

Effect of educational training program about polarity management on Nurse Managers' knowledge and Skills

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Abstract

Background: Most leadership problems involve more complexity than that, where the outcome isn't predictable, and frequently require the ongoing management of tension between two or more seemingly opposite but nevertheless interdependent values. The leaders should recognize polarities and the value that each pole brings their solutions. **Aim:** The present study aimed to assess effect of educational training program on nurse managers' knowledge about polarity management at Assiut University Hospital. **Subject and methods:** A quasi-experimental research design was used to conduct this study. A convenience sampling technique was used to select a group of (50) nurse managers. Two tools were used throughout the study phases. Tool (I): classified into three parts; personal data sheet, Knowledge questionnaire about polarity management, and polarity map application test. Tool (II) : Evaluation of the education training program (opinionnaire sheet) . **Results:** The majority of nurse managers had lacking in knowledge about polarity management and also had poor skills in polarity management before training. There was a significant improvement in all items and a total score of nurse managers' knowledge and skills of polarity management after implementation of training program than before. **Conclusion:** Training program was highly effective in improving nurse managers' knowledge and skills in polarity management. **Recommendations:** Polarity management awareness should be included in the orientation programs for the newly appointed managers, polarity management should be involved in performance appraisal for nursing managers, and the curriculum of nursing administration course in faculties of nursing in Egypt should add topics of polarity management.

Keywords: Nurse Managers, Polarity management, Polarity map, Training program.

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Introduction

Polarities exist in the world, wherever there is life. Polarities are a part from the day which involved in every important issue and every important decision . They are not problems that can be solved. They never go away but must be managed. Polarities and polarity management are a vital part of management today. The ability to properly recognize the pitfalls of,

maintain a balance between the different poles of a polarity is a very important skill required in each manager. Polarities are interdependent pairs of values or points of view that are very different, and may appear as opposites and competitive yet need each other over time to reach a higher purpose or outcome that neither can reach alone (Wesorick, 2014).

Polarity is a theoretical frame for dealing with complex challenges' offers

nursing leaders a new vision for how to deal with these professional issues rather than seeing the nursing shortage and the advancement of patient safety as insoluble problems that must be solved .

Distinguishes between problems to be solved and polarities to be managed this is done by asking two questions: “Is the difficulty ongoing?” and “Are there two poles which are interdependent?” Johnson’s differentiation method asserts that if two opposing issues must be held in balance and if those problems are ongoing with no simple or definitive solutions, they are polarities that must be managed. This requires a shift in focus from looking at one pole to the exclusion of the other and requires valuing and considering both poles simultaneously (**Welp ,2007**).

Taie, (2014) stated that one of the challenges that managers need to overcome is learning to understand the differences between “problems to solve” and “polarities to manage. Managers' 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 (**Johnson, DePol and Jacobs, 2013**).The Polarity Management framework and principles provide a practical set of resources for dealing with all polarities in life. Polarities are ongoing, chronic issues which are both unavoidable and unsolvable .

There are three steps necessary to manage polarities :The first is to know there are polarities and how they work so we can see them. The second step is to Map the polarity which requires naming each pole and filling in the map so we clearly know the content of the positive and negative quadrants, the higher purpose and greatest fear. The third step is to tap the energy/tension between them

which requires action steps to keep each pole strong. To visualize this, the polarity map needs to expand. Managing polarities requires vigilance and intentional action steps to simultaneously keep each pole supported over time so together they reach a goal neither could reach alone. Because of our problem solving approach we saw each pole as a problem that needed to be fixed and that approach will always fail with polarities. These questions will give some clarity (**Wesorick, 2014**).

Significance of the study

Managers' ability to discover and manage polarities allows them to avoid wasting time and resources, build trust, scale back resistance to vary, and accelerate action of the upper purpose.

There's nice potential for organizations that value more highly to train new leaders to develop skills in polarity management. If coaching and development professionals respond with timely coaching interventions, it may have a positive impact on managers' effectiveness and ulterior organization performance. Very little analysis within the space of polarities is situated, however. Information gathered from this study might supply a helpful and positive application for managers troubled to be effective with progressively advanced organizations. So, this study was conducted to assess nurse managers' knowledge and skills about polarity management at Assuit University Hospital

Aim of the Study

Assess the effect of educational training program on nurse managers' knowledge and skills about polarity management at Assuit University Hospital

Research hypotheses

1) Nurse Managers' is lacking in knowledge about polarity management.

2) Nurse Managers' knowledge and skills about polarity management will improve after implementation of educational training program.

