Clinical supervision coaching program for head nurses and its relation to their professional identity

Sanaa Moustafa Safan,∗ Amal Refat Gab Allah, Rehab Abd Allah Nassar

Nursing Administration, Faculty of Nursing, Menoufia University, Egypt

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ABSTRACT

Background: While formal education and training establish the basis for new leadership roles, coaching helps the nurse manager to put this training into use.

Aim: To explore the effect of clinical supervision coaching program in relation to head nurses’ professional identity.

Methods: Quasi-experimental research design was employed in conducting the study. This study was conducted at Menoufia University Hospitals, Egypt. A group of (41) head nurses and a group of (205) staff nurses were selected for this study. Three tools were used; Knowledge questionnaire about clinical supervision, clinical supervision effectiveness scale and professional identity questionnaire.

Results: The majority of the studied head nurses had inadequate levels of knowledge (95.1%) and clinical supervision effectiveness (65.9%) at the pre coaching phase and had significantly improved in the post and follow up phases. Professional identity was also low (80.5%) at the pre coaching phase and had significantly improved after coaching.

Conclusions: There was a positive correlation between the head nurse’s clinical supervision knowledge and effectiveness and their professional identity at all study phases. Coaching was effective in improving clinical supervision and professional identity.

Implications: It is recommended that coaching be used to support head nurses in a wide range of situations: orientation as a new nurse manager, support during role transitions, during new initiatives and during changing responsibilities as well as for ongoing development and succession planning that maximize their professional capabilities.

Key Words: Clinical supervision, Coaching program, Head nurses, Professional identity

1. INTRODUCTION

Nurse manager provides dynamic leadership role for healthy work atmosphere, positive patient outcomes and accomplishment of organizational goals. However, the development of skills critical for success is often ignored and new nurse managers struggle during their role transition from a clinical provider to nursing leadership.[1] Nurse Managers’ skills and abilities can be developed in a range of ways such as seminars, action learning sets, mentoring and coaching.[2] Variety of tools is needed to enable nurse managers to succeed in management and leadership in their units. Among the most effective leadership strategy for nurse managers to gain knowledge and develop skills within the context of supportive culture is reflective team coaching. The skills associated with the art of coaching improvement are useful in many situations including group dynamic clinical supervision. Integrating reflective team coaching into leadership plans for nurse managers can assist in generating the conditions to foster front line quality and safety improvement competences.[3]

Coaching is a formal association, much like a partnership, focused on meeting the learning requirements of the coaches.
in order to develop performance. Coaching differs from mentoring: a mentor acts as a reliable counselor in a relationship that is self-selected, informal and long enduring. During coaching, jointly established goals are used to draw a path for optimum performance during a time limited relationship. This could be achieved by maximizing strengths, improving weakness and monitoring progress of the coaches. On the other side, coaching empowers individuals to take responsibility and accountability for themselves and make necessary adjustments in their professional and personal life. Coaching also supports the argument that the goals of organizational effectiveness and personal fulfillment are indeed compatible. Moreover, coaching is highly focused on individuals as they articulate their future within an organization. It helps them to achieve excellence through developing personal and professional goals and guaranteeing to do the activities necessary to achieve them.

Coaching of performance will direct managers, supervisors and those in development to make the right play by training them on how to create a constructive and productive environment, understanding the importance of positive feedback and following key guidelines for giving it. Clinical supervision facilitates professional development and quality of practice and promotes safety and protection of clients through the adoption of targeted strategies. Nursing supervision is a process intended to improve the learning and performance of another with the direct intention of improving the supervisee’s talent to initiate the highest quality of care. Many organizations feel that the most future task of them is clinical supervision. Clinical supervision is grounded upon a clinically focused professional association between the practitioner engaged in professional practice and a clinical nursing supervisor. This relationship involves the supervisors who use their knowledge and experience to assist their supervisees to improve their practice, knowledge and value. Also, clinical supervision is an essential part of professional socialization. It can take diverse forms and may be adjusted to suit different circumstances. High-quality clinical supervision can improve job satisfaction and minimize stress levels. When it is absent or insufficient, however, the consequences can be serious.

Professional identity improves the outcome of the internalization of professional knowledge, skills, attitudes, values and standards of ethical clinical supervision, and the combination of these characteristics into one’s personal identity and performance within nursing education and practice. Furthermore, professional identity is concerned with the attitudes, beliefs, knowledge and skills shared within a professional group and associated to the professional roles assumed by them. It is a constituent of person’s total identity and increases by his/her position within the community, relations with others and the interpretation of experience.

