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Impact of Soft Skills Training Program on First Line Nurse Managers' Performance and Self-Efficacy: A Quasi-Experimental Study

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Impact of Soft Skills Training Program on First Line Nurse Managers' Performance and Self-Efficacy: A Quasi-Experimental Study

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Abstract

Background: Soft skills for first line nurse mangers are the most important demands and requirements for their role to enable them to make their daily basis, to deal with the majority of health-care personnel. Soft skills for first line nurse mangers include the skills and characteristics that help them succeed in their roles such as communication, teamwork, and leadership. So, using those skills will reflect on performance of first line nurse mangers and their self-efficacy.

Aim: To study the impact of soft skills training program on first line nurse managers' performance and self-efficacy.

Methods: A quasi-experimental pretest-posttest design and utilizing a convenience sample of 70 staff nurses at Fakous Central Hospital. Five tools of data collection were used namely, Soft Skills Knowledge Questionnaire, The First Line Nurse Managers' Soft Skills Questionnaire, First Line Nurse Managers Soft Skills Observation Sheet, First Line Nurse Managers Performance Observation Form and General Self-Efficacy Scale.

Results: Finding of the present study revealed a significant difference of first line nurse mangers' knowledge, perception and practice regarding soft skills as indicated by significant improvement in the mean scores of first line nurse mangers' knowledge, perception and practice regarding soft skills($p< 0.001$) that confirmed that there were highly positive statistically significant correlations among studied first line nurse mangers' total knowledge, perception ,practice regarding soft skills and their performance and self -efficacy.

Conclusion: It was concluded that there was significant positive correlation was found between FLNMs' total knowledge scores about soft skills and their total scores for perception, practice, performance, and self-efficacy across all phases of the training program.

Recommendation: Applying soft skills as curriculum for the fourth year to prepare the students in the professional work in the future, further research needs to apply another soft skills such as problem solving and emotional intelligence.

Introduction

First-line nurse managers (FLNMs) are essential to healthcare organizations. Their roles are complex, and vital. Because, FLNMs primarily ensure safe, high-quality care, acting as a crucial link between upper management and nurses. Additionally, FLNMs play a vital role in achieving organizational goals. Their presence on the healthcare team is increasingly important, as they balance administrative duties with direct and indirect patient care throughout their workday. Close contact with staff nurses necessitates high competency and strong interpersonal skills. Therefore, effective nurse management requires a blend of hard skills and crucial soft skills [1].

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Even though (FLNMs) must develop soft skills daily, because they primarily interact with most health care staff. Soft skills of (FLNMs) encompass the traits and abilities that enable them thrive in their positions, which including communications, collaboration, and leadership. Therefore, employing those skills will impact the performance of (FLNMs) and their confidence in themselves. Consequently, it is essential for (FLNMs) to utilize soft skills to achieve the effectiveness of their performance so, (FLNMs) must demonstrate professional abilities both technical and interpersonal skills. Soft skills are competencies that everyone including head nurses, ought to possess **[2].**

Soft skills describe how people behave, communicate, and interact positively. These skills are crucial for success in personal, professional, and social settings. Hard skills, conversely, are abilities stemming from knowledge, practice, and attitude competence and excellence developed through training and experience in a specific field. Thus, soft and hard skills complement each other; soft skills enhance and support hard skills in the workplace **[3].**

Moreover, soft skills encompass behaviors and personal traits enabling effective interaction, successful performance, goal attainment, and supportive teamwork. These skills aid (FLNMs) in monitoring of patient care, mentor other nurses, and meet professional demands, adapting to various settings for optimal quality. Situational factors, emotions, or external pressures can influence soft skill application. Proactive skill development in response to these triggers ensures clear, objective team actions. Effective soft skills foster a strong healthcare team and optimal patient care **[4].**

An equally compatible leadership standard in teamwork is essential in today's rapidly changing healthcare environment, which increases the requirement for competent nurse leaders to deliver qualified care results. Soft skills include interpersonal or social skills as well as, the capacity to acquire and use competences in a variety of contexts. Soft skills include interpersonal abilities including empathy, communication, honesty, integrity, and a sense of humor. Some research on nursing occupations have proven the importance of soft skills in nursing practice, stating that critical thinking for decision making and the quality of patient care are significant soft-skill traits. Additionally, communication, teamwork, interpersonal relationship, organization communication, teamwork, initiative and leadership skills are soft skills for first line nurse managers **[5].**

The effectiveness of the first line managers is crucial as it greatly influences the performance of the nurses. Consequently, first-line managers must serve as role models; should they neglect to inspire their nursing staff, it can greatly affect nurses' job performance, causing them to wish to depart from the unit or to work with diminished quality, reduced productivity, dissatisfaction, and other negative attitudes towards their work and organization, including a drop in commitment levels. The nurse unit manager holds particular responsibilities towards both the organization and the staff. The staff, in return, have obligations to the organization and to their supervisor. The novice nurse will aid in enhancing the unit’s efficiency by understanding the manager’s responsibilities. So, the nurse unit manager's responsibility is to enhance the performance of nurses within their professional service framework **[6].**

