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|  <p>INNOVATIVE<br/>JOURNAL<br/>ЮНКВУГ</p> | <p>Contents lists available at <a href="http://www.innovativejournal.in">www.innovativejournal.in</a></p> <p>INTERNATIONAL JOURNAL OF NURSING DIDACTICS</p> <p>homepage: <a href="http://innovativejournal.in/ijnd/index.php/ijnd">http://innovativejournal.in/ijnd/index.php/ijnd</a></p> |  <p>IJND<br/>ISSN: 2231-5454</p> |
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## Effect of Clinical Supervision Training Program for Nurse Managers on Quality of Nursing Care in Intensive Care Units

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DOI: <http://dx.doi.org/10.15520/ijnd.2017.vol7.iss8.244.08-17>

**Abstract: Background:** clinical supervision is a useful strategy to foster the professional development of nurses, develop advanced independent practitioners, provide support for staff nurses and improve the quality of patients care. (Gonge and Buus, 2011). **Aim:** The aim of the current study was to examine the effect of clinical supervision training program for nurse managers on quality of nursing care in intensive care units. **Design:** A quasi – experimental design was utilized in this study. **Setting:** The current study was conducted in eight selected intensive care units at New Kasr El Aini Teaching Hospital. **Subjects:** Study sample composed of two groups as follows: first group is all nurse managers who were working at the previous selected intensive care units at New Kasr El Aini Teaching Hospital; their number was (30). The second group is: stratified random percent of sample from staff nurses population which constitute (78) out of 187 staff nurses. **Tools:** Data were collected by using the following three tools: clinical supervision knowledge questionnaire, observational checklist for the clinical supervision competencies and quality of nursing care checklist. **Results: there** was a statistical significant correlation between nurse manager’s clinical supervision competencies and quality of patient care among staff nurses immediately post program and 3 months post program. A statistical significant correlation between knowledge and competencies scores of head nurses 3 months post program. **Conclusion:** There was a positive effect of a clinical supervision training program on quality of nursing care among staff nurses. **Recommendations:** Provide nurse managers with adequate support and needed resources that facilitate implementation of clinical supervision as well as motivate them to implement the new educational strategies of clinical supervision that improve quality of patient care .Replication of current study in other departments and hospitals to get the clinical supervision benefits and effectiveness for nurse managers, staff nurses and patients.

**Key words:** Clinical supervision, training program, nurse manager, quality of nursing care, staff nurses.

### INTRODUCTION

Improving the quality of care in practice is a challenge for nursing managers and staff as well as the healthcare organization. Nurse Managers have an essential role in empowering staff development and quality improvement. They have a critical role to play in quality improvement efforts to provide ongoing leadership and accountability for quality of nursing care. They are accountable for their role in assisting their staff to meet quality and to decrease barriers to provide quality patient care. The effect of clinical supervision on quality of care is a timely issue (Abou Hashish, 2010).

On the other hand, the increasing concern about the link between clinical supervision practices and patient safety and quality of care has created an urgent need for a more understanding of the nature of clinical supervisory activities at an operational level. The vital purpose of clinical supervision is to improve patient care and experiences, therefore, improvements in outcomes for patients are major test of effective supervision (Abou Hashish, 2010). Supervision is the activity of management that is concerned with training and discipline of workforce. It is an intervention provided by a senior member of a profession to a junior member of the same profession (Bernard and Goodyear, 2014).

Nursing supervision is a process designed to enhance the learning, and performance of another with the direct intention of enhancing the supervisee’s ability to deliver the

highest standard of care. Many organizations feel that the most future task of them is clinical supervision (Edwards et al., 2009). Clinical supervision is a process based upon a clinically focused professional relationship 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 develop their practice, knowledge and value. Also these relationships will, enable practitioners to establish, maintain and improve quality of nursing care and their clinical practice (Eldeeb, 2010). Moreover it is an important mechanism in the provision of high quality of care. Good supervision will produce a positive outcome for the nurses as well as the patients. It offers nurses an opportunity for taking responsibility for developing and maintaining their competencies in their work practices which reflects on quality of patient care (Eldeeb, 2010).

Quality is an important aspect of healthcare; indeed, for most people, it is the most important aspect. Quality is a degree of excellence or superiority in kind, While the JCAHO (Joint Commotion Accreditation Hospitals Organization) defines healthcare quality as the degree to which health services for individuals and populations increase the likelihood of desired health outcomes (Marquis and Huston, 2015).

According to Goodrick and Reay (2010), clinical supervision is considered to have three principal functions including; educational, supportive and managerial functions that could help in attaining personnel and organizational

goals. Moreover, clinical supervision is an important way to support and guide nurses to ensure safe practice and quality of care and helping them in coping with their working situations and preventing burnout. Also, it helps nurses to maintain their ability to take action under stress and to adopt a more tolerant attitude towards patients. (Walsh, 2012; White and Winstanley; 2010 and Berggren & Severinsson, 2011). In addition, it provides an avenue for nurses to demonstrate active support for each other as professional colleagues, and providing reassurance and validation (Health Workforce Australia, 2011). Importantly, clinical supervision has been linked to good clinical governance, by helping to support quality improvement, managing risks, and by increasing accountability (Care Quality Commission, 2013).