Moreover, professional identity is an individual’s image of who he/she is as a professional. The nurse’s professional identity refers to the commonality of the nursing profession and to the distinctive way the nurse employs this commonality within the nursing profession. It’s often expressed in terms of related concepts, e.g. professionalism, perception of roles and professional self-concept. Professional attitudes or professionalism is viewed as a framework professionals use in identifying their work in a social role context. Advance ment of professional identity is also reinforced by critical, creative, and reflective thinking abilities in addition to accountability and awareness about research utilization and leadership. Professional identity includes the full application of nurses’ knowledge, skills, and abilities with clear meaning of the brims of diverse professions. There is a perfect sympathetic, either at individual or discipline domain, that professional identity could allow nurses to replicate an additional responsible and justifiable role, and change the outdated approach of how nurses perceives themselves and are perceived by others.

1.1 The significance of the study

The primary purpose of coaching is to help the coaches learn to adjust his/her personal behavior in order to achieve success in the workplace. Nurse Managers can be developed in a range of ways such as seminars, action learning sets, mentoring and coaching. Within development programs for nurse managers, a perceived value is placed on coaching to help them maximize their skills and potentials, develop both personally and professionally and facilitate formation of professional identity that enables nurses to practice with confidence and professionalism. It was observed from clinical experience at the study setting that nurse managers’ clinical supervision skills are inadequate. Thus, this study was conducted to explore the effect of clinical supervision coaching program in relation to head nurses’ professional identity

1.2 Research hypotheses

H1. The majority of head nurses at Menoufia University Hospitals have knowledge deficit about clinical supervision before implementation of the coaching program.

H2. Head nurses’ clinical supervision effectiveness is low at Menoufia University Hospitals before implementation of the coaching program.

H3. The coaching program will be effective in improving head nurses’ clinical supervision knowledge and effectiveness.
H4. There will be a positive relationship between head nurses’ clinical supervision coaching and their professional identity.

H5. There will be a relationship between head nurses’ clinical supervision and professional identity and their socio-demographic characteristic.

1.3 Theoretical framework
The implementation of coaching was based on one model of supervisor development that is the Supervisor Complexity Model (SCM) plus the coaching model. According to the Supervisor Complexity Model, supervisors develop through four different stages of development in their progress from novice to more competent and expert supervisors. The coaching model has three phases; preplanning and assessment phase, active coaching phase and a follow up phase.[21] Both skill and supervisory identity are developed as one move through the stages, and the existence of encouraging environment can facilitate development. The Supervisor Complexity Model identifies four stages of supervisor identity development and what tasks at each stage. At each stage, the supervisor develops greater professional identity, increased acceptance of the supervisee, and increasing confidence in supervisory skills. Moreover, supervisory identity and skill are both seen as necessary variables that demonstrate development. Changes in one can be caused by or related to the other.

2. MATERIALS AND METHODS
2.1 Research design
Quasi-experimental research design was employed in conducting the study.

2.2 Study setting
This study was conducted at different critical care units, and general departments at Menoufia university hospitals.

2.3 Subjects
The study sample consisted of two groups:

Group (1): Convenience sampling technique was used to select (n = 41) head nurses from the above-mentioned Setting who had at least two years of experience and accepted to participate in the study.

Group (2): Convenience sampling technique was used to select (n = 205) staff nurses who accepted to participate in the study. Five nurses were selected from each unit from the above-mentioned setting to evaluate their head nurses’ clinical supervision effectiveness.

2.4 Instruments of data collection
Data were collected using three different instruments:

2.4.1 Instrument (I): Clinical supervision knowledge questionnaire
This tool was developed by the researcher to assess the head nurses’ knowledge about clinical supervision. It was divided into two parts as follows:

Part (1): Consisted of items related to demographic characteristic of head nurses such as: working unit, age, qualifications, and years of experiences.

Part (2): Clinical supervision knowledge questionnaire: It included (84) questions divided into (40) multiple choice questions, (20) essay questions and (24) true or false questions. This questionnaire included questions about supervision, coaching, motivation, communication, delegation, performance appraisal, problem solving & decision making and discipline as they are main components of clinical supervision. Each question was granted one point for the correct answer and zero for incorrect answer. The total score for all questions was 84 marks. Total scores were expressed as percentages. A score of (≤ 60%) indicate low level of clinical supervision knowledge, a score of (60% - < 75%) indicate moderate level of clinical supervision knowledge, and a score of (≥ 75%) indicate high level of clinical supervision knowledge. Low level indicates inadequate (unsatisfactory) knowledge and moderate and high levels indicate adequate (satisfactory) knowledge.[22]

2.4.2 Instrument (II): Clinical supervision effectiveness scale
This instrument consisted of two parts:

Part (1): Consisted of items related to demographic characteristic of staff nurses such as: unit, age, qualifications, and years of experiences.