The position of (FLNMs) involves planning, organizing, leading, and managing, which can be categorized into patient, unit, and staff administration **[7].** So, job performance is divided into behaviors associated with the technical core (task performance) and behaviors that support the social environment where the technical core operates (contextual performance). Task performance refers to how effectively an individual carries out their job duties, whether by directly converting raw materials into products or services, or indirectly by offering the organization support services like planning, coordinating, or supervising tasks. Contextual activities like collaboration, dedication, and adherence to organizational policies benefit the organization by fostering an environment where task activities take place. When first-line nurse managers enhance their performance, it results in an improvement in their self-efficacy **[8].**

Self-efficacy influences the selection of goals to pursue, the methods for achieving those goals, and its impact on our work performance. Self-efficacy is described as an individual's confidence in his or her capacity to execute specific actions that result in a desired outcome. Self-efficacy influences an individual's motivation, learning ability, and career advancement. Self-efficacy is an individual, situational, and context-specific matter that involves certain behaviors and executing various skills required to become a professional head nurse. A head nurse with strong self-efficacy will have greater confidence in their role and will achieve remarkable success. Consequently, introducing a training program focused on soft skills for frontline nurse managers is essential for enhancing their performance and self-efficacy **[9].**

When nurse managers at the frontline have cultivated soft skills, it resulted in enhanced job performance. Individual performance pertains to a set of personal activities and actions that help fulfill organizational goals. So, the effectiveness of the head nurse in executing their duties and obligations

can be assessed through their performance. The effectiveness of the head nurse greatly influences the performance of the nurses. Each day, they interact with most health-care staff. The achievements of healthcare institutions largely rely on the efforts of head nurses, who must have a specific skill set. Recognizing these competencies is essential. One such skill is self-efficacy, which can boost an individual's confidence to engage in nursing during difficult situations **[10].**

The significance of these soft skills and the contribution of management institutions in cultivating them for future managers is crucial, as a manager's responsibilities are closely linked to the 'softer' aspects of an individual and are vitally important in the leadership growth of any organization. Managerial soft skills have taken on significant importance since business organizations began employing professional managers. First-line managers (FLMs) must cultivate essential skills as they adjust to their position. Researchers have recognized different areas of competency that can fundamentally be categorized into technical, conceptual, and interpersonal skills **[11].**

Research Hypothesis

H1. The first line nurse managers' knowledge about soft skills improves after implementing training program.

H2. The first line nurse managers' soft skills performance improves after implementing training program.

H3. The first line nurse managers' performance improves after implementing training program.

H4. The first line nurse managers' self-efficacy improves after implementing training program.

Methods

Study design:

The study used a quasi-experimental pretest-posttest approach with a single group.

Clinical Trail Number: not applicable.

Participants and setting:

A convenience sample was utilized which includes all available first line nurse managers(n=70) who are responsible for managing nursing units and who fulfills the criteria of having a minimum of one-year experience work and available at time of data collection. A pilot study was carried out on 7 first line nurse mangers (10%) of the study sample; they were selected randomly and excluded from the study to test the clarity, feasibility of the questions and to determine the time needed to fill-in questions. The study was conducted in all departments at Fakous Central Hospital, and provides a wide spectrum of health services in Fakous. Fakous Central Hospital occupied with (238) beds.

Outcomes and instruments:

Tool I: Soft Skills Knowledge Questionnaire:

This tool designed by the researcher for this study and aimed to assess first line nurse mangers' pre-post knowledge about soft skills. It was comprised of two parts during different phases of the program.

The first part: was used to identify personal characteristics of the study first line nurse mangers such as, age, gender, marital status, educational qualifications, years of experience, and attending training program about soft skills. The questions was scored as 1=true and zero=false answer. One point was given for each correct answer.

The second part: was designed by the researcher based on relevant literature reviews to assess first line nurse mangers' pre-post knowledge about soft skills. It consists of (30) questions in the form of multiple choices (17) question and true and false (13) question that related to soft skills.

Scoring system:

The scoring system based on statistically cut-off point 60% by convert into percent score to;

low level (<60% of scores), Average level (60-<75% of scores)&good level (≥ 75% of scores).

Tool II: First Line Nurse Managers' Soft Skills Questionnaire: It was designed by the researcher based on relevant literature review for this study **[12-16].** It aimed to assess first line nurse mangers' soft skills from their perspectives. included 37 items that categorized under four dimensions of soft skills for first line nurse managers as communication skills with staff (10 items), interpersonal relationship & organizational communication (6 items), leadership skills & initiative (12 items), and interpersonal and teamwork skills (9 items).

Scoring system:

Soft skills questionnaire scored based on statistically cut-off point 50% by convert into percent score to; low level (<50% of scores), average level (50-<75% of scores) & high level (≥ 75% of scores).

Tool (III): First Line Nurse Managers Soft Skills Observation Sheet:

This tool was developed by researcher for this study after an intensive review of the literature regarding soft skills specifically for first line nurse managers by[12-16]. It aimed to assess first line nurse mangers' soft skills activities. It included 37 items; that categorized under four dimensions of soft skills for first line managers namely, communication skills with staff, interpersonal relationship & organizational communication, leadership skills & initiative, and interpersonal and teamwork skills and it have the same items of first line nurse mangers' soft skills questionnaire. The

responses were rated (1) for not done, and (2) for done.