Subject and method

The present study aimed to assess the effect of the educational training program on nurse managers' knowledge, skills about polarity management.

The methodology pursued in the conduction of the study portrayed according to the following designs; technical, operational, administrative, and statistical design.

Technical design

This design involved the study design, the study setting, the study subject and tools of data collection.

Study design

A quasi-experimental design with pre-post assessment were utilized to assess the effect of the educational training program on nurse managers knowledge and skills about polarity management dimension, and their opinions regarding educational program effectiveness.

Study setting

The study was conducted at Assiut University Hospital. The implementation of the training program was carried out in nursing training center at the Technical Institute of Nursing - Assiut University.

Study Subject

A convenience sample which represented by all nurse managers (director and head nurses) who are working at the Assiut University Hospital with total number (50 nurse managers).

Tools of the study

The data needed for the study was collected using self –administered questionnaire, it comprised of two tools;

First tool: Nurse Managers' knowledge about polarity management Questionnaire; this questionnaire developed by the researchers .It was used to assess the nurse managers' knowledge about polarity management dimension. This questionnaire included two parts:

Part (1): Including (7) questions regarding personal data sheet as; name (optional), age, gender, position, educational qualification, years of experience, and attendance of training program about leadership.

Part (2): including total (41) questions in the form of multiple choices and true & false. It is divided into seven dimension; polarity definition and characteristics (6 questions), problem solving definition and characteristics (3questions), polarity maps (7 questions), polarity management (10 questions), polarity principles (6 questions), polarity outcomes (6 questions), using polarity maps (3 questions and its application).

Polarity map application test: include asking each group of nurse managers to set an example for polarity commonly faced by them and apply the steps of polarity mapping to manage this polarity.

The scoring system of the nurse managers' knowledge about polarity management and polarity map application each statement was scored (1) for correct answer and (0) for false answer.

Second tool: Evaluation of the education training program (opinionnaire sheet): The opinionnaire was developed by the researchers, to evaluate the program effectiveness from participant point of view. This opinionnaire was covered total (17) questions. It divided into (5) parts; the objectives of the training program (5) questions, the content of the training program (5) questions, teaching methods that used in the training program (3) questions, teaching aides (3) questions, and discussion (1) questions.

Scoring system

Each statement is rated on a three-point Likert type scale, the scores ranging from value ranging from (3) excellent, (2) good ,and (1) poor.

Operational design

This design explains the steps of actual implementation of the study, including the pilot and field work.

Preparatory phase

It took about two months from January to February 2020 which included reviewed the available literature concerning the study topic, study tools prepared, and translated and develop a booklet to be used in the training program.

Pilot study

A pilot study was carried out on a group 10% of the study subjects chosen randomly at different hospitals to ensure the clarity, reliability, accessibility, time

consuming and understanding of the study tools before beginning of actual data collection. Also, pilot helped to determine the organizational, administrative procedures needed for the study.

The draft of the questionnaire reviewed for face validity by experts' opinion through a jury comprised from 5 experts (3 Professors from Nursing Administration Department and 2 Professors from Community Health Department) Faculty of Nursing, Assuit University (to test comprehension of study tools).

The study tools reliability tested using (a) Cronbach's test for the tools of the study. The (a) Cronbach's test was as follows; Cronbach's alpha coefficient value was 0.875 for Nurses managers' knowledge about polarity management Questionnaire. Cronbach's alpha coefficient value was 0.890 for Evaluation of the training program (Opinionnaire sheet). This means that Cronbach's Alpha coefficient value, is accepted and highly reliable.

Fieldwork

The researcher started to collect data and implement of the training program from 2nd week February 2020 to 2nd week March 2020. The researchers develop a training program through four stages (assessment, planning, implementation and evaluation phase).

Planning and developing a training program:

The program was planned and designed based on the needs assessment in this study through (pre-test questionnaire). The detailed program content as time table for training program that displayed in (Table 1). The planning phase included the following:

Formulating training program objectives

General objective: to develop participant's scientific knowledge, and practical abilities at Assiut University Hospital about application of polarity management

Specific objective: by the end of this a training program, participant will be able to:

Define polarity.

List the characteristics of polarity.

Define problem solving.

List the characteristics of the problem solving.

Explain the polarity maps.

Illustrate the polarity management.

Explain the polarity principles.

Demonstrate how using polarity maps.

Apply polarity maps.

Discuss the polarity outcomes.

