

## Effect of Polarities Management Educational Program on Head Nurses' Performance

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### Abstract:

**Background:** Polarities are interdependent oppositional values that must be managed in a balanced sustainable dynamic for improving head nurses performance. Head nurses' ability to identify and manage polarities helps to save time and resources; build trust and reduce resistance to change, accelerate and sustain achievement of better performance. **Aim of the study:** Determine the effect of polarities management educational program for head nurses on their performance. **Study design:** A quasi-experimental design was utilized. **Setting:** The study was conducted in all medical and surgical departments at Benha University Hospital. **Subjects:** Consisted of all head nurses (61) who worked at medical and surgical departments. **Tools of data collection:** Three different tools were used to collect data: I. Polarity Management Knowledge Questionnaire, II. Polarity Management Practice Checklist, III. Head Nurses Performance Observational Checklist. **Results:** More than three fifth (63.9.8%) of head nurses had unsatisfactory knowledge regarding polarity management at preprogram phase, that improved to (82.0%) and (80.3%) satisfactory level at post & follow up of program phases respectively. More than two thirds (68.9%) of the head nurses had poor practice level regarding polarity management, that improved to be (85.2%) and (82%) to good practice level at post program and follow up phase. Only (11.5%) of the head nurses had high performance level in pre-program phase that improved to be (83.6%) in post program and (80.3%) in follow up phase. **Conclusion:** There was a highly statistical significance correlation between head nurses' knowledge, practice regarding polarity management and their performance at post and follow up program. **Recommendations:** In-service education and training programs must be continuous process for refreshing head nurses' knowledge and practice regarding polarity management. Encouraging head nurses to improve and update their knowledge by self-learning through center of hospital training.

**Keywords:** Head nurses, Performance, Polarity Management, practice, educational program.

### Introduction:

A head nurse is a key position in health teams in hospitals, care homes, hospices, and smaller specialty health practices. The nurse manager oversees all patient nursing care in her/ his unit in addition to acting as managing director to the other nursing staff. It is a responsibility that needs management ability as well as progressive practice in nursing. Management is ability of leading, planning, staffing, organizing, and

controlling actions to reach objectives (AL-Jazaery & Khaleel, 2019).

Polarities are competing values that need each other over time in order to achieve a greater purpose. Polarities are everywhere, within and between health care team, and within head nurses home and work environments. The essence of life and maximum survival on all levels, depend on polarities. For example, inhaling and exhaling are competing values, over time human to do

both in order to achieve the greater purpose of sustaining “life.” If human over do one and neglect the other, human will die. One of the challenges that head nurses need to overcome is learning to understand the differences between “problems to solve” and “polarities to manage. Head nurses' ability to identify and manage polarities helps them to save time and resources; build trust and reduce resistance to change, accelerate and sustain achievement of the greater purpose (Yohemas, 2020). Polarity management maintains the secret of dealing with paradoxes. Polarity management is to acknowledge that there is a class of problems that cannot be "solved" permanently, because polarities require shifting back between two opposing but interdependent states. Polarity management can be a very powerful tool when used at the right place and time. Polarity management helps in analyzing and managing competing dilemmas in a rapidly changing health care environment. (Monrad, et al. 2019).

The efficacy of the head nurse in carrying out their tasks and responsibilities may be measured by their performance. The performance of the head nurses is critical since it has a significant impact on the performance of the nurses. On a daily basis, head nurses deal with the majority of health-care team. As a result, head nurses should act as role models; if head nurses fail to motivate the nurses, that may have a significant impact on head nurses' work performance, leading to nurses' desire to leave the unit or working with lower quality, low productivity, dissatisfaction, and other passive attitudes toward work and organization, such as a decrease in commitment level (Elsayed et al., 2019).

Managing polarities improving head nurses' performance and enable head nurses to save time and resources build trust and reduce

resistance to change, accelerate and sustain achievement of desired outcomes. Also help head nurses to improve their communication practice, Decision making practice, negotiation practice, persuasion and dialogue practice. Managers' practice to manage different polarities in health care are mainly dependent on stress management abilities and willingness to work as teams (Gab Allah & Nassar, 2018).

#### **Significant of the study:**

There are many different polarities in hospitals . The head nurses have a very important role in managing these polarities as they are considered the backbone of hospital administration. Polarity management for healthcare transformation issues in nursing and healthcare are increasingly complex and demand innovative solutions to ensure safety, quality, satisfaction, cost effectiveness and improve nurses performance. So this study was conducted to determine the effect of polarities management educational program on head nurses performance.

#### **Aim of the study:**

This study aimed to determine the effect of polarities management educational program for head nurses on their performance.

#### **Research Hypotheses**

There was an improvement in head nurses' knowledge, there was an improvement in head nurses' practice regarding polarities management after implementing the program and there was positive effect on head nurses' performance.

