The Effect of a Clinical Supervision-Enhancing Strategy for Head Nurses on Their Professional Identity

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Abstract

Background: Clinical supervision, a fundamental skill for head nurses, is based on developing head nurses' professional knowledge, skills, and professionalism, all of which are integral parts of professional identity. ***Aim:*** The present study aimed to examine the effect of a clinical supervision-enhancing strategy for head nurses on their professional identity. ***Material and methods:*** This study was a quasi-experimental research design (pre- and post-intervention) involving a convenience sample of 41 head nurses and 263 staff nurses working in Main Mansoura University Hospital. ***Data collection tools:*** The Self-administered Clinical Supervision Knowledge Questionnaire, Manchester Clinical Supervision Scale, and Professional Identity and Values Scale were used. ***Results:*** There was a statistically significant difference between head nurses' knowledge pre- and post-intervention. Also, there was a statically significant difference in head nurse clinical supervision effectiveness after the program implementation compared to before implementation. ***Conclusion:*** The program had a significant effect on all professional identity domains. The program had a large effect on total professional identity post-intervention and a medium effect during the follow-up phase. ***Recommendations:*** Educational programs can upgrade the level of professional performance and professional identity. Also, more researches are recommended in this area.

Keywords: Clinical supervision, Enhancing strategy, Head nurses, Professional identity.

Introduction

One of the key issues in the healthcare sector, particularly in nursing, is developing programs, services and incentives that are most effective in attracting new nurses to the field and retaining current nurses while providing the highest level of care to patients. Clinical supervision has long been seen as a powerful tool for raising clinical standards and increasing treatment quality. Supervision is an important aspect of how people form and develop their professional identities. Supervisory experience is inextricably tied to professional identity development. Without supervision by trained supervisors, both self-efficacy and professional identity suffer **(DeKruyf, Auger, & Trice-Black, 2013).**

Clinical supervision is a means of giving support, training, and professional growth in an organized manner. It provides a safe and confidential environment for staff nurses to reflect on and discuss their work, resulting in enhanced awareness and clinical abilities and increased competency. Clinical supervision is a nursing practice that entails the collaboration of two or more experts (a novice nurse or practitioner nurse and a clinical supervisor). The supervisee is responsible for their behavior. Clinical supervision aims to establish a framework for workplace monitoring, assessment, examination, and feedback, all of which can contribute to professional skill growth **(Abou Shaheen, Hamouda, Zahran, & Eldemerdash, 2018).**

According to Proctor's model, there are three functions of clinical supervision. The first is the formative function, which is an educational activity that was the original foundation for clinical supervision. The second is the normative role, which is the establishment of consistency in patient care practices through clinical supervision (it follows "norms" or standard procedures). The third is a restorative function, which encourages colleagues to feel validated and supported through peer feedback. In practice, the functions overlap and intersect **(Markey, Murphy,O'Donnell,Turner,& Doody, 2020).**

The head nurse to be an effective clinical supervisor, he or she must possess certain characteristics. Among these essential characteristics are the "four A's of clinical supervision," which are: *Available* - open, interested, trustworthy, and non-aggressive; *Accessible* - easy to approach, talks without restraint; *Able* - having actual knowledge, proficient; and *Affable* - pleasurable, sociable, and supportive. In addition to supervisory ability, clinical supervisors require excellent interpersonal skills, education skills, clinical competence, knowledge, and command of essential managerial skills **(Driscoll, Stacey, Harrison Dening, Boyd, & Shaw, 2019).**

According to **Gibson, Dollarhide, and Moss (2010)** a professional identity includes a mixture of personal and training traits that are used in the workplace. Professional identity evolves through time as a result of contacts with other professionals and the acquisition of knowledge about professional practices and the development of individual skills and beliefs.

