was a professor of Nursing Administration at Faculty of Nursing, Ain Shams University, two Assistant Professor of Nursing Administration, at Faculty of Nursing, Ain Shams University, and two Assistant Professor of Psychiatric Nursing at Ain Shams University. They were asked to express their opinions regarding the proposed tools. Based on their recommendation corrections, addition and or omission of some items were done.

Pilot study:

A pilot study was performed on 10% of the study sample (six head nurses and fifteen staff nurses) these six head nurse and fifteen staff nurses were included in the main study sample. Data obtained from the pilot study was analyzed; there was no modifications done.

Fieldwork:

The actual field work of the study lasted for ten months from August 2019 to July

2020. The study was conducted through the following phases:

Phase I (baseline): This phase started from August 2019 to September 2019. The data was collected to assess head nurses' knowledge, and level regarding emotional intelligence, and to assess head nurses' leadership practice before implementation of the educational program through using the different tools of data collection. The time needed by head nurses to complete each sheet ranged from 40-45 minutes.

Moreover, the emotional intelligence level questionnaire and leadership practice inventory distributed to the staff nurse to assess head nurses' emotional intelligence level and leadership practice level by their staff nurses. The time needed by staff nurses to complete each sheet ranged from 40-45 minutes. (30-35). The different tools were distributed to nursing staff as (pretest) before starting the program at the morning by the researcher then post immediately and 3 month after the program.

Phase II (program planning): This phase started from October 2019 to November 2019. The educational program was developed based on review of the current and past literature, using textbooks, articles, magazines, internet search, in addition based on the needs and demands of head nurses according to the results of the baseline assessment of knowledge in the pretest. Different instructional strategies as group discussion, brain storming, and role play were selected to suit the participant's needs, and to achieve the objectives and contents of the educational training program. Within the available resources, the training program was developed by the researcher.

Phase III (program implementation): The program was implemented to the head nurses working in the study setting. Head nurses

were divided into four groups each group contains 14 head nurses except only one group contains 15 head nurses. Each group had one session/week and each session was conducted through 2 hours, from 11 am to 1pm. The total numbers of sessions were 12 sessions for every group, allowed for achieving the educational program. This phase took three months from December 2019 till February 2020.

Phase IV (post program evaluation): The researcher evaluated the effect of the emotional intelligence educational program on the head nurses' leadership practice among head nurses and as reported by their staff nurses. At the end of the last session, a post-test was done immediately after educational program implementation for all head nurse. Also, the emotional intelligence questionnaire level and leadership practice inventory distributed to the staff nurse to assess head nurses' emotional intelligence level and head nurses' leadership practice level immediately after educational program implementation for head nurses.

Phase V (follow-up): During the period from July to Augustus (2020) the follow up of impact the educational program was evaluated by using the same data collection tools. Note; the follow up program phase has been suspended for one month due to the COVID-19 pandemic.

Ethical consideration:

The agreement for participation of the nursing staff were taken after aims of the study have been explained to them, they were given an opportunity to refuse to participate, and they were assured that the information collected would be treated confidentially and used for the research purpose only.

Statistical analysis:

Data entry was done using SPSS V20 computer software package. Qualitative

variables were compared using chi-square test. T-test was used for comparisons between two-independent quantitative variables. Paired t-test was used to compare between two means in the same studied group pre and post, follow up phase. Pearson correlation coefficient (r) was used for assessment of the inter-relationship among quantitative variables. Multiple linear regression analysis was used. The confidence level chosen for the study was 95%. Statistical significance was considered at p value <0.05.

Results

Table (1): Shows that, slightly more than half (54.4%) of head nurses were working in Medical unit and their age ranged between 30-45 years old. All (100%) of head nurses were female. More than three quarter (78.9%) of the study subjects were married. Meanwhile, slightly less than half (47.4%) of the study subjects had Bachelor of Nursing. In relation to their experience, more than half (56.1%) of them had 10- < 20 years of experience in nursing field, and about half (50.9%) of had 5-10 years of experience as head nurses, and More than three quarter (79.0%) of theme didn't attend training programs related to emotional intelligence and leadership practice.

Table (2): Shows that, slightly more than half (56.0%) of staff nurses were working in Medical unit and slightly more than one third (38.0%) of them their age ranged between 26-35 years old. Moreover, majority (87.3%) of them were female. In relation to marital status the majority (85.4%) of the study subjects were married. Meanwhile, slightly less than half (46.0%) of them had Diploma of Nursing, and more than half (52.0%) of them had 5- < 10 years of experience in nursing field.