#### **Subjects and Methods**

##### **Research Design**

A quasi-experimental design was utilized to conduct this study.

##### **Setting**

This study was conducted in all medical and surgical departments at Benha University Hospitals, which consisted of (17 medical units) and building (14 surgical units)

**Subjects**

Included (61) head nurses and their assistants working at previous mentioned setting available during time of the study.

**Tools of data collection:**

Three tools were used for data collection.

**I- Polarity Management knowledge Questionnaire:**

It was developed by the researchers based on review of related literature (Shankari and Franklin,2012,Taie, 2014;Gab Allah and Nassar ,2018) to assess head nurses' knowledge regarding to polarity management. It contained two parts:

**Part (1) Personal data:** It consisted of personal data of head nurses (age, gender, marital status, education, department, years of experience).

**Part (2) polarity management:** It included 37 questions to assess head nurses' knowledge about polarity management in the forms of: True or false, multiple-choice questions, arrange the questions

**Scoring system:**

The questions were scored as “1” for correct answer, and “zero” for incorrect answer so the total scores (37). Total Knowledge score was calculated as follow; poor if the percent score was less than 60% that equals (<22 degree), moderate if if the percent score equal 60% that equals (= 22 degree) good if more than 60 that equal (>22 degree)(Mohamed, Aboelmagd and yousif, 2021)

**Table (D): Tools reliability**

| Tool name                                       | No of item | Cronbach's alpha |
|---|------------|------------------|
| Polarity Management knowledge Questionnaire     | 37         | 0.88             |
| Polarity manageme practice checklist            | 122        | 0.90             |
| Head nurses performance observational checklist | 60         | 0.90             |

**II- Polarity management practice checklist:**

It was developed by the researchers based on review of related literature (Bonnie,2014, Roth,2019, Johnson, 2019 and Khalaf Alah,2019 ) to assess head nurses' practice regarding polarities management.

**Scoring system:**

Reasoned based on likert scale allocated as follows: (1) done, (0) not done. The total score was 122. Total scores were expressed as percentages. If the score  $\geq 75\%$  (>73 degree) it was considered good practice level If the score was 60% -75% (=73 degree) it was average practice level and poor practice level if < 60% (>73 degree) (Levknecht, 2013).

**Head nurses performance observational checklist:**

It was developed by the researchers based on review of related literature (Rose,2016; Elsayed, 2018; Elsayed, Ibrahim, and Elsayed, 2019) to assess head nurses performance.

**Scoring system:**

Responses of the head nurses were measured on two point likert scale as follow, (1) done), and (0) not done .Total scoring system =130. Total scores were expressed as percentages. If the score was more than 60-75% (>78 degree) it was considered high performance level. If the score was 60% (=78 degree) it was moderate performance level and low performance level if less than 60% (>78 degree) (Elsayed, 2018).

**Validity of the tools:**

The tools were tested for validity through distribution of the tool to a panel of 5 experts consisted of two professors of Nursing Administration from Tanta University, one professor of Nursing Administration from Menofia University and two assistant Professors of Nursing Administration from Benha University, modifications were done based on their comments such as (modify some words to

give the right meaning for the phrase which were not clear).

#### **Pilot study**

It took one month (July 2020) the revised questionnaires were tested with 10% of head nurses (6 head nurses from the study settings) to assess clearly application of tools, and assess the feasibility of the study. In addition to estimate the time needed to fill the questionnaire that approximately ranged from 15 - 25 minutes for knowledge questionnaire. No modifications were done, so the pilot study was included in the main study subject.

#### **Field Work**

The field work for this study includes four phases; assessment, planning, implementation, and evaluation phase. It took nine months started from July 2021 to March 2022.

**Phase I (Assessment):** This phase took one month (July 2021). The data was collected to assess head nurses' knowledge, practice regarding polarity management and to assess head nurses' performance before implementation of the educational program through using of the different tools of data collection in the available hospital classroom and during their work hours. The polarity management knowledge questionnaire sheets were distributed to head nurses, the researchers was available all the time during filling the questionnaire sheets for any clarification as needed then the researchers checked each one to ensure its completeness.

#### **Phase II (Program planning)**

This phase took two months that took place from August 2021 to September 2021. An educational program was developed based on determined needs and relevant review of literature. The teaching sessions were achieved by using available resources, relevant content and instructional strategies for each session. Different methods of teaching were used such as lecture, group discussion, brain storming and hand out prepared by the researchers and distributed to all head nurses.

#### **Phases III (Program implementation)**

It was aiming to prepare and develop an educational program of the polarity management. The subjects were divided to six groups according to their departments, each group was nearly 10 head nurses. The program took about 2 days / week. The duration of each session was two hours depending on workload and including periods of discussion according to the achievement, progress and feedback. It started at (10) AM to (12) Pm. At the beginning of the each session an orientation to the training and its aims took place. Feedback was given at the beginning of each session about the previous one and at the end of each session about the current session.