Part (2): Clinical Supervision effectiveness Scale: This instrument was guided by the Manchester Clinical Supervision Scale developed by Winstanley.[23] The aim of this instrument was to assess the effectiveness of clinical supervision of head nurses at the workplace from their staff nurses’ points of view. Manchester Clinical Supervision scale comprises (36) items divided into seven sub-scales; Trust/rapport (7 items), supervisor advice/support (6 items), improved care skills (7 items), importance/value of clinical supervision (6 items), finding time for clinical supervision (4 items), personal issues (3 items), and reflection (3items). Participants’ responses were rated on a five-point Likert scale while “1” stands for “strongly disagree” and “5” stands for “strongly agree”. A high score for any subscale reflects a high degree of effectiveness of that particular aspect of clinical supervi-
sition, and a high total score reflects high overall effectiveness of clinical supervision. A score of (< 60%) indicates low clinical supervision effectiveness, a score of (60% - < 75%) indicates moderate clinical supervision effectiveness, and a score of (≥ 75%) indicates high clinical supervision effectiveness.\textsuperscript{[23,24]}

2.4.3 Instrument (III): Head nurses’ professional identity questionnaire

This was a self-administered questionnaire. This instrument was developed by Kabeel\textsuperscript{[25]} and modified by the researchers to assess nurse managers’ professional identity. It consisted of 56 items divided into three subscales; (27) items covered professional image; (25) items covered assertiveness and (4) items covered self-responsibility. Each item was ranked on a three point scale ranging from 1 for disagree, 2 for uncertain and 3 for agree, with higher scores indicating stronger professional identity. The scoring system was classified as follows: low professional identity with a score < 60%, moderate professional identity with a score (60% - < 75%), and high professional identity with a score ≥ 75%.

2.4.4 Validity of the study instruments

Tools were tested to assess face and content validity through bilingual group of five experts from nursing administration departments at different faculties of nursing across Egypt. Tools were considered valid from the experts’ perspective.

2.4.5 Reliability of the instruments

Test-retest reliability was used by the researcher for testing the internal consistency of the tools. The Cronbach’s coefficient alpha for clinical supervision knowledge questionnaire was (\(\alpha = 0.89\)), for the clinical supervision effectiveness scale was (\(\alpha = 0.86\)) and its test-retest reliability coefficient was 0.93.\textsuperscript{[23]} It was (\(\alpha = 0.89\)) for professional identity questionnaire.

2.5 Pilot study

A pilot study was conducted after the development of the instruments and before starting the actual data collection. The pilot study was carried out on randomly selected 10% of nurse managers and staff nurses. The subjects of the pilot study were included in the main study sample because no modifications of study instruments were done. The time required to answer the clinical supervision knowledge questionnaire was estimated to be 35-45 minutes, for the professional identity questionnaire (10-15) minutes, and for staff nurses to fill in the clinical supervision effectiveness scale (15-20) minutes.

2.6 Field work

- Data collection was carried out over a period of three months. It was filled in the period from the 1st of January 2018 to the 1st of April 2018. The implementation of coaching was based on The Model of Coaching. All coaching models have the following stages in common: preplanning and assessment phase, active coaching phase and a follow up phase\textsuperscript{[21]}

- In the preplanning and assessment phase, an initial assessment of nurse managers’ knowledge about clinical supervision was done using the developed knowledge questionnaire. At the same time, five staff nurses from each unit assessed their head nurse’s clinical supervision effectiveness. Professional identity questionnaire was self-administered to head nurses.

- The first meeting with head nurses was conducted within the preplanning assessment phase. During this meeting the coach and coaches began to form a relationship and agree on a desired course. Data of pre-test were analyzed and then the coaching needs were determined. Accordingly the coaching program and its schedule were designed by the researchers. The studied sample of head nurses was divided into three groups and each group received the coaching program separately to ensure effectiveness. The clinical supervision coaching program was carried out in the period from 15th of April, 2018 to 1st of June 2018.