Scoring system:

Soft skills observation sheet scores was classified based on statistically cut-off point 50% by convert into percent score to; low level (<50% of scores),average level (50-<75% of scores) &high level (≥ 75% of scores).

Tool (IV): First Line Nurse Managers Performance Observation Form:

It was developed by researcher for this study after reviewing of the literature regarding role of the first line nurse manager as **[17-19]** that aimed to assess first line nurse managers' performance. It consisted of 42 items that categorized under three dimensions namely, patient care management activities (10 items), unit management activities (12 items), and staff management activities (20 items). The responses was rated (1) for not done, and (2) for done.

Scoring system:

Performance observation form scores were classified based on statistically cut-off point 50% by convert into percent score to; low level (<50% of scores), average level (50-<75% of scores) & high level (≥ 75% of scores).

Tool (V). General Self-Efficacy Scale (GSES):

It was developed by **[20]** to assess general self-efficacy and includes 10-items aimed at measuring first line nurse mangers general self-efficacy from their respective. Participants responded to the general self-efficacy scale using a 5-point scale (1 = strongly disagree; and 5 = strongly agree).

Scoring system:

General Self-Efficacy Scale (GSES) scores were classified based on statistically cut-off point 50% by convert into percent score to; low level (<50% of scores), average level (50-<75% of scores) &high level (≥ 75% of scores)

Validity and reliability:

The study tool (I- II- III- IV- V) was tested for face and content validity by jury test of five experts(two professors and three assistant professor) in the field of Nursing Administration, faculty of nursing to evaluate the individual items as well as the entire instrument as being relevant and appropriate to test what it wanted to measure. It was (94%) and the content validity index (%) of its items were; (93.4%) for knowledge questionnaire about soft skills, (92%) for Soft Skills Questionnaire, (93.7%) for Soft Skills Observation Sheet, (94%) for Performance Observation Form and (92.8%) for General Self-Efficacy Scale (GSES) questionnaire. As well the total content validity index of the questionnaires was (93.32%) to assess reliability, the questionnaire was tested by the pilot participant at first session for calculating Cronbach's Alpha which was; (0.804) for knowledge questionnaire about soft skills, 0.739% for Soft Skills Questionnaire, (0.814) for Soft Skills Observation Sheet, (0.820) for Performance Observation Form and (0.823) for General Self-Efficacy Scale (GSES) questionnaire. In addition to the total reliability Cronbach's Alpha of the questionnaires was 0.803.

Data collection

This study utilized paper-based tests to assess first line nurse mangers' soft skills knowledge at three time points: before implementation of the soft skills training program (T1), immediately after completion of the soft skills training program training program (T2), and 3 months after implementation (T3). The data was collected the beginning of November 2024 to the end of end of September 2025. In the first session of soft skills training program, the first line nurse managers completed soft skills knowledge questionnaire to establish to determine their knowledge base line before implementing the program. Additionally First Line Nurse Managers' Soft Skills Questionnaire by the researcher to assess first line nurse mangers' soft skills from their perspectives. As well as, First Line Nurse Managers Soft Skills Observation Sheet assess first line nurse mangers' soft skills activities, First Line Nurse Managers Performance Observation Form to assess first line nurse managers' performance and General Self-Efficacy Scale to assess general self-efficacy. After that, immediately after the training program, the participants were administered again Soft Skills Knowledge Questionnaire, First Line Nurse Managers' Soft Skills Questionnaire to determine the changes in first line nurse mangers' knowledge for soft skills was completed by first line nurse mangers. Also First Line Nurse Managers Soft Skills Observation Sheet, and First Line Nurse Managers Performance Observation Form completed by the researcher. Finally General Self-Efficacy Scale completed by first line nurse managers. Three months later, participants were given the Soft Skills Knowledge Questionnaire, First Line Nurse Managers' Soft Skills Questionnaire and General Self-Efficacy Scale. As well as the researcher completed First Line Nurse Managers Soft Skills Observation Sheet and First Line Nurse Managers Performance Observation Form for the third time to assess their sustained effects.

The intervention:

Soft skills training program intervention was administered over the course of four weeks to first