- During the period of February 2022 the impact of the education program was evaluated (immediately post program phases), using the same tools which were used before the program.

#### **Phase IV (evaluation phase):**

The researchers evaluated the effectiveness of polarity management program on head nurses knowledge, practice and performance. At the end of the last session, a post test was done immediately after training program implementation for all head nurse.

- During the period from July till August (2022) questionnaires for the number of head nurses within each unit were distributed (follow up phase).

#### **Ethical considerations:**

Prior the study conduction, ethical approval was obtained from the scientific research committee at Faculty of Nursing Benha University. The study was conducted with careful attention to ethical standards of research and rights of the participants:-

- **Informed consent:**

The respondent rights was protected by ensuring voluntary participation, so the informed consent was obtained by explaining

purpose, nature time of conducting the study, potential benefits of the study, how data was collected, any invasive procedure, expected outcomes and the respondent rights to withdraw from the research study at any time without any reasons.

▪ **Anonymity and confidentiality:**

The respondent was assured that the data was treated as strictly confidential; furthermore, the respondent anonymity was maintained as they were not requiring mentioning their names.

▪ **Scientific honesty:**

To ensure scientific honesty, the researcher uses bracketing and intuiting to avoid bias.

**Statistical analysis:**

Data were verified prior to entry into the computer. The Statistical Package for Social Sciences (SPSS version 21.0) was used for that purpose, followed by data analysis and tabulation. Descriptive statistics were applied quantitative data (frequency and percentages). ( $\chi^2$ ) test was utilized to compare percentage between studied variable. Paired t test was used to compare mean scores between pre and post program. Non-significant level value was considered when  $p > 0.05$ . A significant level value was considered when  $p \leq 0.05$  and a highly significant level value was considered when  $p \leq 0.001$ . Arithmetic mean: as average describing the central tendency of observation. The standard deviation: as a measure of dispersion of results around the mean (for quantitative variable). T. test is a test of significance used for comparison between two variables for the same sample and Pearson correlation ( $r$ ) test was used for association between total scores.

**Results**

**Table (1):** Shows that more than half (50.5%) of the head nurses aged between 30 - 35 years with SD  $35.70 \pm 6.34$ , the majority (91.8%, 91.8%) of them were female and married, more than three quarters (75.4%) of

them had bachelor degree of nursing, more than half ( 54.1%) of them work in medical department and as regarding to years of experience extremely half ( 50.8% ) of them had  $5 \geq 10$  years SD ( $11.39 \pm 5.80$ ).

**Figure (1):** Shows that more than three fifth (63.9%) of head nurses had poor knowledge in pre-program phase improved to (82%) and (80.3%) of them had good knowledge in post program and follow up phase respectively.

**Table (2):** Clarifies that, there was a highly statistical significant difference in relation to mean and standard deviation scores of knowledge ( $p < 0.000^{**}$ ) between pre and post program and between pre-program and follow up phase of program, the highest mean and standard deviation was regarding polarity management knowledge score preprogram phase ( $2.18 \pm 3.91$ ) improved to ( $12.68 \pm 3.19$ ) in post program phase declined to ( $12.18 \pm 3.91$ ) in follow-up phase

**Figure (2):** Show that more than two thirds (68.9%) of the head nurses had poor practice level regarding polarity management, that improved to be (85.2%, 82%) of them had good practice level regarding polarity management in post program and follow up phase.

**Table (3):** Clarifies that, there was a highly statistical significant difference relation between mean and standard deviation scores of head nurses' practice regarding polarities management between pre and post program and between pre-program and follow up phase ( $p < 0.000^{**}$ ), The highest mean and standard deviation was polarities management practice regarding communication practice ( $25.08 \pm 5.25$ ) in post-program phase and ( $23.7 \pm 35.10$ ) in the follow up phase as compared to the preprogram phase ( $4.14 \pm 9.86$ ).

**Figure (3):** Shows that only (11.5%) of the head nurses had high performance in pre-program phase that improved to be



(83.6%) of them in post program and decreased to be (80.3% ) in follow up phase.