In this context, **Dubar, Tripier, & Boussard (2015)** asserted that professional identity is intimately linked to institutions, coworkers, the institutional hierarchy, union representatives, the academic world, and acknowledging a person's knowledge and talents, and self-concepts. Practicing their

education and specialized information relevant to the profession's basic values were deemed to have the most impact on a person's professional identity. Participation in group training has also been shown to positively impact identity building **(De Lasson, Just, Stegeager, & Malling, 2016).**

Internalization of professional knowledge, skills, attitudes, values, and norms of ethical clinical supervision and blending these traits into one's personal identity and performance within nursing teaching and training promotes a professional identity **(Cowin, Johnson, Wilson, & Borgese, 2013).** A sense of self and interactions with others influenced by the nursing discipline's features, norms, and values, subsequent in individual thinking, acting, and feeling like a nurse, is characterized as a professional identity in nursing. Five characteristics define professional identity in nursing: doing, being, acting ethically, flourishing, and changing identity. The ***Doing*** characteristic includes acceptance societal conventions and expectations, professional standards or norms, and operating within the constraints of established positions and areas of activity at all times **(Brewington & Godfrey, 2020).**

The ***Being*** characteristic includes making decisions based on a framework of appropriateness based on an individual's worth, guided by an internal locus of control that pushes people to act correctly in a scenario. The ***Acting ethically*** characteristic requires working from a set of standards and making fair and impartial personal and professional judgments without allowing biases to cloud judgment while being conscious that biases exist and maintaining the privacy of patient information. The ***Flourishing*** characteristic includes positive personal and professional improvement that occurs regularly. Individuals go through a metamorphosis, growing in maturity and well-being on a personal and professional level. The ***Changing identities***

involve developing different identities through life's stages. It is critical to understand how these identities may change and how new behaviors may arise as a result of these changes. In order to build and create a professional identity, it is critical to comprehend identity shifts (**Godfrey& Young, 2020).**

Professional identity is extremely important in the medical field. It helps to identify practice boundaries and reduces role misunderstanding, especially in multidisciplinary teams. A lack of professional identity clearness has a main influence on a profession's perceived worth and a practitioner's confidence in supporting for their professional ideas **(Turner & Knight, 2015).**Furthermore, a hazy professional identity can lead to problems within a profession, such as practice being fewer paradigm-specific and more focused on jobs that "fill gaps" left by other professions **(Sundberg, Josephson, Reeves, & Nordquist, 2017).** These challenges also affect clinical supervisors' confidence to instill suitable professional knowledge and values in their subordinates.

Significance of the study

Effective clinical supervision can improve nurses' perceptions of organizations and their support and dedication to its vision and goals. It is one method for a provider to meet their duty to their employees. Clinical supervision is connected to nurses' perceived efficacy, critical thinking, duty support, reduced staff turnover, and emotional and social support. Clinical supervision allows them to examine their own psychological and emotional reactions to their work in a safe atmosphere. Helping nurses avoid medical errors and job-related stress enhances their well-being and clinical performance, which leads to better patient care and decision-making abilities of nurses and patient safety **(Thacker & Diambra, 2019).** In conclusion, the training strategies were effective in improving clinical supervision and professional identity.

The study aim

This study aimed to examine the effect of clinical supervision-enhancing strategies for head nurses on their professional identity.

Research objectives

1. Assess head nurses' knowledge regarding clinical supervision.

2. Detect head nurses' clinical supervision effectiveness level from a nurse's point of view.

3. Determine head nurses' professional identity level.

4. Develop clinical supervision-enhancing strategies for head nurses.

5. Determine the effect of clinical supervision-enhancing strategies for head nurses on their professional identity.

Research hypothesis

- An applied clinical supervision-enhancing strategy has an effect on head nurses' professional identity.

Research design

A quasi-experimental research design (pre- and post-intervention study) was utilized. Quasi-experimental design is a unique research methodology because it is characterized by what it lacks. Quasi-experimental research is differs from experimental research because either there is no control group, no random selection, no random assignment, and/or no active manipulation." **(Iowa State University of Science and Technology, 2021).**

Setting

The study was conducted at the Main Hospital of Mansoura University in El Dakahlia Governorate, Egypt, which provides a wide variety of health care services.

Subjects

The study sample encompassed two groups: a convenience sample of 41 head nurses and all their subordinates of staff nurses with a total number of 263 staff nurses. Those who agreed to participate in the study had at least one year of experience in a hospital.

Study tools

The study tools used in data collection were divided into three sections: a Self-administered Clinical Supervision Knowledge Questionnaire, the Manchester clinical supervision scale, and a professional identity and values scale.

Section (I): Self-administered Clinical Supervision Knowledge Questionnaire

This tool was developed by researchers to assess the head nurses' knowledge about clinical supervision. It was divided into two parts as follows:

Part I included head nurses' personal characteristics such as age, marital status, gender, level of education, department, and years of experience.