## SIGNIFICANCE OF THE STUDY

Improving the quality of patient care in critical care units is the most important hospital objectives to continue in providing services to their patient and to continue in the healthcare market as a competitor. There is an evidence that clinical supervision has positive impacts not just on the retention and absenteeism rates of nurses but it also has a positive effect on the quality of patient care (Pitman, 2011). There is potential for clinical supervision to contribute to the development of a more articulate and skilled workforce which in turn can contribute positively to organizational objectives (Royale College of Nursing, 2007; White & Winstanley, 2011). From the work experience of the researcher at New Kasr El Aini Teaching Hospital, it was observed that nurse managers in intensive care units, lack the essential administrative skills and prerequisite for effective clinical supervision, which in turn affect quality of nursing care. So it hopes that this clinical supervision training program will enhance their skills and provide them with basic and essential principles of effective clinical supervision that leads to positive patient outcome.

## SUBJECTS AND METHODS

### *Aim of the study:*

The aim of the current study was to examine the effect of clinical supervision training program for nurse managers on quality of nursing care in intensive care units.

### *Research hypothesis:*

The current study is carried out to investigate the following hypotheses:-

H (1): There will be difference in knowledge test score of nurse managers' clinical supervision after the program implementation compared to before.

H (2): There will be difference in scores of nurse managers' clinical supervision competencies after the program implementation compared to before.

H (3): There will be difference in scores of quality of nursing care rendered by staff nurses after the program implementation compared to before.

### *Research design:*

A quasi – experimental design was utilized in this study.

### *Setting of the study:*

The current study was conducted in eight selected intensive care units at New Kasr El Aini Teaching Hospital which is affiliated to Cairo University Hospital with a total number of 80 patient beds from total hospital beds number 838.

### *Subject sample:*

Study sample composed of two groups as follows:

**1<sup>st</sup> Group:** All nurse managers who were working at the previous selected intensive care units at New Kasr El Aini Teaching Hospital constituted the study sample. Their number was (30) who were divided into (19) head nurses and (11) charge nurses. The inclusion criteria include: having baccalaureate degree in nursing, had more than one year experience in their worked units, interested in participating in the clinical supervision training program, completed the pre-test at the beginning of the training program, complete the program; and take the post-test immediately after have been exposed to the clinical supervision program and 3-months later.

**2<sup>nd</sup> Group:** Stratified random percent of sample (42%) from staff nurses population which constitute (78) out of 187 staff nurses, with confident level 95 % and sample sizes for margin of error = 0.10 was included in the current study.

### *Inclusion criteria:*

Staff nurses, who took a daily patient assignment and provided direct patient care, had more than one year experience in their worked units and who agreed to participate in this study was included in the study.

### *Data collection tools:*

To achieve the aim of this study data have been collected by using the following tools:

**Clinical supervision knowledge questionnaire:** It was developed by Helen and House (2010) and Eldeeb (2010), and modified by the researcher to measure nurse managers' clinical supervision knowledge. It divided into two parts as follows:

1<sup>st</sup> Part: Was related to the personal characteristics of the participants: Such as: gender, position, age, years of experience, work place, the level of education, and one question related to attending of previous training programs.

2<sup>nd</sup> Part: **Clinical supervision knowledge questionnaire:** It contained (30) questions divided into (20) multiple choice questions, (14 questions for clinical supervision knowledge and 6 for management knowledge), and (10) true or false questions focused on clinical supervision knowledge.

**Scoring system:** each question was granted one point for the correct answer and zero for incorrect answer. The total score for all questions was 30. Total scores were expressed as percentages. Score of (<59, 9 %) indicate low clinical supervision knowledge, score of (60 % - 74.9%) indicate moderate clinical supervision knowledge, and score of (≥75%) indicate high clinical supervision knowledge. Low scoring indicates inadequate (unsatisfactory) knowledge and high, moderate scoring indicate adequate (satisfactory) knowledge (Morsi, 2014, Helen and House, 2010).

**Observational checklist for the clinical supervision competencies:** This tool was guided by the Manchester Clinical Supervision Scale developed by **Winstanly (2000)** and modified by the researcher to assess nurse managers' clinical supervision competencies. It consisted of three dimensions to collect data relevant to the study and subdivided into (34) items as follows: (17 Items) to assess managerial skills, (7 Items) to assess educational skills and (10 Items) to assess supportive skills of nurse managers' competencies. The observation checklist was used three times before the program, immediately after and three months post program implemented. With the scoring system of a 3 point Likert scale on competencies, (3) done, (2) not done and, (1) not applicable. As the total score for all questions were 34. Total scores were expressed as percentages. Score of (<59, 9 %) indicate low clinical supervision competencies, score of (60 % - 74.9%) indicate moderate clinical supervision competencies, and score of ( $\geq 75\%$ ) indicate high clinical supervision competencies. Low scoring indicates inadequate (unsatisfactory) competencies and high, moderate scoring indicate adequate (satisfactory) competencies (**Morsi, 2014, Helen and House, 2010**).

**Observational checklist for quality of nursing care:** This tool was developed by **Kabeel (2010)**, modified by the researcher, and it used to assess the quality of nursing care rendered by staff nurses during different periods of assessment, (before program, immediately after program and three months later). It divided into two parts as follows:

1<sup>st</sup> Part: **The personal characteristics data sheet:** It was developed by the researcher and includes such data of the participant: gender, age, years of experience, work place, the level of education, and one question related to attending of clinical supervision session.