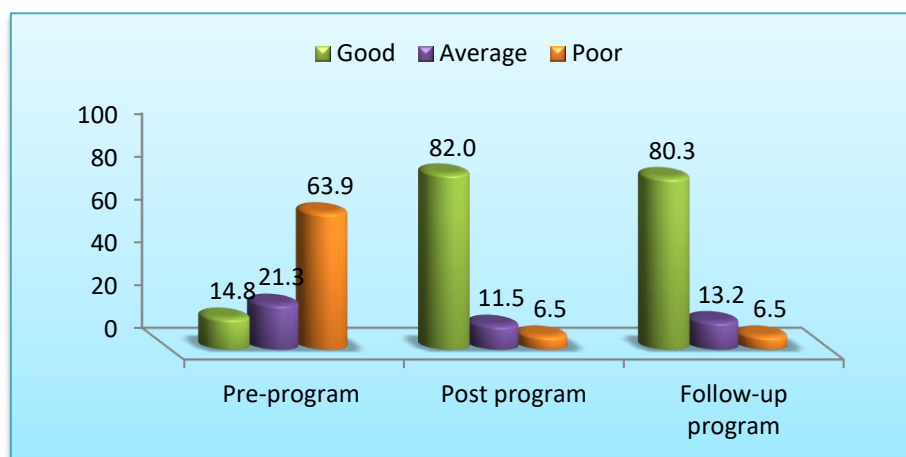
**Table (4):** Shows that the highest mean of the head nurses performance was  $24.72 \pm 7.25$  in post program, comparing to  $3.21 \pm 8.15$  in pre-program phase and  $22.24 \pm 7.29$  in the follow up phase. There was a highly statistical significant difference in relation to mean and standard deviation of head nurses' performance ( $p < 0.000^{**}$ ) between pre and post program and between pre-program and follow up phase of program, which indicated that the program had a positive improvement of head nurses performance

**Table (5):** Shows that there was negative correlation between head nurses' knowledge, practice and performance ( $p\text{-value} > .05$ ) and there was positive correlation between head nurses' practice and performance in pre-program phase ( $p\text{-value} < .000$ ). Also there was positive correlation between head nurses' knowledge, practice and performance ( $p\text{-value} < .000$ ) and there was positive correlation between head nurses' practice and performance in post-program phase ( $p\text{-value} < .000$ ). In addition there was positive correlation between head nurses' knowledge, practice and performance ( $p\text{-value} < .000$ ) and there was positive correlation between).

## Effect of Polarities Management Educational Program on Head Nurses' Performance

**Table (1): Distribution of head nurses according to their personal characteristics (n=61)**

| Personal items                               | No=61      |      |
|--|------------|------|
|  | No         | %    |
| <b>Age</b>                                   |            |      |
| 25 >30                                       | 4          | 6.6  |
| 30 >35                                       | 31         | 50.8 |
| 35 >40                                       | 14         | 23.0 |
| +40  | 12         | 19.6 |
| Min –Max                                     | 28-58      |      |
| Mean ±SD                                     | 35.70±6.34 |      |
| <b>Sex</b>                                   |            |      |
| Female                                       | 56         | 91.8 |
| Male   | 5          | 8.2  |
| <b>Marital status</b>                        |            |      |
| Married                                      | 56         | 91.8 |
| Not married                                  | 5          | 8.2  |
| <b>Qualification level</b>                   |            |      |
| Associated degree of nursing                 | 8          | 13.1 |
| Bachelor degree of nursing                   | 46         | 75.4 |
| Post -graduation studies                     | 7          | 11.5 |
| <b>Department Unit</b>                       |            |      |
| Medical                                      | 34         | 55.7 |
| Surgical                                     | 27         | 45.3 |
| <b>Number of years of experience to work</b> |            |      |
| 1 >5   | 8          | 13.1 |
| 5 >10  | 31         | 50.8 |
| 10 >15                                       | 18         | 29.5 |
| +15  | 4          | 6.6  |
| Min –Max                                     | 4-30       |      |
| Mean ±SD                                     | 11.39±5.80 |      |



**Figure (1): Percentage distribution of head nurses knowledge regarding polarity management**

**Table (2): Mean and standard deviation of head nurses knowledge regarding dimensions of polarity management through the program phases (n=61)**

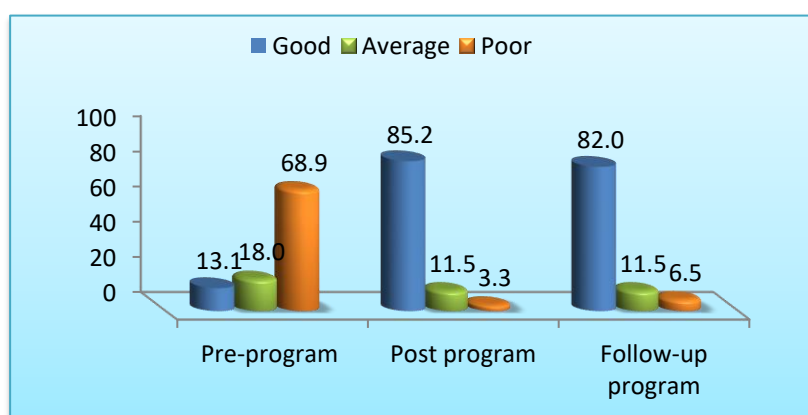
| polarity management knowledge dimension   | Maximum Score | Pre Program | Post Program | Follow up  | t1    | p-value | t2    | p-value | t3    | p-value |
|---|---------------|-------------|--------------|------------|-------|---------|-------|---------|-------|---------|
|   |               | ±SD         | ±SD          | ±SD        |       |         |       |         |       |         |
| Concepts of polarities                    | 12            | 1.55±3.22   | 9.50±1.95    | 9.22±1.84  | 13.53 | .000**  | 1.489 | .142    | 14.24 | .000**  |
| Problem solving and decision making items | 11            | 1.85±3.30   | 9.32±2.54    | 8.83±1.96  | 11.27 | .000**  | 2.28  | .026*   | 11.84 | .000**  |
| Polarity management                       | 14            | 2.18±3.91   | 12.68±3.19   | 12.18±2.64 | 12.84 | .000**  | 1.70  | .093    | 14.06 | .000**  |