- The program was conducted in twenty sessions (ten theoretical and ten practical), each session lasted for 60 minute and each group received two sessions a day twice per week until the end of the program. Session one: Clinical supervision (theoretical), session two: On the job training on clinical supervision, session three: coaching skills, session four: communication skill training, session five: motivation (theoretical), session six: onsite practical training on motivation, session seven and eight: problem solving and decision making (theoretical & practical), session nine: delegation, session nine performance appraisal, and session ten: discipline. Teaching methods used were lectures, on the job training, group discussion and role playing. During the active coaching phase, the coach’s role was to use procedures designed to generate self-feedback and insight from the coaches. This holds the coaches responsible and accountable for their development and endorses self-esteem and critical thinking. Actions easier to achieve were set first then those for complicated goals. As the coaches gained insight, achieved goals and built self-efficacy, the coaching relationship and sessions wind down.

- During the follow up and close out phase of the coaching engagement, progress was monitored and post-test data were collected using the same data collection
Written approval was obtained from Medical and Nursing Directors of Menoufiya University Hospitals to obtain their permission to conduct the study. The researchers obtained study subjects’ approval orally after explaining the study purpose and the procedures. Participants were informed that their information will be confidential and be used for the purpose of research only. Additionally, subjects were assured that participation is voluntary and that they have the right to withdraw from the study at any time.

### 2.7 Administrative and ethical aspects

Written approval was obtained from Medical and Nursing Directors of Menoufiya University Hospitals to obtain their permission to conduct the study. The researchers obtained study subjects’ approval orally after explaining the study purpose and the procedures. Participants were informed that their information will be confidential and be used for the purpose of research only. Additionally, subjects were assured that participation is voluntary and that they have the right to withdraw from the study at any time.

### 2.8 Statistical methods

Results were collected, tabulated, statistically analyzed by IBM personal computer and statistical package SPSS version 22. Two types of statistics were done: Descriptive statistics: e.g. percentage (%), mean (x) and standard deviation (SD). Analytic statistics: e.g. Chi-square test ($\chi^2$) was used to study association between two qualitative variables. Student $t$-test is a test of significance used for comparison between two groups having quantitative variables. ANOVA test is a test of significance used for comparison between more than two groups having quantitative variables. Pearson’s correlation coefficient measured how variables or rank orders are related.

### 3. RESULTS

Table 1 presents socio-demographic characteristic of the studied subjects. As evident in the table, the highest percentage of the study subjects age ranged from 30 to less than 40 years (63.4% & 31.6% respectively). Concerning qualification, the majority of head nurses (70.7%) and staff nurses (83.8%) had a bachelor degree in nursing. As for job position, the highest percentage of the study subjects were staff nurses. Regarding years of experience, the highest percentage of head nurses (39.1%) had experience more than 10 years while staff nurses had experience less than 5 years (67.8%). Concerning units and departments, the highest percentage of the studied subjects were working at critical care units.

Figure 1 Shows the levels of head nurses’ clinical supervision knowledge throughout different study phases. As shown in the figure, the majority of the studied head nurses had low level of knowledge at the pre coaching phase (95.1%). Moreover, knowledge scores had significantly improved immediately after coaching and in the follow up phase ($p < .001$).

| Working area       | n (%)  | n (%)  | n (%)  |
|--------------------|--------|--------|--------|
| Critical care units| 25     | 61     | 125    |
| General departments| 16     | 39     | 80     |

Table 2. Mean scores of head nurses’ clinical supervision effectiveness subscales throughout the study phases.

| Demographic data | Head nurses (n = 41) | Staff nurses (n = 205) |
|------------------|----------------------|------------------------|
| Age (years)      |                      |                        |
| - 18-29          | 4 9.8                | 63 30.9                |
| - 30-39          | 26 63.4              | 65 31.6                |
| - 40-49          | 10 24.4              | 44 21.3                |
| - > 50           | 1 2.4                | 33 16.2                |
| Mean ± SD        | 38.78 ± 4.00         | 32.37 ± 5.83           |
| Range            | 30-47                | 21-47                  |
| Years of experience |                  |                        |
| - < 5            | 10 24.3              | 139 67.8               |
| - 5-10           | 15 36.6              | 27 13.1                |
| - > 10           | 16 39.1              | 39 19.1                |
| Mean ± SD        | 17.78 ± 5.03         | 12.86 ± 6.27           |
| Range            | 10-28                | 1-29                   |

In Table 2, mean scores of head nurses’ clinical supervision effectiveness subscales throughout the study phases. As shown in this table, there was statistically significant difference between all subscales of clinical supervision effectiveness. Additionally there was improvement at the mean score of all subscales of clinical supervision effectiveness after coaching and on follow up assessment than before.