2<sup>nd</sup> Part: **The quality of nursing care checklist:** It includes 16 dimensions to collect data relevant to the study, and subdivided to (87) items as follows:

Patient assessment (4 Items), personal hygiene and physical comfort (4 Items), safety measures (6 Items), caring behavior and patient rights (11 Items), vital signs (5 Items), oxygen and ventilation (6 Items), medication administration (3 Items), intravenous line (10 Items), nutrition, fluid and electrolyte balance (6 Items), rest and sleep (4 Items), activities and body mechanics (3 Items), elimination (4 Items), documentation principals (6 Items), patient and family education (4 Items), emotional support (4 Items) and for patient discharge and follow up (7 Items).

The scoring system was a 3 point Likert scale on the quality of nursing care, (3) done, (2) not done and, (1) not applicable. Scoring represent varying levels of quality of nursing care; Low = < 49.9 %, Moderate = 50 – 74.9 % and High = > 75 % (**Fawzy, 2013, Saleh, 2016**),

#### **Tools validity:**

Study tools contents were developed and tested for its content validity through five experts from both nursing administration department and medical surgical department at Faculty of Nursing - Cairo University. As they were asked to examine the data collection tools for their content

coverage, clarity, wording, length, format, and overall appearance. Based on experts' comments and recommendations, some changes had been made at the data collection tools.

#### **Pilot study:**

A pilot study was carried out on (5 nurse managers and 8 staff nurses) which were constitute 10% of the current study sample before starting the actual data collection to ascertain the clarity and applicability of the study tools. It also, needed to estimate the time necessary on fill in these tools. Based on the pilot study analysis no modifications were done in the questionnaire or observational checklist for the quality of nursing care and the clinical supervision competencies as well as the clinical supervision knowledge questionnaire.

#### **Tools reliability:**

The Cronbach's Alpha test was done for study tools. The calculated reliability was (87%) for observational checklist for the quality of nursing care and that was within the accepted limit. As regarding to observational checklist for the clinical supervision competencies, the calculated reliability was (89.1%) which was within the acceptable limit also.

#### **Procedures:**

Once, permission was granted from director of New Kasr El Aini Teaching Hospital, Nursing Director and the head nurses of different intensive care units in New Kasr El Aini Teaching Hospital to conduct the study. The researcher explained the aim, nature, and significance of the study for every eligible nurse manager to obtain their acceptance to participate in the study. Then, the researcher obtained their acceptance in a written form.

Prior to program implementation an initial assessment of the nurse managers' knowledge about clinical supervision competencies was done using the developed questionnaire. As well as clinical supervision competencies of nurse managers' was measured by the researcher through utilizing the clinical supervision competencies observational checklist. Moreover, quality of nursing care for staff nurses was measured by the researcher using the quality of nursing care observation checklist. It was filled in a period from 1<sup>st</sup> October 2016 to 15<sup>th</sup> October 2016. The time spent from each nurse manager to answer the clinical supervision knowledge questionnaire was 60 minutes. While the researcher took about 45 – 60 minutes to observe the quality of nursing care and the nurse manager's competency.

The results obtained from initial assessment of nurse managers' knowledge and clinical supervision competencies were analyzed and then the educational needs were delineated. Accordingly the training program was designed by the researcher as well as training program schedule. After designing training program, it was implemented for nurse managers. The clinical supervision training program was carried out in a period from October 2016 to November 2016. The total number of nurse managers was divided into two groups to receive the training program, with total number of eight sessions each session was carried out twice as follows: session one: (concept and importance of clinical supervision), session two: (component and stages of

practicing clinical supervision), session three: (methods and models of clinical supervision), session four (essential skills of clinical supervisor), session five (principles of motivation and conflict management), session six (time management and principles of delegation), session seven (problem solving and decision making skills) and session eight (principles of coaching, socialization skills).

The duration of each training session ranged from 90 to 120 minutes, at the beginning of the program sessions, an orientation to the program and its purpose took place and the nurse managers were informed about the time and place of sessions, which were carried out at the training department lecture room. Each session was started by setting objectives and overview of the new topic, at the end of each session the nurse managers' questions were discussed. Different methods of teaching were used as the following; lecture, group discussion, role play and brain storming. Teaching and instructional media included the following; hand out, CD and power point presentation.

Evaluating of the immediate effect of training program on nurses manager clinical supervision knowledge and competencies was done using the same developed tools as well as quality of nursing care for the staff nurses for three times considered as intermittent observation. It was filled in a period from 1<sup>st</sup> November 2016 to 15<sup>th</sup> December 2016. Follow up was conducted three months after program implementation to assess nurse managers' knowledge and competencies of clinical supervision as well as quality of nursing care of staff nurses by using the same previous

tools. It was filled in a period from 15<sup>th</sup> March 2017 to 1<sup>st</sup> April 2017.

#### **Ethical consideration:**

Before data collection, primary approval of the ethical committee at Faculty of Nursing Cairo-University was obtained to carry out the study. Also, an official permission was obtained from the Director of New Kasr El Aini Teaching Hospital, Nursing Director of New Kasr El Aini Teaching Hospital to conduct the study. Participation in the study was voluntary and based on the nurse managers' ability to give informed consent; where it should be signed by participants after reading all its details; the ethical issues considerations include explaining the purpose and nature of the study, stating the possibility to withdraw from the study at any time. Confidentiality of the information was assured. Final approval of the ethical committee at Faculty of Nursing Cairo University was obtained.