Teaching place

The training program was conducted in the nursing training center at the Technical Institute of Nursing - Assiut University

Implementation phase of the training program

The program was implemented by the researchers on the study sample who were nurse managers (n=50) from different departments at Assiut University Hospital. The participants were divided into three groups. The first group consisted of 20 participants the second and third group was contain 15 participants. This was done to avoid shortage of nurse managers which might happen if all of them leave the hospitals at the same time and also because of the difference in shifts. The participants in

training program were divided into small groups. Every group ranging from (n=5 to n=7) participants.

The program implemented in a period of one day for every group. The course content was spread into five sessions for every group. The total time of the program was 7.30 hours; every session took one hour except the application one took two hours for the three groups. The theoretical part was delivered in four sessions.

A presentation was given by the researchers. At the beginning of the first session, an orientation to the program and its purpose was done and the participants were informed about time and place of session taken. Each session started by a summary about what was given during the previous one session. This phase took about one month from 3rd week of March 2020 to 2nd week of April 2020.

Teaching methods

The methods or strategies of teaching that were used by the researchers of the training program included the following:

For theoretical part

The researchers used the following teaching strategies: Lecture, discussion, brain storming, and small group discussion.

For the practical parts

The researchers used the following teaching strategies:

Demonstration (Photographs and drawing for illustrations): The trainers show models and Photographs to the participants to identify the correct methods before applying them. Then, each

participant demonstrates his own model and the trainers give the comments.

Case study: The case study is a method which provides descriptive situations which stimulate participants (trainees) to make decisions. In purpose of the case method is to make trainees apply what they know, develop new ideas to manage a situation or solve a problem.

Practical training: Practical training is an effective way because program participants (trainees) apply the theoretical information they have acquired in the discussion. It ensures the participants of the program access to different information and skills in working life, and the trainers (researchers) allows the group to apply what was seen in practical training under his supervision.

Teaching aids these used:

The researchers used the teaching aids for implementation of the program including ;Booklet, Handout was provided to all participants, Power Point, Flip charts, Photographs and drawing for illustrations, and Video presentation.

Evaluation phase of the training program

Immediately after implementation of the training program, the researchers use post-test format to evaluate the effect of the training program as same pre-test format that were used at the beginning of program implementation to evaluate the improvement of knowledge. The test was completed in about half an hour.

Lastly, participant's reaction form (opinionnaire sheet) was distributed immediately after program implementation to elicit participants' opinions and the worth points about various aspects of the training program as

an education experience and the benefits gained from it.

Administrative design

An official permission to collect data and implement training program was obtained from the Director of Nursing Training Center and Nursing Director of Assiut University Hospitals.

Ethical considerations

The Ethical Committee in the Faculty of Nursing – Assiut University approved on the research proposal. The study was following common ethical principles in research. The study subject had the right to refuse to participate and /or withdraw from the study at any time. There was no harm for study subject during application of the research. Study subject confidentiality was considered during collection of data. The purpose of this study was explained to all participants and oral consent taken from the participants in the present study. Informed the participant that the information and data obtained will be confidential and used only for the purpose of the study. Written consent taken from the participants through document dating before the training program implemented.

Statistical design

Collected data were verified prior to computerized data entry and analysis by using statistical software package for social sciences (IBM SPSS-22). Data were presented using descriptive statistics in the form frequencies and percentages. Quantitative variables were presented in the form of means and standard deviation. Qualitative variables were compared using (chi-square test) and (ANOVA test). Used (Person Correlation) to examine the association between scores was

considered statistically significance difference ($P < 0.05$).

Results

Table (1): Illustrates that the vast majority are females (**96%**) and half of nurse managers aged from **41 to 50** yrs.

Figure (1): Illustrates that more than two thirds have Bachelor degree of nursing (**68%**).

Figure (2): Displays that the nurse managers attended training program about leadership (**50%&45%**) respectively.

Table (2): Depicts that raising in the mean scores of all dimensions in the post-test with highest mean score as regard to polarity management and polarities maps (**8.72 ± 0.92 & 6.32 ± 0.84**) respectively. There are statistically significant differences as regard to all Polarity dimensions.

Table (3): Shows that vast majority of studied nurse managers scores the effectiveness of educational program excellent as regard to the extent of organizing the training program, cover educational needs, Suitability of teaching methods, The extent of teaching aids Suitability, and discussion (**96%, 90%, 92%, 96%, and 90%**) respectively.