Table 3 Shows levels of head nurses’ clinical supervision effectiveness from staff nurses point of view throughout the study phases. As shown in this table, the highest percentage of head nurses’ had low clinical supervision effectiveness at the pre-coaching phase while after coaching, the highest percentage of them had high clinical supervision effectiveness and it improved more in the follow up phase.

| Working area       | n (%)  | n (%)  | n (%)  |
|--------------------|--------|--------|--------|
| Critical care units| 25     | 61     | 125    |
| General departments| 16     | 39     | 80     |
In Table 4, mean scores of head nurses’ professional identity and its dimensions throughout study phases. As presented in the table, the mean scores of all professional identity dimensions and the total professional identity mean scores had significantly improved immediately after coaching and in the follow up phase ($p < .001$). And also the highest mean score of professional identity dimensions throughout study phases was professional image.

**Table 2.** Mean scores of head nurses’ clinical supervision effectiveness from staff nurses’ point of view throughout the study phases (n = 41)

| Clinical supervision effectiveness subscales                     | Pre-coaching | Post-coaching | Follow up | ANOVA test | $p$-value |
|----------------------------------------------------------------|--------------|---------------|-----------|------------|-----------|
| Trust/rapport                                                   | 10.63 ± 1.61 | 15.54 ± 2.04  | 15.63 ± 1.94 | 480.10     | < .001    |
| Supervisor advice/support                                       | 9.50 ± 1.54  | 16.29 ± 1.63  | 16.33 ± 1.60 | 1,251.17   | < .001    |
| Improved care skills                                           | 9.87 ± 2.74  | 15.59 ± 2.39  | 18.17 ± 2.78 | 530.48     | < .001    |
| Importance/value of clinical supervision                       | 10.78 ± 1.89 | 12.14 ± 1.98  | 12.18 ± 2.04 | 33.37      | < .001    |
| Finding time for supervision                                   | 8.43 ± 1.76  | 9.82 ± 1.72   | 10.09 ± 1.48 | 58.87      | < .001    |
| Personal issues                                                | 6.20 ± 0.96  | 7.69 ± 1.49   | 7.70 ± 1.50  | 84.26      | < .001    |
| Reflection                                                      | 4.80 ± 1.59  | 7.83 ± 1.32   | 7.93 ± 1.32  | 311.27     | < .001    |
| Total supervision effectiveness                                 | 60.23 ± 6.11 | 85.35 ± 7.24  | 87.49 ± 7.79 | 938.65     | < .001    |

**Table 3.** Levels of head nurses’ clinical supervision effectiveness from staff nurses’ point of view throughout the study phases (n = 41)

| Clinical supervision effectiveness level | Pre-coaching | Post-coaching | Follow up | $\chi^2$ | $p$-value |
|-----------------------------------------|--------------|---------------|-----------|---------|-----------|
| Low                                     | 27 65.9      | 1 2.4        | 0 0.00    |         |           |
| Moderate                                | 14 34.1      | 5 12.2       | 5 12.2    | 92.49   | < .001    |
| High                                    | 0 0.00       | 35 85.4      | 36 87.8   |         |           |
Table 4. Mean scores of head nurses’ professional identity and its dimensions throughout the study phases (n = 41)

| Head Nurses’ Professional Identity      | Mean ± SD Pre-coaching | Post-coaching | Follow up | ANOVA test | p-value |
|----------------------------------------|------------------------|---------------|-----------|------------|---------|
| Professional Image                     | 37.35 ± 5.54           | 75.22 ± 3.87  | 75.22 ± 3.87 | 957.01     | < .001  |
| Assertiveness                          | 33.98 ± 5.50           | 69.29 ± 2.18  | 69.29 ± 2.18 | 127.46     | < .001  |
| Self-responsibility                    | 8.23 ± 0.83            | 10.44 ± 0.81  | 10.44 ± 0.81 | 99.89      | < .001  |
| Total professional identity            | 79.55 ± 10.83          | 154.95 ± 5.69 | 154.95 ± 5.69 | 1269.20    | < .001  |

Figure 2. Levels of head nurses’ professional identity throughout the study phases (n = 41)

Figure 2 shows the levels of head nurses’ professional identity throughout the study phases. As presented in the figure, the majority of the studied head nurses had low professional identity at the pre coaching phase (80.5%). Furthermore, professional identity levels had significantly improved immediately after coaching and in the follow up phase (95.1% at the two stages).