line nurse mangers at Fakous Central Hospital. The data gathered 4 days/week in the morning shift (Sunday, Monday, Tuesday and Wednesday). To first line nurse mangers are divided into four groups. The training program has taken 8 hours per week distributed on four sessions for each group; every session take (2) hour. Various methods of teaching strategies are used such as lecture, group discussion, and brainstorming. The first session gives an introduction to soft skills, define, different and list importance of soft skills also know types of soft skills and enumerate examples of soft skills. The second session includes: list of managerial soft skills), definition of communication, process of communication, effective communication, and factor affecting communication of FLNMs with staff, strategies to improve communication skill with staff and barrier of communication between (FLNMs) and their staff. The third session include; definition of leadership, definition of leadership skills, leadership skills for FLNMs, definition of initiative, benefits of initiative, role of FLNMs to become initiative, roles of FLNMs to improve leadership &initiative skills and strategies to improve leadership &initiative for FLNMs. As well as, definition of interpersonal relationship, importance of interpersonal relationship, types of interpersonal relationship, stages of interpersonal relationship, ways to maintain good interpersonal relationship, definition of organizational communication, importance of organizational communication, requirements of organizational communication, types of organizational communication, and organizational communication strategies. the fourth session included definition of interpersonal relationship & organizational communication, factors affecting of interpersonal relationship & organizational communication, strategies to improve interpersonal relationship & organizational communication, definition of interpersonal and teamwork skills, factors affecting interpersonal and teamwork skills, and strategies to improve interpersonal and teamwork skills. The 70 first line nurse mangers were separated into four groups according to their work schedules. The main investigator, who has a master's degree in nursing management, provided instruction in the available conference hall at Fakous Central Hospital. Whats App reminders and Periodic email were used to ensure participants' commitment during the four week training period.

Ethical considerations:

This study obeyed to the ethics outlined in the Declaration of Helsinki [21]. The Faculty of Nursing's Research Ethics Committee at Mansoura University in Egypt provided ethical approval with (code No. 655. The hospital's responsible administrator provided official approval to conduct the study. After explaining the purpose and scope of the study, all participants agreed to participate and provided signed informed permission. They were advised that their participation was entirely voluntary, and they might withdraw at any moment. All participants were assured data confidentiality as well as sample privacy.

Statistical analysis:

The collected data were coded, entered, tabulated, and analyzed using SPSS (Statistical Package for Social Science) version 25 (IBM Corporation, Armonk, NY, USA). For quantitative data, the range, mean and standard deviation were calculated. For qualitative data, which describe a categorical set of data by frequency, percentage or proportion of each category, comparison between two groups and more was done using Chi-square test (χ 2). For comparison between means of two groups of non-parametric data of independent samples, Z value of Mann-whitney test was used. For comparison between more than two means of non-parametric data, Kruskal-Wallis (χ2) was calculated. For comparison between means of three related groups (before, immediately after and three months after implementing training program), χ 2 value of Friedman test was calculated for non-parametric data. Correlation between variables was evaluated using Pearson's correlation coefficient (r) **[22].**

Results

The study included a total of 70 first line nurse mangers. Observed that 40% of the first line nurse managers had age ranged from 35-40 years old with mean 40.74±7.36 and most of them (90.0%) were female and were married. Concerning first line nurse managers' educational level, (80.0%) were have bachelor's degree, and (62.9%) of them had less than 10 years of experience with represents 14.87±3.44 mean scores and most of them (97.1%) do not attending pervious training programs about soft skills **(Table 1).**

There was statistically significant improvement in soft skills total knowledge level through training program phases. In pretest phase first line nurse mangers ' knowledge was at good level (0%), while in immediately posttest and after 3 months follow up test phases were at good level (85.7% and 81.4%) respectively **(Table 2).**

Moreover, there was statistically significant improvement in total mean score and level of soft skills perception which improved from high level (10.0%) with mean score 116.00±27.59 in pretest phase to high level (84.3%) with mean score 157.76±36.77 in immediately posttest phase then to 77.1% with mean score 152.23±39.01 after 3 months follow up test phase **(Table 3).**

In addition, there was statistically significant improvement in mean score and level of total

practice soft skills which improved from the good level (12.9%) with represents 46.97±11.30 mean score in pretest phase to good level (80.0%) with mean score 66.84±9.98 in immediately posttest phase then to (70.0%) with mean score (65.21±10.51 after 3 months follow up **(Table 4).**

As well as, there was statistically significant improvement in mean score and level of total performance which improved from the good level (10.0%) with represents mean score 56.08±12.48 in pretest phase to good level (85.7%) with mean score 77.13±13.03 in immediately posttest phase then improved to (81.4%) with mean score 75.91±13.60 after 3 months follow up test phase, with statistically significant improvement (p=0.0001) **(Table5).**

Moreover, there was statistically significant improvement in mean score and total level of self-efficacy which improved from the good level (10.0%) with mean score 26.97±8.15 in pretest phase then improved to good level (87.1%) with mean score 45.06±10.04 in immediately posttest phase then to (80.0%) with mean score 42.57±12.17 after 3 months follow up test phase, with statistically significant improvement (p=0.0001) **(Table 6).**

In addition, significant positive correlation between total knowledge scores of the studied first line nurse managers and total scores of their soft skills perception dimensions, practice soft skills dimensions, performance dimensions, and self-efficacy through training program phases at Fakous Central Hospital **(Table7).**

Table (1): Personal characteristics of the studied first line nurse managers (n=70).