. \* Statistically significance  $p < 0.05$     \*\* highly statistically significance  $p < 0.001$

t1 paired t test between pre and post program

t2 paired t test between post and follow-up program

t3 paired t test between pre and follow-up program



**Figure (2): Head nurses practice regarding polarities management**



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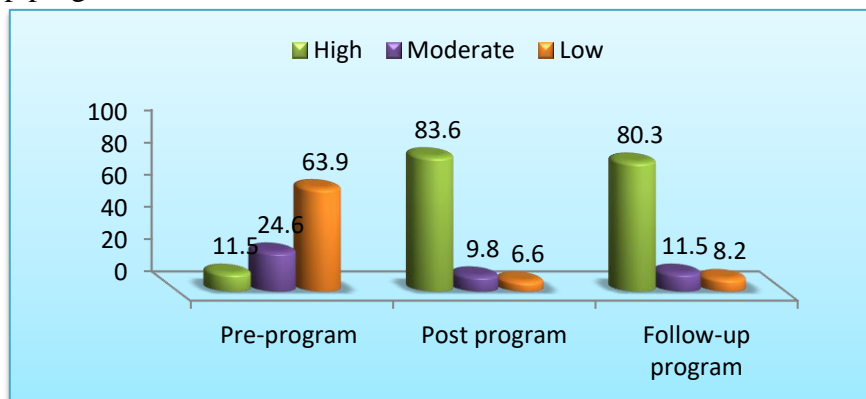
**Table (3): Mean and standard deviation of head nurses practice dimensions regarding polarity management through the program phases (n=61)**

| Polarity management Practice | Maximum Score | Pre program | Post program | Follow up  | t1    | p-value | t2    | p-value | t3    | p-value |
|------------------------------|---------------|-------------|--------------|------------|-------|---------|-------|---------|-------|---------|
|                              |               | ±SD         | ±SD          | ±SD        |       |         |       |         |       |         |
| Communication practice:      | 29.00         | 4.14±9.86   | 25.08±5.25   | 23.73±5.10 | 14.56 | .000    | 1.482 | .143    | 13.26 | .000    |
| Negotiation practice:        | 10.00         | 1.62±3.69   | 8.59±2.80    | 8.14±2.46  | 12.30 | .000    | 1.818 | .074    | 11.39 | .000    |
| Adaptability practice:       | 6.00          | .88±2.10    | 5.31±1.67    | 4.91±1.94  | 13.64 | .000    | 2.875 | .006    | 10.44 | .000    |
| Control practice:            | 3.00          | .44±1.07    | 2.59±.90     | 2.47±.94   | 12.52 | .000    | 1.474 | .146    | 10.32 | .000    |
| Management practice          | 23.00         | 3.72±8.22   | 19.67±6.07   | 18.91±4.18 | 11.95 | .000    | .948  | .347    | 11.94 | .000    |
| Team work practice           | 13.00         | 2.13±4.85   | 10.80±3.01   | 10.86±2.01 | 11.62 | .000    | .23   | .812    | 12.35 | .000    |
| Mediation practice;          | 9.00          | 1.47±3.35   | 7.60±2.47    | 7.42±1.75  | 11.47 | .000    | .694  | .490    | 11.63 | .000    |
| Decision making practice:    | 9.00          | 1.47±3.35   | 7.63±2.51    | 7.40±1.61  | 10.50 | .000    | .850  | .399    | 11.16 | .000    |
| Apply polarity map           | 29.00         | 4.45±10.16  | 24.70±7.48   | 23.78±6.78 | 11.73 | .000    | 1.629 | .109    | 10.89 | .000    |