Table (1): Distribution of personal characteristics for the studied nurse managers at Assiut University Hospital (no=50)

Personal characteristics	Nurse managers (n=50)	
	No.	%
Age: (years)		
▪ 20 –	11	22.0
▪ 31 –	14	28.0
▪ 41 – 50 yrs.	25	50.0
▪ More than 50 yrs.	0	0.0
Mean \pm SD	2.28 \pm 0.81	
Gender		
▪ Male	2	4.0
▪ Female	48	96.0
Years of experience:		
▪ 1–	14	28.0
▪ 6 –	5	10.0
▪ 11 – 15 yrs	31	62.0
Mean \pm SD	1.46 \pm 0.73	

Figure (1): Percentage distribution of educational qualification among studied nurse managers

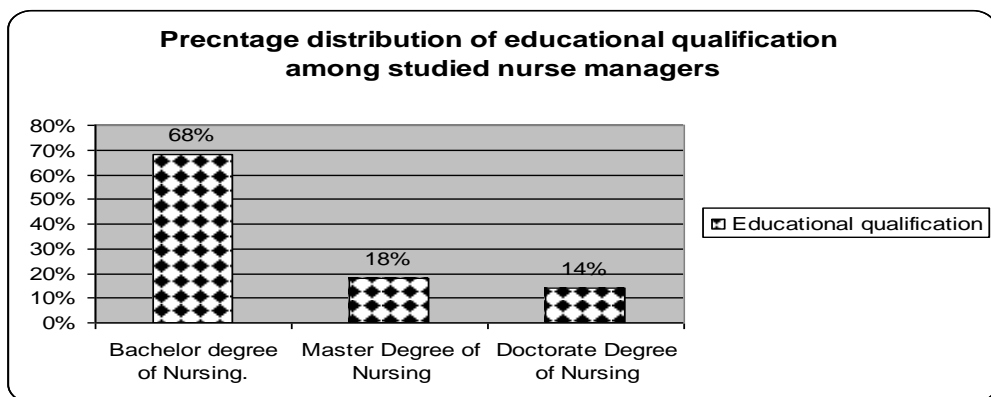


Figure (2): Percentage distribution of attending training program about leadership.

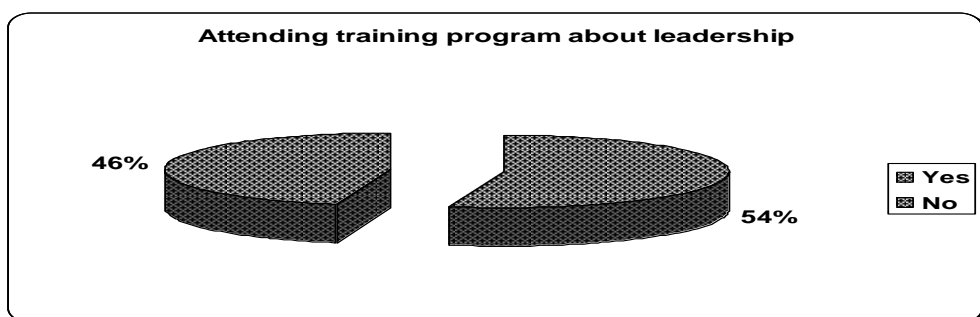


Table (2): Mean scores of pre & post-tests polarity dimensions among the studied nurse managers at Assiut University Hospital (no=50)

Polarity dimensions	Nurse managers (pre-test)	Nurse managers (post-test)	X ²	P-value Pre-post test
	Mean ± SD	Mean ± SD		
- Polarity definition and characteristics.	2.94±1.31	5.24±0.68	9.16	0.010
-Problem solving definition and characteristics.	1.02±0.79	2.00±0.98	13.68	0.003**
- Polarities maps.	3.74±1.80	6.32±0.84	27.76	0.000**
- Polarity management.	4.38± 2.59	8.72± 0.92	11.12	0.011*
- Polarity principles.	2.62± 2.30	5.70± 0.46	8.00	0.005**
- Polarity outcomes.	2.28±1.86	5.44± 0.91	55.44	0.000**
- Skills of using polarity maps (application).	2.62±9.27	4.98±0.14	38.72	0.000**

* $P < 0.05$

** $P < 0.01$

Table (3): Distribution of nurse managers opinions regarding educational program effectiveness at Assiut University Hospital (n=50)