Table (3): Displays that, there was highly statistically significant difference between head nurses' satisfactory levels of

total emotional intelligence knowledge throughout the program phases.

Figure (1): Clears that, approximately one third (33.3%) of head nurses had satisfactory level of total emotional intelligence knowledge before implementing the educational program. As observed the total satisfactory emotional intelligence knowledge increased markedly (84.2%, 80.7%) respectively throughout post and follow up program phases.

Table (4): Indicates that, there was statistically significant difference of head nurses' self-awareness, and empathy dimensions mean scores between head nurses and staff nurses at program phase. Also, at post program phase there was a statistically significant difference of head nurses' empathy, and social skills dimensions mean scores between both groups. Furthermore, at follow up program phase there was a statistically significant difference of head nurses' self-motivation dimensions mean scores between both groups.

Figure (2): Shows that, slightly less than one third (31.6%) of head nurses had satisfactory level in total emotional intelligence, and as reported by staff nurses the head nurses' total emotional intelligence satisfactory level was (28.7%) at preprogram phase. Also the head nurses' total emotional intelligence level was improved markedly throughout post and follow up program phases as reported by head nurses and by their staff nurses.

Table (5): Portrays that, there was highly statistically significant difference of head nurses' total leadership practice and all leadership practice dimensions except inspiring a shared vision dimension between head nurses and as reported by their staff nurses at preprogram phase. Also, at post program phase there was a highly statistically significant difference of head nurses'

challenging the process dimension, and head nurses' inspiring a shared vision dimensions between both groups. Furthermore, at follow up program phase there was a statistically significant difference of head nurses' enabling other to act dimension between both groups.

Figure (3): Displays that, slightly more than one third (35.1%) of head nurses had satisfactory level in head nurses' total leadership practice compared to (24.9%) as reported by their staff. As observed the head nurses' total leadership practice level was improved throughout post and follow up program phases as reported by head nurses and by their staff nurses.

Table (6): Reveals that, there was highly positive statistical significance correlation between head nurses' total emotional intelligence score and head nurses' total emotional intelligence knowledge score among head nurses throughout program phases. Moreover, there was highly positive statistical significance correlation between head nurses' total emotional intelligence score and head nurses' total leadership practice score among head nurses throughout program phases. Meanwhile, there was positive statistical significance correlation between head nurses' total emotional intelligence score and head nurses' total leadership practice score as reported by their staff nurses throughout program phases.

Table (7): Shows that, head nurses total emotional intelligence score was a positive dependent predictor for the score of total leadership practice immediate post training program. As indicated by the value of R; they explain 46% of the variation of leadership practice score.

Table (1): Personal characteristics of the head nurses (57)

Items	Head Nurses (57)	
	No	Percent
Department		
Medical	31	54.4
surgical	26	45.6
Age (in Years)		
< 30	21	36.8
30-45	31	54.4
<45	5	8.8
Mean ± SD	35.65± 6.78	
Sex		
Male	0	00.0
Female	57	100.0
Marital status		
single	5	8.8
Married	45	78.9
Widow	3	5.3
Divorced	4	7.0
Nursing qualification		
Diploma of Nursing.	14	24.6
Technical Nursing Institute.	11	19.3
Bachelor of Nursing	27	47.4
Master degree	5	8.8
Nursing experience		
< 5 years	5	8.8
5- < 10years	15	26.3
10- < 20years	32	56.1
> 20 years	5	8.8
Mean ± SD	12.64± 5.15	
Experience as head nurse		
< 5 years	14	24.6
5- 10years	29	50.9
> 10 years	14	24.6
Mean ± SD	8.68± 3.84	
Training programs related emotional intelligence and leadership		
No	55	79.0
Yes	12	21.0

Table (2): Personal characteristics of the staff nurses (150)

Items	Subordinate staff nurses (150)	
	Frequency	Percent
Department	84	56.0
Medical	66	44.0
surgical		
Age (in Years)	41	27.3
< 26	57	38.0
26-35	52	34.7
<35		
Mean ± SD	30.55±4.89	
Sex	19	12.7
Male	131	87.3
female		
Marital status	14	9.3
single	128	85.4
Married	5	3.3
Widow	3	2.0
Divorced		
Nursing qualification	69	46.0
Diploma of Nursing.	37	24.7
Technical Nursing Institute.	44	29.3
Bachelor of Nursing	0	0.0
Master degree		
Nursing experience	24	16.0
< 5 years	78	52.0
5- < 10years	30	20.0
10- < 20years	18	12.0
> 20 years		
Mean ± SD	9.51± ±3.15	

Table (3): Head nurses total emotional intelligence knowledge throughout educational program phases (n= 57).