\* Statistically significance  $p < 0.05$     \*\* highly statistically significance  $p < 0.001$

t1 paired t test between pre and post program

t2 paired t test between post and follow-up program



**Figure (3): Percentage distribution of head nurses regarding their performance through the program phase**

**Table (4): Mean and standard deviation of head nurses' Performance through the program phases (n=61)**

| Head nurses Performance                  | Maximum Score | Pre program | Post program | Follow up  | t1     | p-value | t2    | p-value | t3     | p-value |
|--|---------------|-------------|--------------|------------|--------|---------|-------|---------|--------|---------|
|  |               | ±SD         | ±SD          | ±SD        |        |         |       |         |        |         |
| Assessment of patient`s needs            | 6.00          | .57±1.54    | 5.18±1.76    | 5.03±1.99  | 14.636 | 0.000** | 1.417 | 0.162   | 13.435 | 0.000** |
| Identifying nursing diagnosis            | 5.00          | .50±1.34    | 4.29±1.45    | 4.18±1.63  | 14.202 | 0.000** | 1.411 | 0.163   | 12.925 | 0.000** |
| planning nursing intervention.           | 6.00          | .63±1.71    | 5.19±1.41    | 4.39±1.65  | 14.551 | 0.000** | 4.969 | 0.000   | 11.883 | 0.000** |
| Evaluation of patient care:              | 3.00          | .39±.98     | 2.55±.78     | 2.11±.96   | 13.200 | 0.000** | 4.968 | 0.000   | 10.199 | 0.000** |
| <b>Patient care management</b>           | 20.00         | 2.11±5.36   | 17.22±4.97   | 15.72±5.64 | 15.143 | 0.000** | 3.989 | 0.000   | 13.252 | 0.000** |
| Staff utilization:                       | 10.00         | 1.52±3.34   | 8.54±2.50    | 7.39±2.68  | 12.269 | 0.000** | 5.637 | 0.000   | 10.128 | 0.000** |
| Staff supervision:                       | 8.00          | .78±2.22    | 6.81±2.28    | 6.09±2.55  | 13.875 | 0.000** | 4.495 | 0.000   | 11.468 | 0.000** |
| Staff development                        | 5.00          | .40±1.38    | 4.24±1.29    | 3.83±1.47  | 15.032 | 0.000** | 3.035 | 0.004   | 13.191 | 0.000** |
| Staff evaluation (performance appraisal) | 6.00          | .49±1.65    | 5.11±1.52    | 4.91±1.34  | 14.734 | 0.000** | 1.447 | 0.153   | 15.042 | 0.000** |
| <b>Staff management:</b>                 | 29.00         | 3.21±8.15   | 24.72±7.25   | 22.24±7.29 | 14.290 | 0.000** | 4.856 | 0.000   | 12.764 | 0.000** |
| Coordinating the patient care services.  | 4.00          | .32±1.10    | 3.42±1.14    | 3.27±1.09  | 14.073 | 0.000** | 1.196 | 0.236   | 13.904 | 0.000** |
| Managing the unit activities             | 3.00          | .24±.82     | 2.62±.79     | 2.44±.92   | 16.045 | 0.000** | 1.445 | 0.154   | 14.196 | 0.000** |
| Maintaining the supplies and equipment   | 3.00          | .26±.83     | 2.62±.73     | 2.45±.76   | 15.394 | 0.000** | 1.524 | 0.133   | 15.701 | 0.000** |
| <b>Unit management</b>                   | 10.00         | .83±2.76    | 8.67±2.24    | 8.18±2.16  | 16.125 | 0.000** | 1.625 | 0.109   | 16.141 | 0.000** |

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**Table (5): Correlation matrix between total knowledge, practice scores regarding polarity management and performance among head nurses through the program phases (n=61)**

| Variables                |                          |         | Knowledge | Practice | Performance |
|--------------------------|--------------------------|---------|-----------|----------|-------------|
| <b>Pre program</b>       | <b>Total Knowledge</b>   | r       | 1         | 0.054    | 0.120       |
|                          |                          | p-value |           | 0.677    | 0.0355      |
|                          | <b>Total Practice</b>    | r       | 0.054     | 1        | 0.37        |
|                          |                          | p-value | 0.677     |          | 0.000**     |
|                          | <b>Total performance</b> | r       | 0.120     | 0.737    | 1           |
|                          |                          | p-value | 0.355     | .000**   |             |
| <b>Post program</b>      | <b>Total Knowledge</b>   | r       | 1         | 0.726    | 0.588       |
|                          |                          | p-value |           | 0.000**  | .000**      |
|                          | <b>Total Practice</b>    | r       | 0.726     | 1        | 0.899       |
|                          |                          | p-value | 0.000**   |          | .000**      |
|                          | <b>Total performance</b> | r       | 0.588     | 0.899    | 1           |
|                          |                          | p-value | 0.000**   | 0.000**  |             |
| <b>Follow-up program</b> | <b>Total Knowledge</b>   | r       | 1         | 0.440    | 0.446       |
|                          |                          | p-value |           | 0.000**  | 0.000**     |
|                          | <b>Total Practice</b>    | r       | 0.440     | 1        | 0.848       |
|                          |                          | p-value | 0.000**   |          | 0.000**     |
|                          | <b>Total performance</b> | r       | 0.446     | 0.848    | 1           |
|                          |                          | p-value | 0.000**   | 0.000**  |             |

### **Discussion:**

Regarding personal characteristics of head nurses more than half of them aged less than thirty five years old, more than three thirds of them were males and married, about three thirds of them had bachelor degree in nursing and more than half of them working in medical unit and had less than ten years' experience in nursing profession. This may be due to that males are interested in college of nursing more than nursing schools or institutes.