Table 5 presents correlation between head nurses’ clinical supervision knowledge and effectiveness and their professional identity throughout the study phases. As illustrated in the table, there was no statistical significant correlation between head nurses’ professional identity and their clinical supervision knowledge at the pre-test while this correlation was statistically significant at post-test and follow up phases. Furthermore, there was a statistical significant correlation between the head nurses’ professional identity and their clinical supervision effectiveness at all the study phases.

Table 5. Correlation between head nurses’ clinical supervision knowledge and effectiveness and their professional identity throughout the study phases (n = 41)

| Clinical supervision                  | Head nurses’ professional identity |
|---------------------------------------|-----------------------------------|
|                                       | Pre-coaching | Post-coaching | Follow up |
|                                       | R          | p-value  | R          | p-value  | R          | p-value  |
| Clinical supervision knowledge        | 0.07       | .682     | 0.05       | .749     | 0.89       | < .001*  |
| Clinical supervision effectiveness    | 0.93       | < .001*  | 0.92       | < .001*  | 0.94       | < .001*  |

Note: * p < .001
Table 6. Correlation between head nurses’ clinical supervision knowledge with their demographic data and clinical supervision effectiveness score throughout the study phases (n = 41)

| Items                      | Head nurses’ clinical supervision knowledge | Head nurses’ clinical supervision knowledge | Head nurses’ clinical supervision knowledge |
|----------------------------|--------------------------------------------|-------------------------------------------|-------------------------------------------|
|                            | Pre-coaching | Post-coaching | Follow up | Pre-coaching | Post-coaching | Follow up |
|                            | R            | p-value       | R          | p-value       | R          | p-value |
| Age (years)                | 0.20         | .208          | -0.37      | .04           | 0.40       | .024    |
| Years of experiences       | 0.12         | .456          | 0.42       | .047          | 0.38       | .042    |
| Clinical supervision       | 0.39         | .04           | 0.42       | .035          | 0.35       | .03     |
|                           | effectiveness score                         |                                          |                                          |                                          |                                          |

Table 6 presents correlation between head nurses’ clinical supervision knowledge with their demographic data and clinical supervision effectiveness scores throughout the study phases (pre-, post- and follow up). As shown in this table, there was no statistical significant correlation between the head nurses’ clinical supervision knowledge and their ages and years of experience at pre coaching phase whereas there was a statistical significant positive correlation between clinical supervision knowledge and head nurses’ ages and years of experience at post coaching and follow up phases. On the other hand, there was a statistical significant positive correlation between clinical supervision knowledge and clinical supervision effectiveness at all study phases.

4. DISCUSSION

Coaching is an effective strategy to support nurse managers in a range of situations: orientation as a new nurse manager, support during role transitions and during new enterprises and during changing responsibilities as well as for continuous development and succession planning. A formal, structured coaching program for nurse managers enhances, facilitates and accelerates skill acquisition and increases individual and organizational reimbursements faster than orientation and education alone.\(^{26}\)

The first hypothesis was that the majority of head nurses had knowledge deficit about clinical supervision. This hypothesis was true according to the study results as the majority of the studied head nurses had unsatisfactory knowledge about clinical supervision before coaching. These results are supported by ElZeneny\(^{27}\) who conducted a quasi-experimental study to investigate the effect of clinical supervision training program for nurse managers on quality of nursing care in intensive care units at Tanta University Hospital. Their results also revealed that nurse managers’ knowledge about clinical supervision was poor and had significantly improved after training.

As regards to clinical supervision effectiveness, the second study hypothesis stated that clinical supervision effectiveness is low at Menoufia University Hospital. This hypothesis was also true according to the study results as more than half of staff nurses included in the study had rated their head nurses’ clinical supervision effectiveness as being low whereas none of them rated clinical supervision effectiveness as being high before the implementation of coaching. From the researchers’ point of view, effectiveness was low due to poor knowledge about clinical supervision and also due to absence of clinical supervision training for nurse managers at the study setting. In the same line, a study conducted by ElZeneny\(^{27}\) revealed that clinical supervision competencies of nurse managers were low.

The researchers hypothesized that coaching program will be effective in improving head nurses’ knowledge and effectiveness of clinical supervision. This hypothesis was true according to the study results as nurse managers’ clinical supervision knowledge and effectiveness had significantly improved after implementation of the coaching program. Despite the limitations addressed in this study as lack of nurse managers’ time and the constant competing priorities and demands on nurse managers’ time, coaching sessions were flexible and appropriate to the time, location and method in order to overcome these obstacles.