<i>Satisfactory knowledge 60%+</i>	Program phases						<i>Pre& Post(X2 P-value)</i>	<i>pre& follow up (X2 P-value)</i>
	Pre		Post		Follow up			
	<i>NO</i>	<i>Percent</i>	<i>NO</i>	<i>Percent</i>	<i>NO</i>	<i>Percent</i>		
Total knowledge regarding emotional intelligence	19	33.3	48	84.2	46	80.7	30.45	26.09
							> 0.000**	> 0.000**

(*) Statistically significant at $p < 0.05$

(**) High Significant at $P < 0.01$



Figure (1): Distribution of head nurses total knowledge regarding emotional intelligence throughout educational program phases (n= 57)

Table (4): Score of head nurses total emotional intelligence as reported by head nurse and by their staff nurses throughout program phase

Emotional intelligence dimensions	Head nurses n=57			Subordinate staff nurses (150)			T(1)	T(2)	T(3)
	Pre	Post	Follow up	Pre	Post	Follow up			
	Mean± SD	Mean± SD	Mean± SD	Mean± SD	Mean± SD	Mean± SD			
Self-awareness	30.28±7.99	38.11±6.19	35.86±6.45	28.36±5.71	36.39±6.57	34.60±6.69	2.10	1.30	1.22
							< 0.05*	>0.05	>0.05
Self-regulation	29.87±6.41	37.65±5.86	35.29±7.09	28.30±5.70	35.98±6.25	34.74±7.28	1.65	1.75	0.496
							>0.05	>0.05	>0.05
Self-Motivation	32.02±6.35	39.47±6.35	36.61±6.28	30.29±6.24	37.78±7.16	34.67±5.61	1.74	1.57	2.15
							>0.05	>0.05	< 0.05*
Empathy	31.95±5.48	40.56±6.37	36.21±5.81	30.31±4.57	38.57±6.63	36.00±5.79	2.01	2.01	0.226
							< 0.05*	< 0.05*	>0.05
Social skills	32.40±6.55	41.50±5.44	38.49±8.19	30.72±7.15	39.56±6.26	37.75±7.59	1.72	2.07	0.617
							>0.05	< 0.05*	>0.05
Total emotional intelligence	151.98±18.65	193.40±28.13	182.18±27.93	147.91±17.15	189.03±29.04	176.91±23.47	1.79	1.65	1.37
							>0.05	>0.05	>0.05

(*) Statistically significant at p<0.05

(**) High Significant at P < 0.01

1: Difference between head nurses & subordinate staff nurses pre educational program

T2: Difference between head nurses & subordinate staff nurses post- educational program.

T3: Difference between head nurses & subordinate staff nurses follow up- educational program

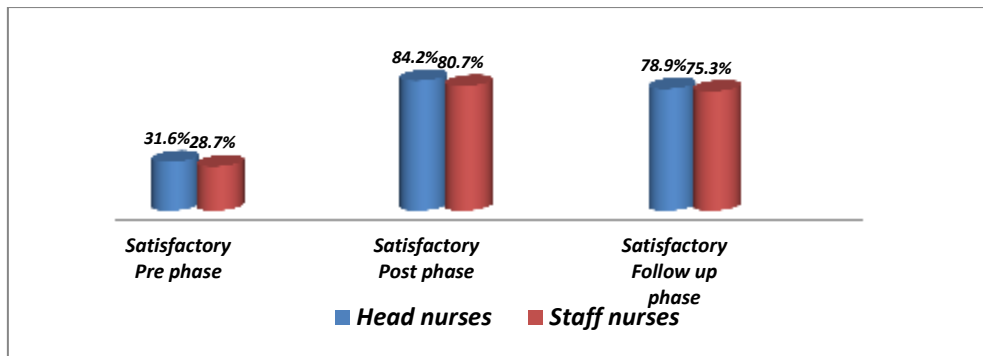


Figure (2): Distribution of head nurses' total emotional intelligence level as reported by head nurse and by their staff nurses throughout program phase

Table (5): Score of head nurses total leadership practice as reported by head nurse and by their staff nurses throughout program phase