Part II consisted of a clinical supervision knowledge questionnaire developed based on a review of the related literature **Abou Hashish (2010), Ballon & Waller-Vintar (2008), Brunero & Stein-Parbury (2008), Cruz, Carvalho,& Sousa (2012), Helen & Douglas House(2014)** to assess head nurses' knowledge levels of clinical supervision before and after a training program. The questionnaire comprised 52 questions that were divided into true and false (30 questions), multiple-choice (11 questions), and matching (11 questions). The questions were categorized under four main domains: 1) clinical supervision (definition, purposes, importance, and barriers); 2) benefits of clinical supervision; 3) skills of clinical supervision; and 4) roles and responsibilities of clinical supervisors.

Scoring system

Each question of the true and false, multiple-choice, and cross-matching questions was scored "one" if it is was correct and "zero" if it was wrong. The head nurse was considered to have an adequate knowledge level of clinical supervision if the percent score was 60% or more and an inadequate knowledge level of clinical supervision if the score was less than 60% **(Morsy, 2014).**

Section (II): The Manchester Clinical Supervision Scale (MCSS)

This instrument consisted of two parts as follows:

Part I included staff nurses' age, gender, marital status, level of education, and years of experience.

Part II was the MCSS developed by **Winstanley (2000)** and aimed to measure the clinical supervision effectiveness of supervisors from a nurse's point of view before and after a training program. This scale consisted of 36 items categorized in 7 subscales, namely: trust/rapport (7 items), supervisor advise/ support (6 items), improved care/ skills (7 items), importance/ value of clinical supervision (6 items), finding time (4 items), reflection (3 items), and personal issues (3 items). The reliability score of the MCSS was 0.77.

Scoring system

Responses were rated on a 5- point Likert scale ranging from (5) strongly agree to (1) strongly disagree. The overall MCSS score was 180, which ranged from 36 to 180. The scores of the subscale items were summed up, and the total was divided by the number of items, giving a mean score for each part. A high mean score reflects a high degree of effectiveness of the perceived clinical supervision process **(Abou Hashish, 2010).**

Section (III): Head Nurses' Professional Identity and Values Scale (PIVS)

This scale was created by **Eason, Mazerolle, Denegar, Burton, & McGarry, (2018)** to evaluate a supervisor's attitudes, beliefs, and practices regarding the supervisory role. It consisted of 41 questions that were categorized under three main dimensions as follows: 1) professional orientation (11 questions); 2) professional values (9 questions); and 3) professional development (21 questions). The scale had a good internal consistency of 0.80 as determined by Cronbach's alpha test. The scale had minor modifications.

Scoring system

Head nurses' response options ranged from strongly disagree (1) to strongly agree (5). Five questions were reverse scored. The overall PIVS score was 205 and ranged from 41 to 205. The level of professional identity was considered low if the percentage score was less than 59% and considered high if the percentage score was 59% or more, depending on the cut-off points.

Validity of the study instruments

The content validity of the tools was tested with a bilingual group of five experts from the nursing administration departments at different institutions across Egypt. The tools were considered valid from an expert's perspective.

Reliability of the instruments

The internal consistency of the three tools was measured with Cronbach's alpha reliability test. The values were 0.89 for the Self-administered Clinical Supervision Knowledge Questionnaire and 0.90 for the MCSS, whereas the value was 0.85 for PIVS.

Pilot study

A pilot study was conducted with 5 head nurses and 26 nurses that representing 10% from different departments of Mansoura University Hospital. These nurses were excluded from the study sample. Participants in the pilot study were asked to complete the questionnaire form, and difficulties or lack of clarity were reported. The amount of time to complete the questionnaire was calculated for both the head nurses and nurses. Based on the pilot study, modifications were made.

Field work

The data collection occurred from the beginning of January 2021 to the end of Jun 2021. The implementation of a clinical supervision training program was based on the model for a training program. Three phases were defined: the assessment phase, the action training phase, and the follow-up phase.