#### **Statistical design:**

Upon completion of data collection, the data were scored, tabulated and analyzed by computer using the "Statistical Package for Social Science" (SPSS). Version 20. Descriptive statistics were applied such as frequency, percentage distribution; mean and standard deviation. Test of significance was performed to test the study hypotheses (F-test). For qualitative data, comparison between two groups and more was done using Chi-square test. Correlation between variables was evaluated using Pearson's correlation coefficient (r). Significance was adopted at  $p < 0.05$  for interpretation of results of tests of significance.

## **RESULTS**

Table (1): Distribution of Nurse Manager according to Their Demographic Data (N=30)

| Variable                   | Values                              | No. | %     |
|----------------------------|-------------------------------------|-----|-------|
| Gender                     | Female                              | 30  | 100.0 |
| Position                   | 1-Head nurse                        | 19  | 63.3  |
|                            | 2- Charge nurse                     | 11  | 36.7  |
| Age(years)                 | 1-20-30                             | 4   | 13.3  |
|                            | 2-31-40                             | 14  | 46.7  |
|                            | 3-41-50                             | 12  | 40.0  |
| Years of experience        | 1-1-<5                              | 5   | 16.7  |
|                            | 2-5-<10                             | 3   | 10.0  |
|                            | 3-10-<15                            | 9   | 30.0  |
|                            | 4-15-<20                            | 9   | 30.0  |
|                            | 5-20-<25                            | 4   | 13.3  |
| Work place                 | 1-ICU                               | 7   | 23.3  |
|                            | 2-Chest ICU                         | 2   | 6.7   |
|                            | 3-Liver ICU                         | 6   | 20.0  |
|                            | 4-Open Heart ICU                    | 3   | 10.0  |
|                            | 5- CCU                              | 11  | 36.7  |
|                            | 6-Neurology ICU                     | 1   | 3.3   |
| level of education         | 1-Bachelor degree of nursing        | 27  | 90.0  |
|                            | 2-Post graduated diploma of nursing | 2   | 6.7   |
|                            | 3-Master degree of nursing          | 1   | 3.3   |
| previous training programs | 1-Yes                               | 9   | 30.0  |
|                            | 2-No                                | 21  | 70.0  |

Data in table(1) shows demographic characteristics of nurse manager, as shown in this table 100 % of study sample were females, 63.3% were head nurses while 36.7% of them were charge nurses. Regarding their age, it is clear that 46.7% were in age group ranged between 31-40, while 13.3% of

them were in age group ranged between 20 – 30 years. Regarding years of experiences ,data in the same table shows that 60% of study sample had years of experiences ranged between 10 -<20. Table (1) also illustrates that 36.7% of nurse managers were working in CCU, 23.3 % in ICU

while only 3.3 were working in Neurology ICU. Regarding level of education, data shows that 90 % of nurse managers

had bachelor degree of nursing. Also it is clear that 70% did not attend previous training program.

Table (2): Comparison of Levels of Nurse Managers' Total Knowledge during Different Periods of Assessment

| Levels of nurses managers' total knowledge | Pre program |      | Immediately post program |      | 3 months post program |      | Chi-square | p-value |
|--|-------------|------|--------------------------|------|-----------------------|------|------------|---------|
|  | No.         | %    | No.                      | %    | No.                   | %    |            |         |
| Low (<60%)                                 | 6           | 20.0 | 0                        | 0.0  | 2                     | 6.7  | 7.00       | 0.03*   |
| Moderate (60-74%)                          | 20          | 66.7 | 10                       | 33.3 | 5                     | 16.7 | 15.71      | 0.0001* |
| High (>=75%)                               | 4           | 13.3 | 20                       | 66.7 | 23                    | 76.7 | 20.81      | 0.0001* |

\* Significant at P< 0.05

Table (2) shows comparison of levels of nurse managers' total knowledge during different periods of assessment. It is clear that there was a statistical significant difference in knowledge levels among nurse managers during different periods of assessment. As shown in the table, 20 % of nurse managers scored low (<60%) preprogram, none of them scored low immediately post program while only 6.7 % had low score 3 months post program.(p= 0.03\*).Also it is clear

that 66.7% of nurse managers scored moderate (60-74%)preprogram, with significance differences immediately post program and three months later.( p=.0001\*).Data in the same table also shows a statistical significant differences and marked improvement in nurse managers total knowledge as 66.7% of them had High (>=75%) score immediately post program ,raised to 76.7% 3 months post program compared to only 13.3 % preprogram (p=.0001\*).

Table (3): Comparison of Mean Scores of Nurse Managers' Clinical Supervision Competencies Subscales during Different Periods of Assessment

| Clinical supervision competence subscales | Pre program |      | Immediately post program |      | 3 months post program |      | F-value | p-value |
|---|-------------|------|--------------------------|------|-----------------------|------|---------|---------|
|   | Mean        | SD   | Mean                     | SD   | Mean                  | SD   |         |         |
| Managerial Skills                         | 1.28        | 0.26 | 1.67                     | 0.17 | 1.74                  | 0.15 | 144.285 | .0001*  |
| Educational Skills                        | 1.14        | 0.31 | 1.50                     | 0.29 | 1.63                  | 0.29 | 64.624  | .0001*  |
| Supportive Skills                         | 1.24        | 0.28 | 1.49                     | 0.45 | 1.61                  | 0.23 | 29.402  | .0001*  |
| Total clinical supervision competencies   | 1.24        | 0.25 | 1.58                     | 0.19 | 1.68                  | 0.16 | 120.015 | .0001*  |