Leadership practice dimensions	Nursing staff						T(1)	T(2)	T(3)
	Head nurses n=57			Subordinate staff nurses (150)					
	Pre	Post	Follow up	Pre	Post	Follow up			
	Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD	Mean±SD			
Challenging the process	16.37±3.67	25.91±5.02	23.68±4.91	15.16±3.18	24.25±5.55	23.33±5.46	2.37 < 0.01* *	2.05 < 0.05*	0.432 >0.05
Inspiring a shared vision	15.51±3.23	25.40±4.99	22.93±4.82	14.90±2.79	23.70±5.53	22.33±5.17	1.33 >0.05	2.07 < 0.05*	0.764 >0.05
Enabling other to act	16.29±3.66	25.56±4.05	23.78±4.74	14.93±2.66	24.56±5.19	22.41±4.67	2.88 < 0.00* *	1.30 >0.05	1.98 < 0.05*
Modeling the way	16.26±3.66	23.11±4.98	21.88±4.48	15.15±2.83	22.55±5.18	21.68±4.81	2.27 < 0.01* *	0.692 >0.05	0.269 >0.05
Encourages the Heart	16.16±3.65	24.16±4.01	22.37±3.48	14.97±2.69	24.10±5.02	21.85±4.17	2.55 < 0.00* *	0.078 >0.05	0.829 >0.05
Total leadership practice	80.59±16.79	121.46±21.10	111.49±18.53	75.11±13.58	119.17±25.45	110.96±22.01	2.49 < 0.01* *	0.603 >0.05	0.162 >0.05

T1: Difference between head nurses & subordinate staff nurses pre educational program

T2: Difference between head nurses & subordinate staff nurses post- educational program.

T3: Difference between head nurses & subordinate staff nurses follow up- training strategy.

(*) Statistically significant at p<0.05

(**) High Significant at P < 0.01

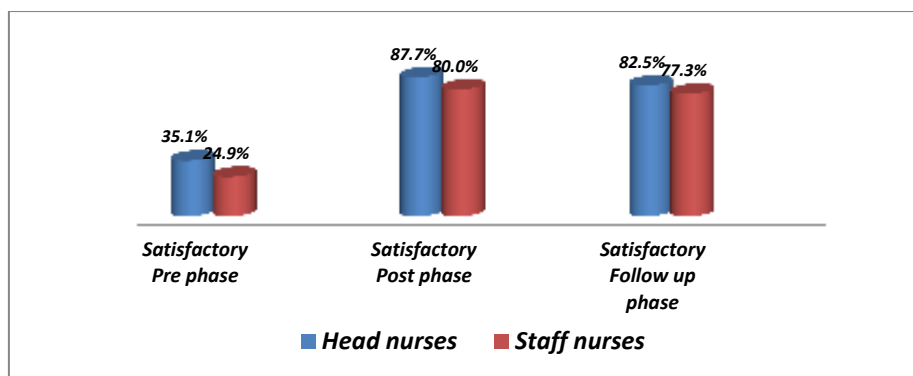


Figure (3): Distribution of head nurses' total leadership practice level by head nurses and their staff nurses through educational program.

Table (6): Correlations between head nurses' total emotional intelligence knowledge score, total leadership practice score and total emotional intelligence score among nursing staff.

Parameter	Head nurses' total emotional intelligence score					
	Pre		Post		Follow up	
	r	P-value	r	P-value	r	P-value
Head nurses' total emotional intelligence knowledge score among head nurses	0.32 3	<0.00* *	0.41 9	<0.00**	0.39 2	<0.00* *
Head nurses' total leadership practice score among head nurses	0.33 2	<0.00* *	0.53 6	<0.00**	0.51 8	<0.00* *
Head nurses' total leadership practice score as reported by their staff nurses	0.22 1	<0.05* 	0.28 7	<0.05*	0.23 4	<0.05*

(*) Statistically significant at $p < 0.05$

(**) High Significant at $P < 0.01$

Table (7): Best fitting multiple linear regression model for the score of head nurses' total emotional intelligence immediate post program among head nurses.

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
(Constant)	171.572	32.171		5.333	.000
Age	.730	.963	.175	.758	.452
Qualification	1.485	4.007	.050	.371	.712
Experience as a head nurse	.339	1.435	.054	.236	.814
Total emotional intelligence score	1.422	.490	.239	2.509	.035

R= 0.46

Model ANOVA: $F = 3.849, < 0.01^{**}$

a. Predictors: Age, qualification, Experience as head nurse, total emotional intelligence score.

b. Dependent Variable: Total leadership practice score.