Assessment phase

As an initial assessment of the head nurses, knowledge about clinical supervision was assessed using the Self-administered Clinical Supervision Knowledge Questionnaire. The head nurses' perceptions were determined with the PIVS. Concurrently, staff nurses from each unit assessed their head nurse's clinical supervision effectiveness. This was completed from January 2021, to beginning of February 2021. Each head nurse spent about 20–25 minutes answering the Self-administered Clinical Supervision Knowledge Questionnaire and PIVS. Staff nurses took about 10–15 minutes to assess their head nurses' clinical supervision effectiveness competency.

Planning phase

The results obtained from the initial assessment of head nurses' knowledge and clinical supervision competencies were analyzed. Then, the educational needs were delineated. Accordingly, a training program was designed as well as a training program schedule. This phase took place from 5 February 2021 to the beginning of March .

Implementation phase

According to their departments, the sample of head nurses was divided into three groups to receive the training program. All those who were supervisors in quality and infection controls and safety departments were trained first. The second training group included one head nurse from every department in the main building. The third training group consisted of one head nurse from every department in other building in the hospital. The training program was implemented in the period started from the 10 March to the mid of April 2021. Each group of head nurses trained for one week, with four sessions per week, and each session was two hours and half. In session one, the concept and importance of clinical supervision, the methods and effectiveness of supervision were discussed as well as the barriers to sustaining clinical supervision. In session two, communication and motivation in clinical supervision were discussed, clinical supervisors' conflict resolution, stress management, and time management were discussed. In session three, the implementation and process of clinical supervision were discussed, clinical supervision models were analyzed. In session four, problem-solving and decision-making skills were considered, the principles of coaching were discussed. Each session began with the establishment of objectives and an explanation of the new topic, followed by a discussion of the questions posed by the head nurses.

The program was implemented for head nurses in conference rooms on the second floor of the hospital. The following teaching methods were used: brainstorming, discussion, work in small groups, and modified lectures.

Evaluation phase

Follow-up was conducted three months immediately after program implementation to evaluate the immediate effects of the training program on head nurses' knowledge of clinical supervision, professional identity, and clinical supervision effectiveness using the same tools. This phase started from the mid of Jun.

Administrative and ethical consideration

The hospital director, nursing managers, and participants were all informed about the study's goals. The hospital director received written consent from the Department of Nursing at Mansoura University to conduct this study. The Ethical Research Committee at Mansoura University's College of Nursing gave their approval. All subjects were told that participation in the study was completely voluntary, and each one gave oral agreement. The confidentiality of the collected data is preserved. The content of the tools was only used for study purposes. The participants had the right to withdraw from the study at any time.

Statistical design

Data were analyzed with SPSS version 22.0. The normality of the data was tested with a one-sample Kolmogorov–Smirnov test. Qualitative data were labeled using numbers and percentages. Continuous variables are shown as the mean and standard deviation. A one-way repeated measure ANOVA test and a paired t-test were used for parametric data. A Wilcoxon signed ranks test, and Friedman's test was used for nonparametric data. The program's effect size was calculated with eta square ($\eta2$) and Cohen's d. The significance level was $p < 0.05$.

Results

A study result indicates that all head nurses were female and had a bachelor's degree in nursing. The majority of them (73.2%) were in the age group 30–40 years old (mean 37 years), married (82.9%), and had between 20–10 years of experience (68.3%). Also, all staff nurses were female. Most (60.1%) were 20–30 years old, married

(76.4%), had fewer than five years of experience (36.1%), had a technical college educational level (67.7%), had mixed supervision (68.4%), and had a period of supervision less than 15 minutes.

Table 1 lists head nurses' knowledge levels related to clinical supervision through pre, post and follow-up training program. Regarding pre-intervention, none of the head nurses had an adequate level of knowledge. However, 95.2% and 90.2% of them had an adequate knowledge level post-intervention and at follow-up, respectively. Nurses had an adequate level of knowledge in all items after the intervention, especially regarding the role and responsibilities of clinical supervisors.

Table 2 illustrates clinical supervision effectiveness domain mean scores as nurses' point of view through pre, post and follow-up-training program. A statistically significant improvement in head nurses' clinical supervision effectiveness was observed post-intervention immediately and at follow-up. The highest mean scores (27.17 ± 2.02, 26.58 ± 2.31) were observed for trust/rapport post-intervention and follow-up. The differences between the total mean scores for head nurses' clinical supervision effectiveness through the study phases were large. The highest mean score was 129.16 ± 4.45 at post-intervention, and the eta square ($\eta2$) value was 0.982, which demonstrated the large effect of the program. However, the mean score decreased at follow-up (124.31 ± 6.18).