\* Significant at P< 0.05

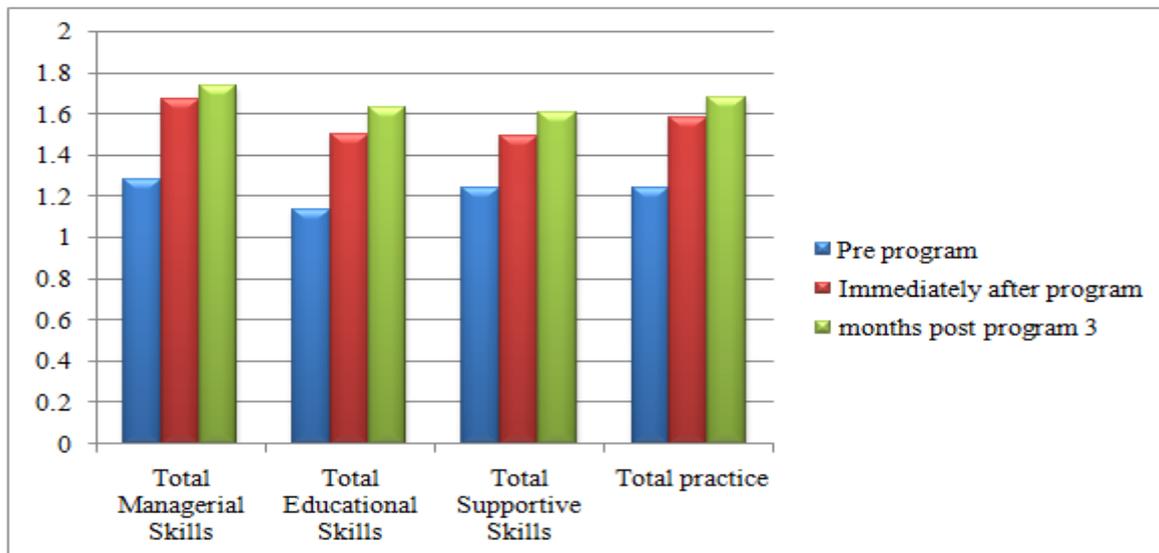


Figure (1): Comparison of mean scores of nurse managers' clinical supervision competencies during different periods of assessment

Table (3) and figure (1) shows comparison of mean scores of nurse managers' clinical supervision competencies subscales during different periods of assessment. As shown there was a statistical significant difference in mean scores of nurse managers during different periods of assessment regarding all dimensions of clinical supervision

competencies (managerial skills, educational skills and supportive skills) which is reflected in total mean scores respectively.(1.24±0.25,1.58±0.19,1.68±0.16).All differences were statistically significant (F=120.015, P=.0001\*).

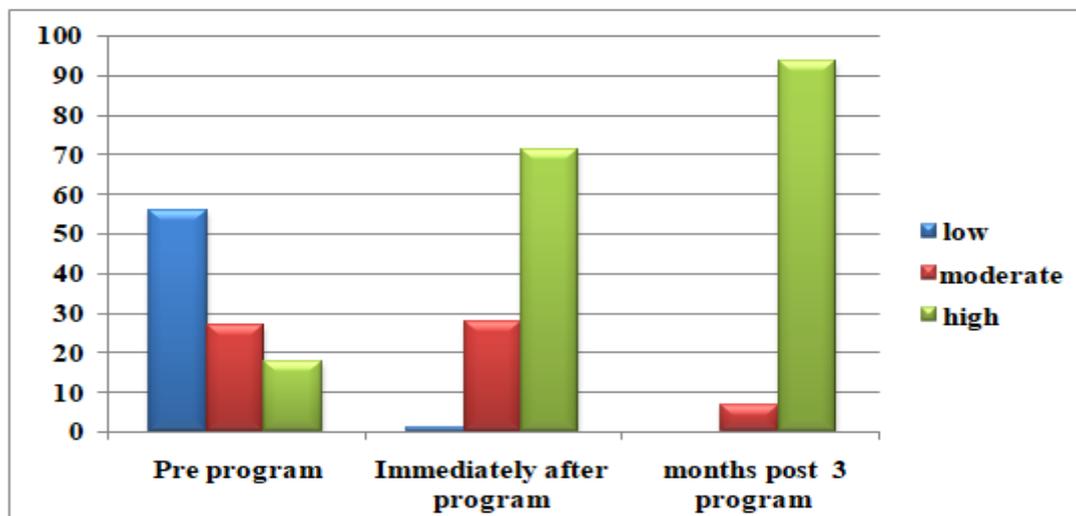


Figure (2) Frequency distribution of nurse manager's levels of total clinical supervision competencies during different periods of assessment

Figure (2) shows a marked improvement in nurse manager's clinical supervision competencies immediately post program and three months post program compared to before implementation. As the highest percentage of them (70%)

scored high immediately post program with significant increase 3 months post program to be 93% compared to preprogram as about almost half of nurse managers scored low.