Items	Excellent		Good		Poor	
	No.	%	No.	%	No.	%
1- The objectives of the training program	46	92.0	4	8.0	0	0.0
- Introduction about the training program						
- Clarity of objectives	43	86.0	7	14.0	0	0.0
- Extent of achieving objectives	42	84.0	8	16.0	0	0.0
- The extent of organizing the training program	48	96.0	2	4.0	0	0.0
- Duration of the training program	36	72.0	14	28.0	0	0.0
2- The content of the training program						0.0
- Comprehensive content	35	70.0	15	30	0	
- Cover educational needs	45	90.0	5	10.0	0	0.0
- The extent of benefit	42	84.0	8	16.0	0	0.0
- The extent of suspense	40	80.0	10	20.0	0	0.0
- How it relates to objectives	41	82.0	9	18.0	0	0.0
3- Teaching methods in the training program	42	84.0	8	16.0	0	0.0
- Sufficiency						
- How is it diverse	44	88.0	6	12.0	0	0.0
- Suitability	46	92.0	4	8.0	0	0.0
4- Teaching Aids						
- The extent of usage	46	92.0	4	8.0	0	0.0
- The extent of suitability	48	96.0	2	4.0	0	0.0
- The extent of sufficiency	42	84.0	8	16.0	0	0.0
5- Discussion	45	90.0	5	10.0	0	0.0

Discussion

Polarity management is a skill that allows nurses managers to achieve organizational goal. The attribute of polarity thinking is about “both-and” and invites a move away from “I am right, and you are wrong” thinking to “we are both right.” This type of thinking complements our traditional problem solving (either-or) thinking (Val & Kathy, 2013). Therefore, the aim of the study was to assess the effect of a training program on enhancing nurse managers' knowledge and skills in polarity management. Firstly, take a look at the personal characteristic data of the study subjects. The present study illustrated that the vast majority are female, more than two thirds have Bachelor degree of nursing, half of studied nurse managers aged from 41 to 50 yrs, and attended training program about leadership. This is may related to that the department of continuing education at Assiut University Hospital focuses only on providing training programs and workshops that improve the technical practices of nursing staff while the administrative skills were ignored and this concept of management is recently used.

The present study has two hypotheses. The first hypothesis was that the majority of nurse managers have lacking in knowledge and skills about polarity management. This hypothesis was true according to the study results as all studied sample lack knowledge about all items of polarity and its management before awareness sessions. Also, the current study hypnotized that the training program will be effective in improving nurse managers' knowledge and skills in polarity management. This hypothesis was true according to the study results as the findings of the present study revealed that there is a

highly statistically significant difference between the mean score of nurse managers' knowledge and skills throughout the study phases (Pre, and post-training). Moreover, there is a significant improvement in all items and a total score of nurse managers' knowledge and skills about polarity management after training program than before as ($P = <0.001$). This finding are in the same line with results of Taie, (2014) who conducted a study titled "Designing and validating protocol for managing polarities in healthcare" who revealed that all of the studied sample before awareness sessions lack knowledge about all items of polarity and that there was a highly significant difference between managers' knowledge about polarity management before and after sessions. In the same line, these findings are consistent with the results of Arab et al., (2016) who conducted a study to evaluate the effects of training on the knowledge and attitudes of nurses with regard to pain management. Their results showed that the training program has a positive impact on knowledge and attitudes. However, the results of a study conducted by Machira et al., (2013) on the effects of training interventions on the knowledge of pain contradict the result of this study hence indicating a negative relationship between training programs and knowledge level among nursing staff.

The evaluation of the present study program by nurse managers was quit positive. The vast majority of studied nurse managers score the effectiveness of educational program excellent as regard to the extent of organizing the training program, cover educational needs, suitability of teaching methods, the extent of teaching aids suitability, and discussion. This may attributed to the participants

motivation to learn and they got a lot of benefits as new knowledge and practices as regard to polarity management where they worked. These findings is congruent with **Abo Gad & El Demerdash, (2014)** Who demonstrated that the effectiveness of training program for nursing managers was enhancing their knowledge and skills after implementation of the program.

Conclusion

According to the study findings, it was concluded that there was a high significant ($p < 0.001$) difference between managers' knowledge and skills about polarity management before and after implementation of the training program. The participants had excellent opinions regarding the content of the program.

Recommendations

- 1) Hospital manager should apply polarity management skills among first line managers.
- 2) Polarity management awareness should be included in the orientation programs for the newly appointed managers.
- 3) Polarity management should be involved in performance appraisal for nursing managers.
- 4) The curriculum of nursing administration course in faculties of nursing in Egypt should add topics of polarity management.
- 5) Organizational culture should supports using of polarity management map.
- 6) Further studies need to be conducted in different healthcare

settings to generalize the concept and usage of polarity management.

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