Table 3 reflects that the head nurses' professional identity domains were amended at post-intervention and follow-up. The domain that was affected by the program most was professional values (97.6%) at the post-program phase, whereas this percentage slightly decreased at follow-up (90.3%). Regarding professional identity, 17.1% of the head nurses had a high level at pre-intervention, and this percentage increased to 95.2% post-

intervention. This percentage decreased at follow-up (87.8%).

Table 4 shows a statistically significant difference between head nurses' knowledge of clinical supervision between pre- and post-intervention and between pre-intervention and follow-up. Head nurses' knowledge levels were increased after the intervention. Moreover, the calculated r-value was 0.1, which indicated a large effect from the program on nurses' knowledge. Also, there was a statistically significant difference between head nurses' knowledge between post-intervention and follow-up, with a medium effect from the program ($r = 0.497$).

Table 5 portrays the result of the training program on head nurses' clinical supervision effectiveness. It clarifies that there were statistically significant variations in clinical supervision among head nurses both pre- and post-intervention and in head nurses' clinical supervision between pre-intervention and follow-up. There were also variations between head nurses' clinical supervision at post-intervention and follow-up. The largest mean difference was discovered between pre- and post-intervention (54.79 ± 6.21) with $d = 0.91$, reflecting a large program effect on head nurses' clinical supervision effectiveness. Also, the second-highest mean difference was found between pre-intervention and follow-up (51.94 ± 7.61) with $d = 0.85$, which reflects a large effect. The post-intervention and follow-up stages had the lowest mean difference ($2.85 \pm .89$) with $d = 0.53$, reflecting the program's medium effect.

Table 6 shows the effect of the clinical supervision training program on head nurses' professional identity through the program phases. The table reflects a statistically significant difference between the three program phases with the highest mean rank (2.89) for head nurses' professional identity at post-intervention, followed by a mean rank of

2.88 for head nurses' professional identity at follow-up. The eta square (η^2) value was 0.0.31), reflecting the program's large effect on professional identity.

Table 7 points the effect of the clinical supervision training program on head nurses' professional identity domains throughout the pre- and post-interventions and follow-up phases. There was a statistically significant difference between pre- and post-intervention, pre-intervention and follow-up, and between post-intervention and follow-up. Moreover, the calculated (r) was very large. Therefore, the program had a large effect on all professional identity domains. Additionally, the program had a large effect on total professional identity both pre- and post-intervention and pre-intervention and follow-up, whereas the program had a medium effect on post-intervention and follow-up phases.

Table 1: Head nurses' knowledge level related to clinical supervision through pre-intervention, post-intervention, and follow up (n = 41)

Knowledge related clinical supervision	Pre Intervention		Post Intervention		Follow up Intervention	
	Adequate knowledge		Adequate knowledge		Adequate knowledge	
	N	%	N	%	N	%
Clinical supervision(definition, purposes, importance, and barriers	3	7.3	36	87.8	32	78.1
Benefits of clinical supervision	4	9.7	38	92.7	35	85.4
Skills of clinical supervision	2	4.8	35	85.4	31	75.6
Role and responsibilities of clinical supervisor	0.0	0.0	40	97.5	36	87.8
Total nurses' knowledge	0.0	0.0	39	95.2	37	90.2

Level of adequate knowledge at 60% or more

Table 2: Clinical supervision effectiveness domains mean scores from the nurses' point of view through pre-intervention, post-intervention, and follow up (n = 263)

Clinical supervision effectiveness domains	Pre Intervention	Post Intervention	Follow-up Intervention	F	Sig.	η2	Effect size
	Mean ±D	Mean ± SD	Mean ± SD				
Supervisor \ advice support	12.53 ±1.02	26.75±4.50	24.97±4.37	1629.8	.000		
Trust / rapport	14.05±2.61	27.17± 2.02	26.58±2.31	4423.2	.000		
Importance/ value of clinical supervision	12.04±3.52	22.37±1.13	21.37±1.14	9792.7	.000		
Improved care/ skill	14.05±4.61	21.59±2.92	20.58±2.81	6989.2	.000		
Finding time	8.03±1.34	9.96±.18	8.96±.18	5252.2	.000	.982	Large
Reflection	6.39±1.54	10.40±.492	9.40±.49	5478.3	.000		
Personal issues	7.25±1.38	10.83±3.70	10.79±.41	1512.1	.000		
Total domains	74.36±3.52	129.16±4.45	124.31±6.18	14302.5	.000		