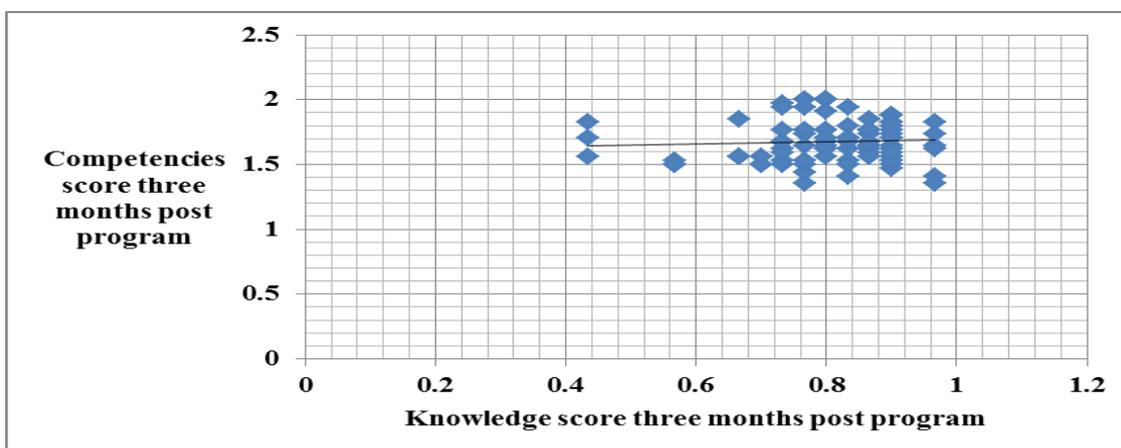


Figure (3): Correlation between knowledge and competencies scores of head nurses 3 months post program

The above figure shows a statistical significant correlation between knowledge and competencies scores of head nurses 3 months post program ( $r=0.49$ ,  $p=0.0001^*$ )

Table (4): Distribution of Staff Nurses according to their Demographic Data (N=78)

| Variable           | Values                           | No. | %     |
|--------------------|----------------------------------|-----|-------|
| Gender             | 1- Female                        | 75  | 96.15 |
|                    | 2- Male                          | 3   | 3.85  |
| Age(years)         | 1-20-30                          | 43  | 55.13 |
|                    | 2-31-40                          | 27  | 34.62 |
|                    | 3-41-50                          | 8   | 10.26 |
| Experience (years) | 1-<5                             | 26  | 33.33 |
|                    | 5-<10                            | 16  | 20.51 |
|                    | 10-<15                           | 9   | 11.54 |
|                    | 15-<20                           | 2   | 2.56  |
| Work place         | 20-<25                           | 25  | 32.05 |
|                    | 1-ICU                            | 13  | 16.67 |
|                    | 2-Chest ICU                      | 9   | 11.54 |
|                    | 3- Liver ICU                     | 9   | 11.54 |
|                    | 4- Open heart ICU                | 14  | 17.95 |
| Education          | 5- CCU                           | 28  | 35.90 |
|                    | 6- Neurology ICU                 | 5   | 6.41  |
|                    | 1-Diploma of nursing school      | 34  | 43.59 |
|                    | 2-Diploma of technical institute | 44  | 56.41 |

Data in table (4) shows demographic characteristics of staff nurses, as shown in this table 96.15 % of study sample were females. Regarding their age, it is clear that 55.13 % were in

age group ranged between 20-30, while only 10.26% of them were in age group ranged between 41-50.Regarding years of experiences ,data in the same table shows that

33.33% of study sample had years of experiences ranged between 1-<5 and 32.05 % had years of experiences ranged between 20-<25. Table (5) also illustrates that 35.90 % of staff nurses were working in CCU, while only 6.41 % were

working in Neurology ICU. Regarding level of education, data shows that 56.41 % of staff nurses had diploma of technical institute.

Table (5): Frequency Distribution of Staff Nurses' Levels of Total Quality of Nursing Care during Different Periods of Assessment (N =78 × 3 = 234).

| Total Quality of nursing care levels | Pre program |       | Immediately post program |       | Three months post program |       |
|--------------------------------------|-------------|-------|--------------------------|-------|---------------------------|-------|
|                                      | No.         | %     | No.                      | %     | No.                       | %     |
| Low (< 50%)                          | 29          | 12.4  | 3                        | 1.3   | 2                         | .9    |
| Moderate (50 % - < 75%)              | 176         | 75.2  | 183                      | 78.2  | 188                       | 80.3  |
| High (≥ 75%)                         | 29          | 12.4  | 48                       | 20.5  | 44                        | 18.8  |
| Total                                | 234         | 100.0 | 234                      | 100.0 | 234                       | 100.0 |