Characteristics	No.	%
Age years		
▪ 30-35	21	30.0
▪ >35-40	28	**40.0**
▪ >40-55	21	30.0
Mean±SD	***40.74±7.36***	
Gender		
▪ Male	7	10.0
▪ Female	63	**90.0**
Marital status		
▪ Single	2	2.9
▪ Married	50	**71.4**
▪ Widow	5	7.1
▪ Divorced	13	18.6
Educational qualification		
▪ Diploma of Nursing	1	1.4
▪ Technical Nursing Institute	13	18.6
▪ Bachelor Degree	56	**80.0**
Years of Experience		
▪ < 10	44	**62.9**
▪ 10-20	18	25.7
▪ >20	8	11.4
Mean±SD	***14.87*±3.44**	
Attending training programs about soft skills		
▪ No	68	**97.1**
▪ Yes	2	2.9

Table (2): Total knowledge levels of the studied first line nurse managers about soft skills through training program phases at Fakous Central Hospital (n=70).

Knowledge total score level about soft skills	Total knowledge level of the studied first line nurse managers						χ^2 test p value
	Pretest		Posttest		After 3 months follow up test		
	No.	%	No.	%	No.	%	
• Low level (0-20)	70	100	0	0	3	4.3	144.615 0.0001**
• Average level (21-27)	0	0	10	14.3	10	14.3	
• Good level (28-35)	0	0	60	85.7	57	81.4	
Total knowledge mean scores (0-30) Range Mean±SD	0-8 2.58±1.36		0-30 25.73±10.14		0-30 24.17±9.74		
χ^2 test p value	98.113 0.0001**						

*Statistically significant ($p < 0.05$) **Highly statistically significant ($p<0.0001$)

Table (3): Overall levels of soft skills as perceived by the studied first line nurse managers through training program phases at Fakous Central Hospital (n=70).

Level of total perception of soft skills score	Training program phases						χ^2 test p value
	Pretest		Posttest		After 3 months follow up test		
	No.	%	No.	%	No.	%	
• Low level (37-110)	29	41.4	4	5.7	6	8.6	98.079 0.0001**
• Average level (111-147)	34	48.6	7	10.0	10	14.3	
• High level (148-185)	7	10.0	59	84.3	54	77.1	
Total perception of soft skills scores (37-185) Range Mean±SD	38-184 116.00±27.59		38-185 157.76±36.77		37-185 152.23±39.01		
χ^2 test p value	63.672 0.0001**						

*Statistically significant ($p < 0.05$) **Highly statistically significant ($p < 0.0001$)

Table (4): Overall level of total practice soft skills score of the studied first line nurse managers through training program phases at Fakous Central Hospital (n=70).

Level of total practice soft skills score	Level of practice soft skills score of the studied first line nurse managers through training program phases						χ^2 test p value
	Pretest		Posttest		After 3 months follow up test		
	No.	%	No.	%	No.	%	
• Low level (37-55)	58	82.9	4	5.7	10	14.3	96.040 0.0001**
• Average level (56-64)	3	4.3	10	14.3	11	15.7	
• Good level (65-74)	9	12.9	56	80.0	49	70.0	
Total levels practice soft skills scores (37-185) Range Mean±SD	37-74 46.97±11.30		40-74 66.84±9.98		37-74 65.21±10.51		
χ^2 test p value	77.854 0.0001**						

*Statistically significant ($p < 0.05$) **Highly statistically significant ($p<0.0001$)

Table (5): Total level performance score of the studied first line nurse managers through training program phases at Fakous Central Hospital (n=70)

Total level performance score	Total level performance score of the studied first line nurse managers through training program phases						χ^2 test p value
	Pretest		Posttest		After 3 months follow up test		
	No.	%	No.	%	No.	%	
• Low level (42-62)	50	71.4	1	1.4	2	2.9	105.312 0.0001**
• Average level (63-73)	13	18.6	9	12.9	11	15.7	
• Good level (74-84)	7	10.0	60	85.7	57	81.4	
Total level performance scores (42-84) Range Mean±SD	42-84 56.08±12.48		42-84 77.13±13.03		42-84 75.91±13.60		
χ^2 test p value	71.200 0.0001**						

*Statistically significant ($p < 0.05$) **Highly statistically significant ($p<0.0001$)

Table (6): Total level of self-efficacy scores of the studied first line nurse managers through training program phases at Fakous Central Hospital (n=70).

Total level of self-efficacy score (Each item was scored 1-5)	Total level self-efficacy score of the studied first line nurse managers through training program phases						χ^2 test p value
	Pretest		Posttest		After 3 months follow up test		
	No.	%	No.	%	No.	%	
• Low level (10-29)	46	65.7	1	1.4	2	2.9	106.817 0.0001**
• Average level (30-39)	17	24.3	8	11.4	12	17.1	
• Good level (40-50)	7	10.0	61	87.1	56	80.0	
Total self-efficacy scores (42-84) Range Mean±SD	10-50 26.97±8.15		10-50 45.06±10.04		10-50 42.57±12.17		
χ^2 test p value	83.587 0.0001**						

*Statistically significant ($p < 0.05$) **Highly statistically significant ($p<0.0001$)

Table (7): Relationship between total knowledge scores about soft skills of the studied first line nurse managers and total scores of their perception of soft skills dimensions, practice of soft skills dimensions, performance dimensions, and self-efficacy through training program phases at Fakous Central Hospital (n=70).