Discussion

Emotional intelligence provides an important assistance to efficient leadership and it has become one of essential leaders' competencies (**Lin et al., 2016**). This study aimed at assesses the effect of emotional intelligence educational program for head nurses on their leadership practice as reported by nursing staff.

The finding of the present study revealed that, approximately one third of head nurses had satisfactory level of total emotional intelligence knowledge before implementing the educational program. This result may be due to despite the importance of EI training, majority of the study subjects had never attended previous training programs, this may be because lack of concern from responsible authorities in Banha University Hospitals.

In the same line with the study finding a study conducted at Ain Shams University hospital by **Hussien, (2019)** who asserted that, minority of first-line nurse managers in both intervention, and control group respectively had satisfactory level of total emotional intelligence knowledge before implementing the training strategy

Meanwhile, the head nurses' total emotional intelligence knowledge increased markedly throughout post and follow up program phases. In agreements with the study finding **Mohamed et al., (2016); Zaki et al., (2018)** who reported that, less than one fifth of nursing leaders had satisfactory total emotional intelligence knowledge before implementing the training program.

Moreover, there was a highly statistically significant difference between head nurses' total emotional intelligence knowledge throughout post and follow up program phases. This finding may be due to proper emotional intelligence training could improve emotional intelligence knowledge.

This finding goes in the same line with **Slaski and Cartwright, (2013); Hussien, (2019)** who reported that, the majority of study sample acquired knowledge related to emotional intelligence knowledge immediate after and follow up program implementation.

According to the study finding, head nurses' total emotional intelligence score was low among head nurses also as reported by their staff nurses before implementing the program with no statistically significant difference in this phase. This could be due to low awareness of head nurses about emotional intelligence skills and absence of training courses and activities that help them to improve emotional intelligence skills. The finding of the present study agree with **Abd El-Mageed, (2017)** who asserted that, minority of study participant had high level of emotional intelligence dimensions at preprogram phase.

Moreover, the head nurses' emotional intelligence score increased markedly among head nurses and as reported by their staff nurses immediate after implementation the program and at follow up phase. This finding emphasized that, emotional intelligence can be developed and trained overtime and its skills allow head nurses develop effective relationships. This finding agreed with by **Naiem, (2014); Hussien, (2019); (2016); ZakI et al., (2018); Dolev and Leshem, (2016)** who mentioned that, there was improvement in head nurses' total emotional intelligence score among experimental group than control group at post, and follow up training program.

The finding of the present study clarified that, head nurses' total leadership practice score was the lowest one before implementing the program as reported by head nurse and by their staff nurses. In addition, there was a highly statistically significant difference between them at this

phase. This may be due to head nurses who hold bachelor in nursing were in higher level of self-leadership, this might be because bachelor curriculum emphasizes on leadership education and practice. In agreements **Alabdulbaqi et al., (2019); Mostafa, (2019); Wheeler and Beaman, (2018)** who concluded that, head nurses who hold bachelor in nursing were in higher level of self-leadership practice.

Furthermore, the head nurses' total leadership practice score increased markedly as reported by head nurse and by their staff nurses immediate after implementing the program and at follow up phase., with no statistically significant differences between them at these phases. This finding may be due to the educational program have a positive impact on head nurses leadership practice and performance. In the same line with the study finding **Rehman et al., (2015); Aitken, (2015)** who concluded that, training programs have a positive impact on leaders. In contrary with the study finding **Rose, (2016)** who mentioned that, the lack of self-reported ratings among charge nurses' after program attendance.

The present study showed that, there was highly positive statistical significance correlation between head nurses' emotional intelligence score and head nurses' emotional intelligence knowledge score among head nurses throughout program phases. This finding may be due to the proper emotional intelligence training could improve emotional intelligence knowledge, and increasing the personal and social competencies knowledge that produced the highest correlation.

In consistence with the study finding **Hussien, (2019); Mohamed et al., (2016)** who stated that, there was a statistically significant correlation between emotional

intelligence knowledge score and emotional intelligence score among first-line nurse managers in intervention group throughout training strategy phases.

Moreover, there was highly positive statistical significance correlation between head nurses' emotional intelligence score and head nurses' leadership practice score among head nurses throughout educational program phases. This finding may be due to people with high emotional intelligence have the capacity to work effectively in teams, manage stress, and lead others effectively. In agreements **Nabih et al., (2016); Zak et al., (2018)** who found that, emotional intelligence has a strong positive and significant relationship with leadership effectiveness.