This result was compatible with **Abdallh et al., (2022)**, they study delegation training program for head nurses and its effect on their nurses' competence and found that the majority of head nurses aging less than thirty five years old married and holding bachelor degree in nursing. In line with this study **El-nagar et al., (2022)**, they study efficacy of guidance program on head nurses' practice for delegating managerial tasks in intensive care Units, and found that the majority of head nurses were married and holding bachelor degree in nursing.

Regarding percentage distribution of head nurses knowledge regarding polarity management through the program phases more than two thirds of the studied head nurses had poor total knowledge in pre-program phase and more than three quadrants of them had good knowledge in post and follow up program phase. This may be due to greater effect of the education program in total knowledge about polarity management after program implementation.

Regarding mean and standard deviation of head nurses knowledge regarding polarity management through the program phases, there were a highly statistical significant differences in relation to mean and standard deviation scores of knowledge between pre and post program and between pre-program and follow up phase of program, which indicated that the program had a

positive improvement of nurses' knowledge level throughout immediate post and follow-up program phases compared with preprogram phase. From researcher opinion this may be due to the using suitable education methods during the different sessions

This result was compatible with **Mohamed et al, (2021)**, they study effect of educational training program about polarity management on nurse managers' knowledge and practice and reported that regarding Mean and standard deviation of studied head nurses according to their total knowledge through the program phases, there were a highly statistical significant difference in relation to mean and standard deviation scores of knowledge between pre and immediately post program. Also this result in line with **Gab Allah & Nassar, (2018)**, they found that the majority of the studied sample before awareness sessions lack knowledge about all items of polarity management. Furthermore, there was a significant improvement in all items and a total score of nurse managers' knowledge about polarity management after awareness sessions than before.

Regarding percentage distribution of head nurses practice regarding polarities management through the program phases more than two thirds of the studied sample had poor polarity management practice that improved to be the majority of them had good polarity management practice in post and follow up program phase. This may be due to head nurses readiness to develop different practice to deal with different circumstances. This study in line with **Manderscheid & Freeman, (2019)**, they conduct a study titled "Managing polarity, paradox, and dilemma during leader transition" they stated that training and development professionals are valued in polarity thinking for transitioning leaders and can respond with timely training interventions, it also, have a positive impact

on new leader effectiveness and subsequent organization performance.

Regarding mean and standard deviation of head nurses practice regarding polarity management through the program phases there were a highly statistical significant difference relation between mean and standard deviation scores of polarities practice between pre and post program and between pre-program and follow up phases of the program. This may be due to improved head nurses practice after program implementation regarding polarities management throughout immediate post and follow-up program phases compared with preprogram phases and the highest mean and standard deviation was for communication practice in post and follow up program phase compared with the preprogram phase. This may be due to that polarity management practice are essential for leaders to quickly achieve goals while building sustainable processes and structures and help eliminate insecurity.

In line with this study **Mallek & El-Hosany (2020)**, who assess the effect of training program for improving competence and polarity of clinical instructors and found that there were statistically significant differences between mean scores of the clinical instructor in relation to their total clinical teaching practice knowledge in pre and post intervention program.

Regarding percentage distribution of studied nurses regarding their performance items through the program phases only less than one quadrant of the studied sample had high performance in pre-program phase that improved to the majority of them in post and follow up program phases. This may be due to the comprehensiveness, effectiveness and applicability of the implemented program. This finding is coherent with the study done by **Mushtaq et al., (2022)**, they study Impact of transformational leadership intervention of

head nurses among front-line solders (staff nurses) working in government hospital The study showed Insufficient pre-intervention scores of the study participants explained inadequate knowledge. After awareness sessions, there was a highly significant improvement in the knowledge scores and practice of head nurses regarding transformational leadership.

Additionally, **Abd-Elrhaman & Abd-Allah., (2018)**, they study transformational leadership educational program for head nurses and its effect on nurses' job performance and demonstrate that the majority of the head nurses had good practice levels after the educational program than that what was reported before the intervention.

Regarding mean and standard deviation of head nurses' Performance through the program phases the highest mean of the studied sample performance was for staff management in pre, post and follow up program phases. And there were highly statistical significant differences in relation to mean and standard deviation of head nurses performance between pre and post program and between pre-program and follow up phase of program. This may be due to the effectiveness of program implementation.