Variables	Total knowledge scores of the studied first line nurse managers through training program phases					
	Pre test		Post test		After follow up	
	r	p value	r	p value	r	p value
• Soft skills dimensions perception scores						
A-Communication skills with staff dimension	0.081	0.504	0.881	0.0001*	0.873	0.0001**
B-Interpersonal relationship & organizational communication dimension	0.030	0.806	0.469	0.0001*	0.496	0.0001**
C-Leadership skills & initiative dimension	0.008	0.945	0.936	0.0001*	0.901	0.0001**
D-Interpersonal and teamwork skills dimension	0.175	0.148	0.584	0.0001*	0.618	0.0001**
• Soft skills practice dimensions scores						
A-Communication skills with staff dimension	0.100	0.409	0.995	0.0001*	0.952	0.0001**
B-Interpersonal relationship & organizational communication dimension	0.094	0.438	0.639	0.0001*	0.061	0.616
C-Leadership skills & initiative dimension	0.110	0.365	0.980	0.0001*	0.922	0.0001**

D-Interpersonal and teamwork skills dimension	0.124	0.308	0.370	0.002*	0.645	0.0001**
• **Performance scores**						
A-Patient management dimension	0.093	0.443	0.943	0.0001*	0.911	0.0001**
B-Unit management dimension	0.127	0.296	0.960	0.0001*	0.936	0.0001**
C-Staff management dimension	0.175	0.148	0.958	0.0001*	0.933	0.0001**
• **Self-Efficacy scores**	0.143	0.238	0.971	0.0001*	0.736	0.0001**

***Statistically significant ($p < 0.05$)** ****Highly statistically significant ($p < 0.0001$)**

r=Correlation Coefficient

Discussion

The aim of the current study was to study the impact of soft skills training program on first line nurse managers' performance and self-efficacy. The study showed that there was a statistically significant improvement in first line nurse managers' mean scores about soft skills knowledge through training program phases. These findings highlight the progressive impact of the soft skills training program in improving the staff nurses first line nurse managers' knowledge regarding soft skills, supporting hypothesis 1 & 2.

Findings of the present study revealed that there is statistically significant improvement in the studied first line nurse managers' soft skills knowledge level through training program phases. In pretest phase first line nurse mangers ' knowledge was no one at good level, while in immediately posttest and after 3 months follow up test phases more than three quarters were at good level. This may be due to effectiveness of training program as a marked improvement and first line nurse managers' knowledge following the training program seems logical because most of first line nurse managers are eager to learn, when compared to pre-program, due to absent of regular training program related to soft skills, beside the limited course content they had during their studying educational program or during period of their work after graduate. Therefore, they are highly receptive and interested in acquiring knowledge when engaged in the training program due to using different teaching methods which help to gain knowledge from all programs content of soft skills.

The study results agree with the study conducted by Dubiel et al., **[23]** who conducted study entitled with virtual reality for the training of soft skills for professional education: trends and opportunities. interactive learning environments and the results of the study mentioned that the knowledge about soft skills were low before educational program but after implemented training program immediately and after 3 months follow up the knowledge about soft skills improved of as professional education.

Also, the study results agree with the study conducted by Pang, Wu, Bi& Wang, **[24]** entitled with effectiveness of hierarchical, diversified soft skills training in clinical nursing training and clarified that hierarchical, diversified soft skills training in clinical nursing training program that they had low knowledge related soft skills at pre-intervention phase, while they have good knowledge about soft skills immediately post intervention phase and follow up 3 months. Additionally, they obtained better outcomes in the core competence, knowledge, operation skills and clinical competence of nursing staff, and promoted the satisfaction of doctors and patients, which can be utilized for clinical practice.

As well as, the findings of the study identical with a study conducted by Sánchez Ramírez, Iñigo, Marcano& Romero-García **[25]**who conducted study entitled with evaluation of a training program to foster employability skills in professional training, the results of these study clarified that the most of employee had poor knowledge related soft skills at pre-intervention phase, while it improved when revealed importance of soft skills so, they had good knowledge at immediately post intervention phase with slightly decreased to be less than three-quarters at follow-up intervention phases.

As well as The finding of this study indicated that there was statistically significant improvement in total mean score and level of soft skills perception which improved from less than one eighth in high level in pretest phase to more than three quarters in high level in immediately posttest phase and after 3 months follow up test phase. This result might be due to the increased self-awareness and motivation that the training program may have fostered among the participants. Before the training, (FLNMs) may not have fully recognized the importance of soft skills in their leadership roles, (FLNMs) not collaborate with medical staff, not follow up with every group member on the status of an assignment regularly, not influence staff to work towards the goals they set, not convincing others through ideas (opinions), not applying the discipline of self and others, not find common ground between various interests in the group and cannot adjust her/his body language according to the situation before implementing the soft skills training program. As well as, focusing more on technical or administrative tasks.

Additionally, in the same line with the study conducted by Laari [**26]** and the study entitle with perceptions of soft skills training among nursing students in Ghana, the study clarified that the participant in pretest have low perception in level and mean score of soft skills and after implementing the training program their perception improved to high level and high mean score in immediately posttest phase and after 3 months follow up test phase. As well as, the majority of respondents strongly agreed that soft skills training in nursing institutions might improve quality nursing care in health facilities, and they thought that training in soft skills would improve their understanding of patient care. They also understood the concept of soft skills and agreed with the definition of soft skills through perception of

soft skills among nursing students was at high levels after training.