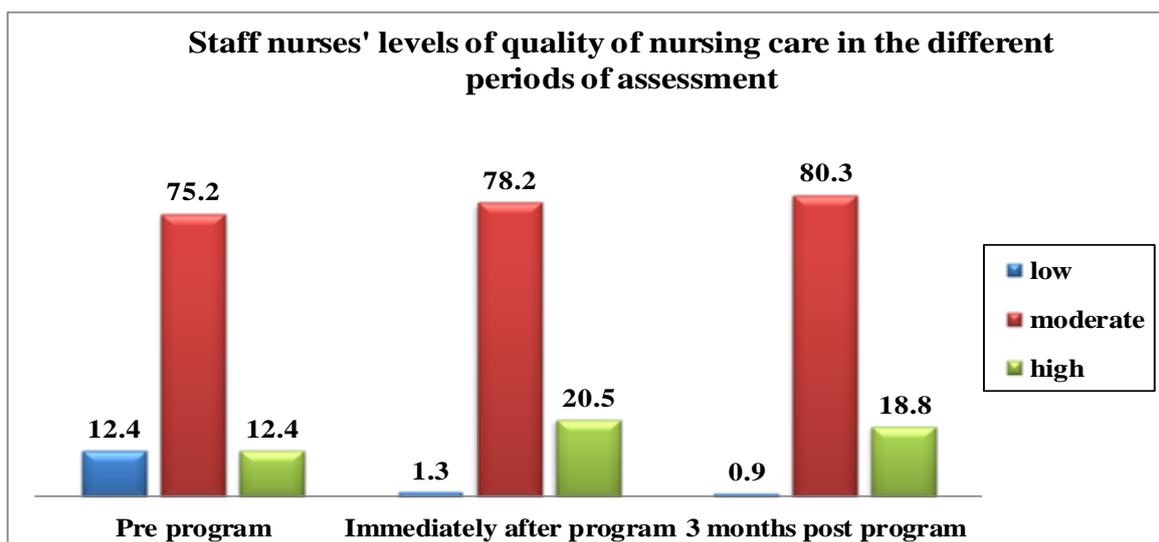


Figure (4) frequency distribution of staff nurses' levels of total quality of nursing care during different periods of assessment

Table (5) and figure (4), show comparison between staff nurses levels of quality of nursing care dimensions during different periods of assessment (pre, immediately post program and three months later).

It was shown that, (75.2 %) of staff nurses scored moderate (50% - < 75%)preprogram, and raised to be (78.2%) immediately post program with further improvement to be (80.3%) three months post program. Data in the same table

show that only (1.3 %)of staff nurses scored low immediately post program with further decreased to (0.9 %) three months post program compared to (12.4 %) preprogram. The above table also declared that (20.5%)of staff nurses scored high immediately post program decreased to (18.8%) three months post program but still higher than preprogram.

Table (6): Correlation between Nurse Manager's Clinical Supervision Competencies and Quality of Nursing Care among Staff Nurses

| Nurse Manager Clinical Supervision Competencies | Quality of nursing care among nurses |          |
|---|--------------------------------------|----------|
|   | R                                    | p -value |
| Pre program                                     | -0.08                                | 0.223    |
| Immediately post program                        | -0.17                                | 0.006*   |
| 3 months post program                           | 0.23                                 | 0.0001*  |

\* Significant at P< 0.05

It is clear from this table that there was a statistical significant correlation between nurse manager clinical supervision competencies and quality of patient care among nurses immediately post program (r= -0.17, p= 0.006\*) and 3 months post program(r= 0.23, p= 0.0001\*)

## DISCUSSION

Clinical supervision is considered a vital part of modern, effective health care systems. Providing effective clinical

supervisory support to allied health professionals enhances quality, safety and productivity and improves competence and confidence in clinical practice (Country Health SA 2009; Smith & Pilling 2008). In addition, effective and competent clinical supervision that focus on providing competent patients care, through helping supervisor to guide and advising their supervisee to improve their professional, skills will reflect on enhances effectiveness, patient retention and staff satisfactions (Center for Substance Abuse Treatment, 2009). The present study aimed at

examine the effect of clinical supervision training program for nurse managers on quality of nursing care in intensive care units.

The current study was hypothesized that there will be difference in knowledge test score of nurse managers' clinical supervision after the program implementation compared to before. The results of the study were support the research hypotheses, as the current findings of this study revealed that there were statistical significant differences in mean scores of nurse managers regarding both clinical supervision and management skills and knowledge during different periods of assessment. As they had highest mean scores immediately post program and 3 months later compared to before program implantation. Moreover, statistical significant differences and marked improvement in nurse managers total knowledge as the highest percentage of them had high score immediately post program, and 3 months post program compared to preprogram, in addition, none of them scored low immediately post program while the lowest percentage had low score 3 months post program.

This was supported by **Abd El-Aziz,(2009)**, who found a significant improvement in head nurses' knowledge after attending educational program and emphasized the importance of educational opportunities to support and update their knowledge and improve the quality of care. Moreover **El-Sayed, (2010)**, indicated that there were marked improvement of the level of knowledge attainment from the pretest, immediate, and two months post - tests. These results was also supported by **Saleh (2009)**, who reported that this improvement in knowledge can be influenced by the rate of memorization, ability of knowledge acquisition, the accumulation of learned knowledge of life, and the refreshing information using different approach of active learning during implementation of program, such as work activities and group discussion, brainstorming, group activities.

As well as current study finding was on the same line with **Morsi, (2014)**, who reported that, there were high statistical significant improvements of both head nurses and their assistants' knowledge and responsibility perception about clinical supervision after implementation of the program as head nurses and their assistance knowledge was bad among four fifths of this study sample and changed completely to be excellent at immediate post program and still excellent in more than three fourths of the study sample. In the same issue, **Saleh, (2016)** supports that, there were high statistical significance improvement when comparing between knowledge of head nurses pre and post three months of implementing the program. From the researcher's point of view this result could be related to that the nurse managers were interested with the subject during the training course and were initiative to improve the quality of nursing care in their units so they gain knowledge easily.

The current study was based on another hypothesis that there will be difference in scores of nurse managers' clinical supervision competencies after the program implementation compared to before. The results of the study were support the research hypotheses that the findings of the present study revealed a statistical significant difference in mean scores

of nurse managers during different periods of assessment regarding all dimensions of clinical supervision competencies (managerial skills, educational skills and supportive skills. As they had highest mean scores immediately post program and three months relative to preprogram. Moreover the highest percentage of them scored high immediately post program with significant increase 3 months post program compared to preprogram as about almost half of nurse managers scored low. This result indicates the positive effect of clinical supervision program on nurse managers' clinical supervision competencies. This result was consistent with **Kelly (2009) and Eldeeb, (2010)**, who reported high significant improvement of nurse unit mangers in clinical practice and supervision in three phases of the program compared to preprogram. This result also was consistent with **Cruz et al.,(2012)** who reported that after training program, the participants gain aspects such as lifelong learning; professional growth and development; solve problems / situations; process; quality nursing care and safety.