This study result is in agreement with the results of a study conducted by Baxter\(^{26}\) who conducted three exploratory case studies to explore the effect of coaching nurse managers’ on unit based performance development. The researcher in that study reported that coaching was a feasible methodology for enhancement and hastening of skill acquisition for nurse managers. Also, a study conducted by Moen\(^{28}\) demonstrated a difference between middle managers that were coached and those that were not. Middle managers who were coached had better self-efficacy and understanding of personal factors contributing to success, compared with those in the control group (no coaching) who experienced deterioration of goal commitment, satisfaction, autonomy
and understanding the relatedness of personal factors to lack of success. In the same line, a study conducted by Karsten[29] reported that after two years of individual coaching program for senior leadership in an acute care hospital, voluntary nurse turnover was declined to half, patient satisfaction elevated from the 50th percentile to the 75th percentile and employee satisfaction elevated from the 50th percentile to the 65th percentile.

Moreover, Abd El-Halem[30] and Fulton[31] had clarified the role of training in improving clinical supervision as their study results found a highly statistically significant improvement in nurses managers’ supervision competencies and stated that the educational program was effective in improving their clinical supervision. A study conducted by Piresa[32] about most relevant clinical supervision strategies in nursing practice reported that continuing education is grounded on the training framework of clinical supervision and should be delineated in an integrative way in the supervision process, since this is well-thought-out of major relevance to nurses’ professional practice. It also leads to the enhancement of skills, encourage self-training, research, innovation, acquisition of skills, competencies and knowledge, and favoring the improvement of self-autonomy. They further clarified that continuing education was found to be the fourth most relevant strategy for clinical supervision.

Additionally, the present study results revealed a statistical significant correlation between nurse managers’ clinical supervision knowledge and effectiveness scores after program implementation, also in the follow up phase. From the researchers’ point of view, the theoretical part of the coaching program was effective in improvement of nurse managers’ knowledge, the knowledge they gained during coaching had helped them to improve their skills in clinical supervision which significantly improved clinical supervision effectiveness. This result was compatible with Baston[21] and Fulton[31] who found a highly statistically significant improvement in nurses’ knowledge immediately after program implementation, as significant differences were found between the mean pre at one hand and post and follow up test knowledge scores at the other and mentioned that the educational program was effective in improving head nurses’ knowledge and competencies of clinical supervision. In agreement with these results, the development of clinical supervision education and training program is effective in increasing knowledge and skills of clinical supervision for stakeholders.[32]

This result also was consistent with Cruz[33] who reported that after training program for nurse managers, the participants gained aspects such as lifelong learning, professional growth and development. On the other hand, this result is contrary to El-Deghaiy[34] who found no significant statistical relation between head nurses’ clinical supervision knowledge and practices scores. Although, nurse managers’ knowledge had slightly declined in the follow up phase as compared to immediately after coaching, their clinical supervision skills had slightly improved in the follow up phase. An explanation of that would be, knowledge may be declined due to oblivion with time. Also researchers believe that improvement of clinical supervision skills in the follow up phase than immediately after coaching may be attributed to nurse managers’ mastery of clinical supervision skills with time and increased self-confidence with practice of such skills. Also, clinical supervision skills was assessed in this study from the staff nurses perspectives and they may not realized such improvement immediately after coaching but perceived it more with time and practice during different clinical supervision sessions.

The results of the present study revealed that professional identity of nurse managers was low before implementation of coaching. In contrary to the study results a study conducted by Mohtashami[35] about professional identity and clinical competencies of psychiatric nurses revealed that the highest percentage of bachelor degree nurses had professional identity at good and very good levels as compared to very small percentage that reported professional identity at weak level. Also, the study results are not in agreement with that of Borjen[36] who studied attitudes of nursing graduates between 1995 and 2005 regarding their profession and concluded that the highest percentage of the studied nurses had positive attitudes. They concluded that the majority of the nurses had succeeded to deal with the stress, problems, shortages, and low income of their profession as a result of their interest and the nature of their job and the opportunity to serve the society. This difference may be attributed to different study population as the previous two studies had studied various nursing categories while this study had only included head nurses’ professional identity.