Also, the results of the study are in the same line with Egnatovich & Jasmine [27] who conducted study entitle with soft skills and the perceived necessity of a college degree for the paramedic profession, and this study clarified the high perception of total mean score and level of soft skills perception to paramedic profession and importance of soft skills after program that enhanced the importance of soft skills to become paramedic profession and that determined through degree-holding paramedics were more likely to think that their college education helped them hone their soft skills.

The findings of this study indicated that there was highly statistically significant improvement in mean score and level of total practice soft skills which improved from more than one eighth in good level in pretest phase then improved to more than three-quarters in good level in immediately posttest phase and to more than two thirds in good level after 3 months follow up. This result might be due to (FLNMs) knowing the factors affecting communication of FLNMs with staff, barriers of communication with staff, and strategies to improve communication skill with staff which included in the program.

Additionally, FLNMs knowing leadership &initiative skills, role of (FLNMs) to become initiative, and strategies to improve leadership &initiative skills, as well as, (FLNMs) learned ways to maintain good interpersonal relationship organizational communication strategies, ways to improve interpersonal skills, ways to overcome of teamwork barrier and strategies to foster teamwork in soft skills training program so, these strategies in program reflected on their practice of soft skills positively which included in the soft skills training program. As well as, the ability of (FLNMs) to learn the new strategies.

The results of present study similar with the study conducted by Astuty & Ginting [28] who conducted study entitled with a relationship between soft skill and caring of nurse in a hospital in Medan, the study revealed the significance of soft skills and it is relation to provide high quality of nursing care that enhanced through high level of practice soft skills in theses study.

Also, these results go in harmony with Fasoi, Bourazani & Kelesi [29] who revealed in their study entitled with non-technical skills for nurse-aestheticists: learning and evaluation," nurses must acquire non-technical abilities, the study revealed the importance of practice soft skills that enhanced through high level and mean score of total practice of soft skills that acquired for nurse-aestheticists during learning and evaluation in addition to the high level of education and specialization, the non-technical skills of an interprofessional team have an important role in safety of patient. As well as, by non-technical skills we mean cognitive and interpersonal traits favoring effective teamwork, such as leadership, communication, decision-making, situational awareness, and role-sharing skills.

On the other hand, the finding of this study disagrees with study conducted by Miano [30] who conducted study entities with relationship of organizational culture and citizenship behavior on soft skills as mediated by transformational leadership: the case of Philippine state universities. This study revealed that most of the participants have moderate level and mean score in practice of soft skills. As well as this study revealed the strong relationship between organizational culture and citizenship behavior on soft skills and transformational leadership.

Also, the findings of the present study revealed that there was highly statistically significance improvement in total performance of the studied first line nurse managers throughout training program phases. It shows more than one third was done in total performance of the studied first line nurse managers in pretest phase then improved to more than three quarters was done in immediately posttest phase and in after 3 months follow up test phase. This result may be due to (FLNMs) become apply the policies, rules and regulation in the unit related to their performance, co-coordinating the work of the ward team, writing reports, checking ward stock, ordering ward stock, ensuring adequacy of resources, prescribing nurses 'work, ensuring accountability for work done, ensuring adequacy of staff after implementing the training program of soft skills.

These findings similar to the study conducted by Sabry Mustafa Ahmed, Faisal Fakhry & Farouk Kamel [31] who conducted study entitle with training program related to performance appraisal system for head nurses and its effect on staff nurses' job satisfaction. This study revealed that most of head nurse done their performance after the training program as well as, head nurse performance in pretest phase was low then improved after implementing the training program in immediately posttest phase and in after 3 months follow up test phase. As well as, the job satisfaction of staff nurses also improved after implementing the training program.

The findings of the study agree to study conducted by Rostami et al., [32] who conducted study entitle

with transforming nursing practices: a comprehensive review of performance improvement strategies. Health science reports. This study assured that most of participants was done their performance correctly as well as there was improvement in the nursing performance after applied the strategies and reflected on nursing practice. Moreover, it determined through more than one third done in total performance of the studied sample before apply the performance strategies then improved to more than three quarters done after apply the performance strategies.

The findings of this study shows that there was highly statistically significant improvement in mean score and level of self-efficacy which improved from less than one eighth in good level in pretest phase to more than three quarters in good level in immediately posttest phase and after 3 months follow up test phase, with statistically significant improvement. This may due to (FLNMs) become able to handle whatever comes in their way, usually think of a solution, when they confronted with a problem, they can usually find several solutions, remain calm when facing difficulties because they can rely on their coping abilities and become know how to handle unforeseen situations after applying communication skills with the staff, interpersonal communication skills that reflected in the (FLNMs) self-efficacy. Additionally, (FLNMs) knowing leadership &initiative skills, role of (FLNMs) to become initiative, and strategies to improve leadership &initiative skills, ways to improve interpersonal skills, ways to overcome of teamwork barrier and strategies to foster teamwork in soft skills training program so, these strategies in program reflected on their self-efficacy positively.