Moreover **Abd – El-Halem, (2013) and, Fulton et al., (2014)** found a highly statistically significant improvement in nurses' manager supervision competencies and stated that the educational program was effective in improving their performance related to clinical supervision. From the researcher's point of view the clinical supervision training program help nurse managers to improve their managerial skills ,this was supported by study results which indicate a marked and significant improvement after conducting the training program in most of managerial skills such as utilize appropriate leadership style according to the situation ..organize staffing plan related to personal and professional resources, manage time effectively, and perform continuous evaluation for the nurses during the daily practice. Moreover a marked improvement in educational skills among nurse managers also was reported after program implementation as they gain experiences in helping nurses how to apply technical skills in different clinical situations and in using different educational strategies in guiding their staff. Also engaging nurse managers in training program enhance most of their supporting skills as maintaining effective communication among nurses and health care professionals, encouraging a team work among nurses and supporting nurse – patient caring relationship. These marked improvements in various skills following the training program enhance nurse manager's clinical supervision competencies. Moreover this result could be related to remarkable interest of nurse managers in training program and their intention to educate their staff and improve quality of patient care in their units.

The current study revealed a statistical significant correlation between knowledge and competencies scores of head nurses post program intervention. From the researchers' point of view, training had a positive effect in improvement of nurse managers' knowledge, the knowledge they gained during training program help them to improve their supervision competencies well. This result was compatible with **Abd – El-Halem, (2013), Fulton et al., (2014), and Morsi, (2014)**, who found a highly statistically significant improvement in nurses' knowledge immediately after program implementation, as significant differences

were found between the mean pre and post - test knowledge score, and mentioned that the educational program was effective in improving head nurses and knowledge and performance related to clinical supervision. While this result is contrary with **El-Deghaidy and Nouby, (2008)** who found no significant statistical relation between head nurses' clinical supervision knowledge and practices scores. IN the same line, **Health Workforce Australia (2011)** reported that the development of clinical supervision education and training program lead to increased knowledge and skills of clinical supervision for stakeholders

The current study was based on another hypothesis that there will be difference in scores of quality of nursing care rendered by staff nurses after the program implementation compared to before. In this respect, **Hyrkasand and Paunonen (2001)** reported that clinical supervision has positive effects on quality of care and it can be considered as a quality improving tool/intervention in nursing practice. While, **Uyset al., (2005)** found a contradicted result that revealed, there was no significant difference in the observed quality of care before and after the training on clinical supervision. Moreover, this results could be explained in the light of the positive impact of the clinical supervision training program on quality of nursing care among staff nurses, as well as the improvement in the effectiveness of clinical supervision practices of their nurse managers which might be reflected on their performance and provision of nursing care and lead to improvement of the quality of nursing care they provided to their patients.

Finding of the present study revealed that there was a statistical significant correlation between nurse manager's clinical supervision competencies and quality of patient care among nurses immediately post program and 3 months post program. This result is supported by **Abo Hashish (2010)** who found that, there was a positive effect of clinical supervision training program for first-line nurse managers on quality of care and job satisfaction. Moreover **Stain - Parbury (2011)** reported that the clinical supervision has an effect on the quality of care by helping to both improve and maintain of professional standards of nursing care and the nursing practice can be improved through the process of clinical supervision. While this result is inconsistent with **Uysetal., (2005)** who found no positive relationship between clinical supervision intervention and the quality of care provided. They reported that, although the training on clinical supervision influenced supervision provided by nurse managers, but changes were not sufficient to change and improve the quality of care.

## CONCLUSION

There was a statistical significant correlation between nurse manager's clinical supervision competencies and quality of patient care among staff nurses immediately and 3 months post program. A statistical significant correlation between knowledge and competencies scores of head nurses 3 months post program. It could be concluded that there was a positive effect of a clinical supervision training program on quality of nursing care among staff nurses.

## RECOMMENDATIONS

Based on the findings obtained from the present study, the following recommendations are deduced.

- The hospital administrators should create and develop system, environment and culture that support high standards of conduct and effective clinical supervision. This system must ensure the right to supervision, feedback, support, decent working conditions and respect for both trainees and their supervisors.
- Set clear roles and responsibilities for both supervisor and supervisee through a constructive clinical supervision policies and procedures.
- Hospital administration should provide adequate training for newly first line nurse managers to ensure that clinical supervision is conducted in an appropriate and supportive manner. As well as provide adequate, regular and timely feedback to them concerning both strength and weakness points in their competencies.
- Provide nurse managers with adequate support and needed resources that facilitate implementation of clinical supervision as well as motivate them to implement the new educational strategies of clinical supervision that improve quality of patient care.
- Adopt and initiate a quality mission to implement and monitor hospital wide clinical supervision program and provide continuous training courses for nurse managers in the different hospital departments not only intensive care units.
- Provide supportive healthy work environment that help nurses to reflect on their personal and professional work related issues with their clinical supervisors that help in enhancing well-being and finding more positive and new ways to improve quality of nursing care.
- Replication of current study in other departments and hospitals to get the clinical supervision benefits and effectiveness for nurse managers, staff nurses and patients.
- Include clinical supervision as a separate program in nursing administration courses at nursing colleges.

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