The fourth study hypothesis which stated that there will be a positive relationship between head nurses’ clinical supervision coaching and their professional identity was also true according to the study results. The study results highlighted a statistically significant difference between professional identity before clinical supervision coaching and immediately after it and in the follow up phase. This result is in accordance with the Supervisor Complexity Model (SCM). According to the SCM, Watkins[37] and Hillman[38] stated that supervisors’ progress through four different stages of development in their progress from novice to more competent and expert supervisors. Throughout every stage, supervisors
have particular duties to achieve and specific responsibilities. Development occurs in the form of an augmented sense of professional identity. Progress typically is constructive, positive and stepwise.\textsuperscript{[37]} Indicated that while skill and identity are two distinct variables, they are complementary concepts that nurture, support or disconfirm each other, and changes in one often involve some degree of changes in the other. Both skill and supervisory identity are developed as one move through the stages, and the presence of a proper holding and positive environment can smooth development. The SCM identifies four stages of supervisor identity development and what tasks appear at each stage. At each stage, the supervisor is said to develop better professional identity, increased acceptance of the supervisee, a less dogmatic approach regarding theory, and increasing confidence in supervisory skills. Changes in one can be triggered by or linked to the other. Thus, training and experience in supervision are viewed as important.

This result is also in agreement with that Fujii\textsuperscript{[39]} who clarified that professional identity improves with development of one’s skills. It’s also consistent with the literature as Cowin\textsuperscript{[12]} maintained that knowledge, skills, attitudes, values and standards of ethics enables incorporation of these characteristics into one’s personal identity and behaviors with nursing education and practice. Also, Joo\textsuperscript{[40]} maintained that coaching can enhance skills, develop awareness in new leaders, and help develop confidence and self-worth.

The result of the present study revealed that professional identity was positively correlated with years of experience. This result supports the fifth hypothesis of the study. This study result is in agreement with that of Fujii\textsuperscript{[39]} who conducted a study about professional identity of public health nurses. Their results revealed that confidence in one’s own ability as a main aspect of professional identity was positively correlated with years of experience. In the same line, a study conducted by Hassani\textsuperscript{[16]} about professional identity and turnover intention among staff nurses illustrated that there were statistically significant positive correlations between total professional identity and nurses’ age and years of experience. On contrary, the results of the study conducted by Mohtasham\textsuperscript{[35]} about correlation between professional identity and clinical competency of psychiatric nurses reported that none of the demographical variables had significant relationship with professional identity.

In conclusion, the five hypotheses tested in this study was true according the study results.

5. Conclusions
This study concluded that the majority of the studied head nurses had low levels of knowledge at the pre coaching phase and knowledge scores had significantly improved immediately after coaching and in the follow up phase. Also, the highest percentage of head nurses’ had low clinical supervision effectiveness at the pre-coaching phase while after coaching, the highest percentage of them had high clinical supervision effectiveness and it improved more in the follow up phase. Additionally, mean scores of all professional identity dimensions had significantly improved immediately after coaching and in the follow up phase and the highest mean score of professional identity dimensions was professional image throughout study phases. Furthermore, there was no statistical significant correlation between head nurses’ professional identity and their clinical supervision knowledge at the pre-coaching while this correlation was statistically significant at post-coaching and follow up phases. Finally, there was a positive correlation between the head nurse’s professional identity and their clinical supervision effectiveness at all the study phases. Based on the findings of the present study, the following could be recommended:

1. Clinical supervision coaching program should be a necessary constituent of annual head nurses’ management development program. Also, the nurse’s professional identity should be an essential subject of in-service programs.

2. The concept of nurse’s professional identity needs more attention, awareness, and is to be highlighted in nursing schools and faculties curricula.

3. Coaching should be incorporated as a necessary strategy for educating and training nursing students on several nursing management and leadership skills. Coaching also should be the best approach for teaching clinical supervision for nursing students.

Limitations of the study and recommendation for future research
This study has some limitations that must be taken into account when interpreting the results from it. Firstly, budget, time, and accessibility limitation did not allow the researchers to contact a larger number of respondents so the results of present study would be more generalizable. Second, this study is cross-sectional and completed in a relatively short time. Future studies would adopt longitudinal design to allow evaluation of the long lasting effect of coaching on both clinical supervision and professional identity. Third, Convenience sampling technique was used to select the study participants. This was because information about nurses were not readily available to the researchers and also because of the limited number of head nurses at the study setting which is not relevant to randomization. Replication
of this study in another setting that includes larger number of head nurses would improve the generalizability of this study results. Further research into the value of coaching as a strategy to improve nurse managers’ competency and to link it to employee and organizational benefits is also recommended.

CONFLICTS OF INTEREST DISCLOSURE
The authors declare they have no conflicts of interest.

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