In line with this study **Elsayed et al., (2019)**, they reported that there were highly statistical significant differences in relation to mean and standard deviation of head nurses performance between pre, post and follow up program phases. Also, **Ali et al., (2019)**, they study effect of authentic leadership educational program for head nurses on staff nurses' organizational commitment in the study had statistically significant improvement in nurses' knowledge and performance and there were statistical significant differences in relation to mean and standard deviation of head nurses

performance between pre, post and follow up program phases.

Regarding correlation between total knowledge, practice regarding polarity management and performance among head nurses through the program phases the study revealed that there were positive correlation between studied sample total knowledge and their practice and their performance and there were positive correlation between studied sample practice and their performance in post-program phase. In addition there were positive correlation between studied sample total knowledge and their practice and their performance and there was positive correlation between studied sample practice and their performance in the follow up phase. This may be because the implementation of polarity management program which indicates the effectiveness of the training program.

This result was congruent with **Abou Ramadan & Eid., (2020)**, they study effect of coaching educational program for head nurses on nurses' self-efficacy and reported that there was positive correlation between studied sample total knowledge, practice and performance after intervention.

Also tis result agreed with **Bakr & Mukhtar (2020)**, they study the impact of an evidence-based practice (EBP) educational program on the nursing managers' professional knowledge/practice, attitude, and practice: quasi-experimental study and reported that there was association between Knowledge, Attitude, Practice, and participants' education, position, and previous experience in EBP. Also **Ali & Saad., (2022)**, reported that there was statistically highly significant relation between total level of studied nurses' knowledge, practice and practice for pre, post and follow up program phases.

### **Conclusion:**

Polarity management for head nurses throughout the program phases: majority of them have adequate knowledge, and most of them have satisfactory practice level toward polarity management in post program phase. In addition there was a statistical significant improvement regarding all dimensions of performance for head nurses through immediately post program phase. And finally there was a positive correlation between total knowledge and practice score for head nurses and their performance during post and follow up (after three months) of the program phases compared with preprogram phase.

### **Recommendations:**

- Hospital managers should periodically assess head nurses` polarity management practice, motivate head nurses to improve their knowledge and practice about Polarity management.
- Polarity management should be involved in performance appraisal for head nurses.
- Provide effective open communication between head nurses and their managers and staff that will improve work and performance.
- Provide monthly meetings, conferences to explain head nurses problems, opinions and their needs.
- Conducting training program and workshops periodically for head nurses about polarity management to improve their practice and performance.
- Publishing posters containing tips for polarity management and its effect on performance of head nurses posted in each department.
- Provide training and education programs continuously for refreshing and increasing head nurses' knowledge and practice about the concept of polarity management.



## **Effect of Polarities Management Educational Program on Head Nurses' Performance**

- Polarity management can be added to course of nursing curriculum.
- Continuous training courses for head nurses about managerial practice such as problem solving, decision making.
- Repetition of the same study for large number of head nurses is highly recommended to achieve generalizable results.
- Investigate factors that affect head nurses' polarity management practice at the clinical setting.
- Provide further research and training program to support such a program to improve polarity management practice.

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## تأثير برنامج تعليمي عن إدارة الأقطاب على أداء رؤساء التمريض هناء محمد السيد- نرمين محمد حسين عيد - فوزية فاروق كامل

الأقطاب هي عملية تفاعل بعض القيم المتضادة لتعمل بالتزامن مع بعضها. وإدارة الأقطاب هي الإعراف بأنه لا يوجد رأى واحد صحيح أو حل واحد فقط. وتوجد أقطاب غير معدودة بالمؤسسات الصحية حيث تعتمد قدرة رؤساء التمريض داخل الهيئات الصحية على تحديد الأقطاب بقدرتها على التعامل مع الضغوط والعمل بروح الفريق. وتصف إدارة الأقطاب الموازنة بين الحول والإختيارات من أجل تحسين النتائج وتحسين مستوى أداء رؤساء التمريض. هدفت هذه الدراسة لتقييم تأثير برنامج تعليمي عن إدارة الأقطاب على أداء رؤساء التمريض. تم استخدام تصميم شبه تجريبي في هذه الدراسة. أجريت هذه الدراسة في جميع الوحدات الداخلية باقسام الباطنة والجراحة بمستشفى بنها الجامعي. تكونت عينة الدراسة من 61 رؤساء الممرضين. حيث كشفت النتائج بأن هناك ارتباط ايجابي ذات دلالة إحصائية عالية بين اجمالى المعلومات والممارسات لرؤساء التمريض وتأثيره على ادائهم ما بعد تنفيذ البرنامج والمتابعة. بينما لم يكن هناك ارتباط ذو دلالة إحصائية في مرحلة ما قبل البرنامج مما يدعم فرضيات الدراسة. كما أوصت الدراسة بالشرع في برامج التعليم والتدريب لتحديث وزيادة معلومات وممارسات رؤساء التمريض فيما يتعلق بإدارة التناقضات لتحسين ادائهم