$η^2$ = Eta Square   **F** = Repeated Measure Anova

Table 3: Head nurses' professional identity levels through pre-intervention, post-intervention, and follow up (n = 41)

Head nurses' professional identity	Pre Intervention (41)		Post Intervention (41)		Follow -up Intervention (41)	
	n	%	n	%	n	%
Professional direction						
Low	32	78.1	2	4.8	5	12.2
high	9	21.9	39	95.2	36	87.8
Professional values						
low	36	87.8	1	2.4	4	9.7
high	5	12.2	40	97.6	37	90.3
Professional development						
low	30	73.2	3	7.3	6	14.6
high	11	26.8	38	92.7	35	85.4
Total professional identity						
low	34	82.9	2	4.8	5	12.2
high	7	17.1	39	95.2	36	87.8

Table 4: The effect of the training program on head nurses' knowledge through pre-intervention, post-intervention, and follow up (n = 41)

Head nurses' knowledge differences related clinical supervision through program phases	Test of significant (z)	p	R	Effect size
Knowledge pre and post intervention	5.598	.001	0.1	large
Knowledge pre and follow-up intervention	5.594	.001	0.1	large
Knowledge post and follow intervention	3.428	.013	0.497	Medium

z =Wilcoxon Signed Ranks Test

Table 5:The effect of the training program on head nurses' clinical supervision effectiveness between pre-intervention, post-intervention, and follow up (n = 263)

Head nurses' clinical supervision effectiveness differences through program phases	Mean Difference ± SD	t	P	Cohen's d	Effect size
Clinical supervision effectiveness Pre and Post	54.79±6.21	142.875	.000	0.91	large
Clinical supervision effectiveness Pre and Follow	51.94±7.61	110.715	.000	0.85	large
Clinical supervision effectiveness Post and Follow	2.85± .89	15.955	.000	0.53	Medium

*. The mean difference is significant at the .05 level.

η^2 = Eta Square

t = Paired t test

Table 6:The effect of the clinical supervision training program on head nurses' professional identity through the program phases (n = 41)

Head nurses' professional identity through program phases	Mean ±SD	Mean Rank	Chi-Square	P	η^2	Effect size
Professional identity Pre	102.60±6.95	1.00	78.284	.000	0.31	Large
Professional identity Post	181.56±181.56	2.89				
Professional identity Follow-up	178.85±2.11	2.88				

Friedman Test

Table 7: The effect of the clinical supervision training program on head nurses' professional identity domains through the program phases (n = 41)

Head nurses' professional identity domains differences through program phases	Pre and post Intervention			Pre and follow Intervention			Post and follow		
	z	p	Effect size(r)	z	P	Effect size(r)	Z	p	Effect size(r)
Professional direction	5.599	.000	1 large	5.599	.000	1 Large	.000	1.00	0.00
Professional values	5.589	.000	.99 large	5.593	.000	.88 Large	2.145	.032	0.79 large
Professional development	5.590	.000	.97 large	5.588	.000	.95 Large	5.281	.001	0.45 Medium
Total	5.584	.000	1 large	5.584	.000	1 Large	4.953	.001	0.69 Medium

z = Wilcoxon Signed Ranks Test

Discussion

Clinical supervision is a method of establishing an environment in which individuals can examine, reflect on, and grow their clinical practice while also supporting one another **(King, Edlington, & Williams, 2020).** Additionally,professional identity development boosts job happiness by instilling a sense of belonging to the field **(Kabeel & Eisa, 2017).**

In this context, the study revealed that none of the head nurses had adequate *knowledge regarding clinical supervision* before program implementation. This finding might be attributable to the fact that most head nurses had never been to a clinical supervision training program previously, so they did not have any formal information about the process of clinical supervision before this study. The lack of such a training program is due to a lack of concern among responsible hospital authorities.