Also, there was positive statistical significance correlation between head nurses' emotional intelligence score and head nurses' leadership practice score as reported by staff nurses throughout educational program phases. This finding may be due to implementation of emotions intelligent training program for leader in healthcare organization play a vital role in supporting their leader to be effective leader. In the same line with the study finding **Bano, (2013)** who reported that, implementation of emotional intelligent program in any organization help their leader to be effective and efficient.

The results of present study revealed that, there was a positive effect of implementation of emotional intelligence educational program for head nurses in improving their emotional intelligence level and leadership practice level. This finding supported the hypotheses of the study, which was head nurses' emotional intelligence level will be improved after the implementation of head nurses' emotional intelligence educational program, also their leadership practice level will be improved after the

implementation of head nurses' emotional intelligence educational program. Similarly, a study conducted at Pakistan by **Saddiqui et al., (2018)** revealed similar results, which clarified that, emotional intelligence independently and collectively had impact on the managerial and leadership effectiveness.

The present study findings showed that, head nurses total emotional intelligence score was positive dependent predictor for the score of total leadership practice immediate post training program. As indicated by the value of R; they explain 46% of the variation of leadership practice score. This may be because EI skills can be learned and can be seen as an ability-based skill that allow the training in specific competencies which lead to learning emotional intelligence skills, and improve total leadership practice. In this respect **Nabih et al., (2016)** who found that, emotional intelligence is an indicator of leadership effectiveness.

Conclusion

There was a positive effect of emotional intelligence educational program for head nurses in improving leadership practice level among head nurses and as reported by their staff nurses after implementing the head nurses' emotional intelligence educational program. These confirm the research hypothesis.

Recommendations

Training of head nurses and staff nurses about EI and social competencies especially empathy dimension through continuous training program. Promotion program for head nurses and for staff nurses have to include emotional intelligence. Education sessions focused on the importance of EI as well as resources and methods for developing higher levels of EI. Hospital should provide continuous emotional intelligence training program to nursing staff to enhance their

skills. The training department and the human resource department at Banha University Hospital should think about the different training methods to enhance emotional intelligence levels whereby they can improve leadership qualities. Management support: through provide resource, and in-services training programs regarding emotional intelligence and leadership practice for head nurses and staff nurses. Further studies are suggested with a bigger sample of senior and supervisory levels, to investigate the question as whether EI could be linked to leadership practice in a broader range at different leadership levels. Conducting a comprehensive studies that compares between nurses and head nurses emotional intelligence level.

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تأثير برنامج تعليمي عن الذكاء الوجداني على الممارسات القيادية لرئيسات التمريض لدى الممرضين

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في السنوات الأخيرة ، اكتسب بناء الذكاء العاطفي والقيادة الكثير من الاهتمام باعتباره السمة الكامنة للقيادة الفعالة. تعرف القيادة انها فن توجيه وتحفيز وإلهام مجموعة أو منظمة نحو تحقيق الأهداف المشتركة. وتعرف بأنها المعالجة والتأثير وتحقيق الأهداف، ومن ثم، فإن القيادة هي كيفية تأثير الفرد في مجموعة من الآخرين من أجل تحقيق شيء مفيد لهم. وفي السياق المؤسسي، فإن القيادة هي ما يقوم به القائد في تطويع سلوك الموظفين لتحقيق أهداف المؤسسة. أجريت هذه الدراسة في مستشفى جامعة بنها. جميع رؤساء التمريض التي يعملن في كل الوحدات الداخلية لمستشفى جامعة بنها وعددهم (٥٧) رئيسة تمريض. جميع الممرضين الذين يعملون تحت رأسهم في هذه الوحدات أثناء وقت الدراسة والموافقين على المشاركة وعددهم (١٥٠) ممرض. ، كان هناك تأثير إيجابي للذكاء الوجداني في تحسين الممارسات القيادية لرؤساء التمريض، وهذا يؤكد فرضية البحث. كما اوصت الدراسة تدريب لرؤساء التمريض على الذكاء الوجداني والمهارات الاجتماعية وخاصة بعد التعاطف من خلال برنامج التدريب المستمر، ويجب على الإدارة وصناع القرار تطوير برامج لتعزيز الذكاء الوجداني بين طاقم التمريض.