On the other hand, a slight decrease in the level of the self-efficacy of (FLNMs) at follow up phase for studied first line nurse managers, this may be due to follow up phase conducted after three months. This showed decline in the taught variables regardless the phenomena being studied as not all, and the first line nurse manager did not use the handout they received during program implementation due to lack of time to read because the heavy workload in their department and increase their responsibilities and they might have forgotten some of knowledge gained during program and participated in improve their performance, the absence of regular group discussion to refresh their knowledge regarding soft skills which impact on their self-efficacy, and lack of motivation.

The finding of the study was similar to Fitriyani, Wahyudi & Kurniasih **[33]** who conducted study entitle with the effect of soft skills and self-efficacy on fresh graduate job readiness: mediation of work motivation, the study revealed that the importance of soft skills in improving self-efficacy that enhanced through the participants have high level and mean score of self-efficacy after implemented training about soft skills and contribute to the development of soft skills development initiatives by educational institutions to boost self-efficacy and prepare future workers for competition.

The finding of the study shows significant positive correlation between total knowledge scores of the studied first line nurse managers and total scores of their soft skills perception dimensions, practice soft skills dimensions, performance dimensions, and self-efficacy through training program phases at Fakous Central Hospital. This may due to ability of (FLNMs) to learn about soft skills, the importance of soft skills in creating positive work environment, when (FLNMs) apply soft skills in the work that lead to improve communication between staff.

The finding of the study agrees with the study conducted by Joie-La Marle et al., **[34]** who conducted the study entities with effects of a new soft skills metacognition training program on self-efficacy and adaptive performance. The study revealed that significant positive correlation between total knowledge scores and total scores of their soft skills perception dimensions, practice soft skills dimensions, adaptive performance dimensions, and self-efficacy through training program phases. As well as, the study enhanced the importance of soft skills metacognition.

Also, the finding of the study similar with the study conducted by Mata et al., **[35]** who conducted study entities with the finding of the study agrees with the study conducted by Training in communication skills for self-efficacy of health professionals: a systematic review. This study revealed that there was significant positive correlation between total scores of non-technical skills especially dimensions, self-efficacy and the professionalism. As well as, this study enhanced the importance of communication skills.

Implications of the study:

Healthcare organizations should prioritize the development of comprehensive soft skills training programs that align with the hospital's vision, strategic direction, and quality improvement goals. Emphasis should be placed on strengthening leadership, communication, and interpersonal skills to ensure that organizational objectives are clearly understood and consistently applied across all levels of the healthcare setting. Soft skills training programs should support effective teamwork, leadership skills and initiative, interpersonal communication &organizational communication to enhance

coordination among departments and improve the overall quality of care. Integrating these programs within hospital quality departments can reinforce collaboration, accountability, and shared responsibility for performance improvement. Also, the establishment of key performance indicators to evaluate (FLNMs) performance and self -efficacy should be accompanied by training in communication, feedback utilization, and critical thinking, enabling healthcare professionals to actively engage in performance reviews and continuous improvement processes. As well as soft skills should be add in the curriculum of the faculty of nursing to train the student to apply soft skills to prepare them to work.

Conclusions

In summary, this study employed a quasi-experimental pretest–posttest design with a single group. The convenience sample consisted of first line nurse mangers worked at Fakous Central Hospital. The main objective of the study was to study the impact of soft skills training program on first line nurse managers' performance and self-efficacy. This study concluded that implementation of soft skills training program was associated with improvement in first line nurse mangers' knowledge, perception and practice regarding soft skills. This means before the training program, none of the FLNMs demonstrated a good level of knowledge about soft skills. Additionally, fewer than one-quarter showed a high level of perception, performance, or self-efficacy, while slightly more than one-quarter demonstrated good practice of soft skills. Following the implementation of the training program, all these aspects knowledge, perception, practice, performance, and self-efficacy showed marked improvement both immediately after and during the follow-up phase. Furthermore, a significant positive correlation was found between FLNMs' total knowledge scores about soft skills and their total scores for perception, practice, performance, and self-efficacy across all phases of the training program.

Declarations:

Abbreviation:

FLNMs: First Line Nurse Mangers
STDF : Science, Technology & Innovation Funding
EKB : Egyptian Knowledge Bank
GSES : General Self-Efficacy Scale

Ethics approval and consent to participate

Each process was carried out in compliance with the applicable rules and regulations. This study obeyed to the ethics outlined in the Declaration of Helsinki and ethical approval was obtained from the Research Ethics Committee of nursing faculty, Mansoura University, Egypt (Reference No. 655). Informed consent was obtained from all participants involved in this study

Consent for publication

Informed consent for publication was obtained from all participants

Availability of data and materials

The corresponding author can provide the quantitative datasets utilized and analyzed in this study upon reasonable request

Competing interests

The authors declare no competing interest

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Authors' contributions

Every author has contributed to the design and thoughts of the study. Execute the intervention, including collecting, evaluating, interpreting, and drafting the manuscript; organize the intervention, including writing and editing the document; Each author evaluated the manuscript's early drafts, provided comments and revisions, and approved the final version.

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