The results of our study are congruent with **Safan, Gab Allah, & Nassar (2020)** who

investigated the effect of a clinical supervision coaching program for nurse managers in a quasi-experimental study in Egypt. They found that before coaching, the majority of the head nurses in the study had insufficient expertise in clinical supervision. This is in agreement with **Rahiem, Habieb, & El-Shaer (2020)** who reported that knowledge before the program was a negligible and highly positive statistically significant improvement in the clinical instructor's knowledge about clinical supervision in all dimensions were observed immediately after the program intervention and three months later.

The current study found head nurses' knowledge of clinical supervision improved overall immediately after the training program was implemented, but there was a modest decline in head nurses' knowledge three months later. This could be explained by head nurses learning as a result of the clinical supervision instructive program and realizing the importance of building a good supervisory relationship with staff nurses. This led to more

concern and contact between head nurses and staff nurses in building trust and rapport, giving advice, support, and guidance, improving their skills and finding time to reflect on their practice and personal issues.

This finding is congruent with **Salah, Sleem, & El-Shaer (2015)** who stated that training is the main to improving knowledge and changing head nurses' attitudes, values, and views. Furthermore, **Ali, Elmolla, & Aref (2016)** provided a training program for first-line managers at Minia University Hospital. They reported that the program increased their information and helped them fulfill their managerial duties more successfully. Moreover, **Russell, Alliex, & Gluyas (2019)** clarified that the training enhanced staff attitudes toward students and their role as learners in clinical areas and understanding how to give successful clinical supervision in a clinical environment.

Similar to the slight decrease in head nurses' knowledge at follow-up, **Abdel-Aziz, Ali, & Mohammed (2016)** showed that, after three months of program implementation, there was a modest drop in nurses' mean knowledge scores when compared to the scores obtained immediately after the program. Also, **Yang et al. (2012)** reported that health care personnel knowledge and abilities at National Taiwan University Hospital deteriorated over time, emphasizing the necessity for more refresher exercise to maximize knowledge retention. Moreover, these results were supported by **(Ibrahim, Mohamed, & EL-Gazar, 2018)**.

Regarding clinical supervision effectiveness, the present study showed a statistically significant improvement in head nurses' clinical supervision effectiveness domains immediately following the program's completion and three months later. This may be attributed to the research findings that revealed the differences between the total mean scores for the head nurses clinical supervision effectiveness through program phases were

great, and the highest mean scores were obtained immediately after post-intervention in all domains. These mean scores decreased at follow up.

This result was in alignment with **ElZeneny, Seada, & El AleamEtewy (2017)** who looked into the impact of a clinical supervision training program for nurse managers on the quality of nursing care in Tanta University Hospital's intensive care units. They found that clinical supervision was ineffective before the program. In addition, **Snowdon et al. (2020)** reported that clinical supervision was greatest effective when the supervisor's professional progress was emphasized, and the supervisor influenced the abilities and qualities necessary to foster a positive supervisory relationship.

The present study showed a large effect size of the program on both head nurses' knowledge and clinical supervision effectiveness immediately at post-intervention and later three months of the program. This might be due to head nurses gaining novel information that allowed them to be more deep and self-assured in their practice and with their staff. They were given enough support and opportunities to share novel ideas, information, and skills while building relationships with their supervisees. As a result, nurses had a favorable impression of the clinical supervision delivered by their straight clinical supervisors. The present study results were consistent with **Safan et al. (2020)** who found a statistically significant correlation among head nurses clinical supervision knowledge and effectiveness scores after program application and in the follow-up phase.

Also**, Abd-Elrhaman & Ghoneimy (2018)** conducted a quasi-experimental design study to examine the effect of a clinical supervision training program at Benha University Hospital. They indicated that first-line managers' knowledge and performance in

terms of clinical supervision improved by a statistically significant amount due to the training. Furthermore, there was a statistically significant development in staff nurses' levels of career adaptability. This result was congruent with **Dehghani, Ghanavati, Soltan, Aghakhani, & Haghpanah (2016)** who found that head nurses had improved communication and cooperation with their management during clinical supervision and with one another. This result was consistent with **Russell et al. (2019)** who conducted a study in Western Australia to look into the effect of a clinical supervision program on nurses' attitudes. It was discovered that clinical supervision had a favorable impact on participants' attitudes.

Moreover, **Tangwongkit, Kerdmuang, Chaiyasak, Weerawatthanodom, & Pungpotong (2020)** looked into the effects of a participating nursing supervision program on the quality of supervision of head nurses at a general hospital in Chain. They found that the head nurses had statistically significantly higher scores on knowledge, attitude, and supervision quality. This result was in contrast with **O'donovan, Clough, & Petch (2017)** who showed that from pre- to post-training, there were considerable gains in supervision skills. Supervisors reported no significant competency improvements due to training, but they identified some positive changes in supervisory practice.

Successful professional identity formation has positively correlated with career success. Professional identity is a construct that encompasses many characteristics of a profession, including practices, ideas, and beliefs, ethics, and the conditions for professional success **(Healey & Hays, 2012).** In this context, as suggested by the research findings, the *head nurses' professional identity levels* were amended and improved after training program implementation. There was a statistically significant difference between the three program phases with the

highest mean rank for head nurses' professional identity after the program, followed by the mean rank for head nurses' professional identity after three months in the follow-up phase. All of these results suggested that the clinical supervision program had a large effect on total professional identity.

This result agrees with **Sun, Gao, Yang, Zang, & Wang (2016)** who discovered a statistically significant difference in the total scores for professional identity after intervention and follow-up after three months. Also, **Tafazoli & Sadeghi (2018)** found a statistically significant variation in the conceptions of professional identity among prospective instructors. This result was consistent with **Brunero & Stein-Parbury (2008)** who stated that effective clinical supervision enhances knowledge, practice, and competence and improves the professional growth of nursing personnel. In this regard, **King et al. (2020)** claimed that clinical supervision is critical. Individuals with higher professional identities can identify their positions as professionals, professional attitudes, and methods to others, both inside and beyond their industries, as it builds professional values and identity.

Finally, the current study demonstrated that the program had a large effect on total professional identity pre- and post-intervention and pre-intervention and followed intervention. However, the program had a medium effect in the post-intervention and follow-up phase. This result can be attributed to the head nurses using clinical supervision principles, which positively impacted their dealing with personal lives and work and helped them to plan and organize their work. This, in turn, increased their professional identity. This point of view was consistent with **Fitzgerald (2020)** who asserted that professional identity is crucial in a range of health-related occupations. Examples include actions and behaviors, knowledge and abilities, values, beliefs and ethics, context and

socialization, and group and personal identities, which all improve patient outcomes and satisfaction with one's practice.

Moreover, **Safan et al. (2020)** at all study phases, found that, there was a favorable correlation between the head nurse's clinical supervision knowledge and effectiveness and their professional identity. Clinical supervision's main goal is to improve the knowledge, abilities, and professionalism of head nurses, all of which are important aspects of their professional identity. As a result, supervision might be considered the principal route for head nurses and staff nurses in training to build their professional identities.

Limitation of the study

A convenience sample of 41 head nurses and 263 staff nurses working at one University Hospital in Mansoura Governorate was used for this study. And the findings can only be generalized to similar hospitals. To prove these findings, additional studies with large sample sizes from a diverse geographic areas should be conducted.

Conclusion

This study showed that, after a training program was implemented, there was a statistically significant difference in the clinical supervision efficacy of head nurses and a statistically significant improvement in their clinical supervision expertise. Additionally, the program had a large effect size on total professional identity in the pre- and post-intervention phases and the pre-intervention and follow-up phases. In contrast, the program had a medium effect on post-intervention and follow-up phases. Finally, the training program had a large effect on all professional identity domains.

Recommendations

- A clinical supervision program should be undertaken regularly for all head nurses in all hospitals to reinforce various techniques that can improve nursing care quality.
- Hospital management should hold workshops to raise awareness of clinical supervision models and implement them in the workplace with head nurses.
- Using constructive clinical supervision rules and procedures, clear roles for both the nurse supervisor and the supervisee should be established.
- More study on measuring and investigating adaptive behaviors, including career planning, self-efficacy, and career exploration, is needed.
- Workshops, in-service programs, and other nursing education activities in diverse work environments should focus on the nurse's professional identity.
- The notion of a nurse's professional identity demands increased attention, awareness, and emphasis in nursing schools and curricula, clarifying its positive impact on nurses' satisfaction and nursing care abilities, which are linked to better patient outcomes and satisfaction.

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