

Research Article

Effect of Head Nurses' Workplace Polarity Management Educational Intervention on Their Coaching Behavior

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Purpose. To maintain the quality of patients care, head nurses (HNs) are confronting various contradicting issues that require the ability to manage polarities and concern coaching behaviors as exploring situations, building alliances, and maintaining communication with nurses. This study aimed to explore the effect of HNs' workplace polarity management educational intervention on their coaching behaviors. **Design.** A quasiexperimental (pre-posttest) research design was used. **Method.** This study was conducted at Tanta International Teaching Hospital, on 12 HNs and 300 nurses using three tools: (I) a polarity management knowledge questionnaire; (II) a polarity map evaluation observational checklist; and (III) a nurses' perception of the HNs' coaching leadership behaviors questionnaire. The statistical tests used were as follows: the Kolmogorov-Smirnov test, the significance of the obtained results was judged at the 5% level; the marginal homogeneity test, ANOVA with repeated measures, the Wilcoxon signed ranks test, and the Friedman test. The study was conducted between end of 2021 and beginning of 2022. The educational intervention included 3 sessions: polarity management and the keys to manage it, polarity map (stability versus change), and head nurses' role in managing polarity and how it reflects on their coaching leadership behavior. HNs' ability to practice polarity management was classified into levels according to cutoff points: high >75%, moderate 60–75%, and low <60%. **Results.** Before intervention (66.7%, 100%) of head nurses had poor knowledge and low practice that changed after 3 months of intervention to be 58.3% and 41.7%, respectively. Before and 3 months after the intervention (70.0%, 33.7%) of nurses perceived that head nurses had a low and a moderate level of coaching, respectively. 70.0% of working nurses reported that they noticed that head nurses' coaching behaviors were low before the educational intervention, but the percentage decreased by half three months after the educational intervention. **Conclusion.** Implementing the educational intervention for head nurses about workplace polarity management significantly correlated with the nurses' perception of their HNs' coaching behaviors.

1. Introduction

Head nurses (HNs) are the frontline leaders in healthcare organizations. HNs face many workplace challenges in leading their staff to effectively and efficiently accomplish the organizational goals, especially at times of crisis such as COVID-19

pandemic [1]. These challenges include implementing cost reduction strategies while maintaining quality; working in teams while keeping autonomy; and various other issues [2, 3]. Such issues, known as polarities, do not always have obvious solutions [2]. Polarities are ongoing, unavoidable, and unsolvable issues that can have opposing solutions but still need to

be solved to attain the required outcomes [4]. Hence, HNs need to be able to assess the situation, identify the polarities, and differentiate it from regular problems [2].

Head nurses need to own the cognitive skills and be knowledgeable about polarity management principles to map the different methods for managing poles and unsolvable issues [5]. Polarity thinking demands the development of a visual framework/map with two poles based on a quick brainstorming process. Each pole is divided into two spheres, with the upper sphere representing the positive aspects and the lower sphere representing the negative outcomes. Both spheres require deep discussion on how these issues can be dealt with. Then, the possible activities are mapped to deal with the situation, by weighing the pros and the cons of each activity according to the available knowledge and specify points of uncertainty [6, 7].

Well-managed polarities occur when HNs can integrate and balance the two poles to gain benefits from both the upsides and synergies to achieve organizational goals [2, 3]. This depends on HNs' ability to converge the opposite poles through negotiation to ensure sustainable outcomes through four basic steps: specify the polarity, name the poles, brainstorm to construct a polarity map, and seek consensus on the overall goals and eliminate threats [8, 9].

Polarity management skills reshape HNs' cognitive abilities to reframe the challenges, build trust, and navigate their strengths and weaknesses. This cognitive mindset enables HNs to encourage others to grow, participate in decision-making, establish work alliances, and decrease the chances of being caught up in power struggles [10, 11]. HNs who manage polarity can reach more sustainable outcomes by being more amenable to change. Thus, polarity management can be an essential component in strategy development, team building, and coaching [12–14].

Training of HNs on polarity thinking has become a popular trend since it requires HNs to think as a coach and invest in developing their staff nurses for success [3, 4]. Study conducted by [15] confirmed that nurses in intensive care units did not spend any of the working hours over the three years, which is the time of the study, in the professional development of employees. Thus, coaching is an essential behavioral process that can stimulate nurses to discover their potential and maximize their performance toward desired organizational outcomes [14, 16].

Training or coaching focuses on the personal and professional developmental changes that are critical to nursing practice. Coaching uses a more conversational approach than structured session, to develop a collaborative relationship between leader and follower [17–19]. HNs can maximize nurses' talents by four main coaching behaviors: build alliances, open communication, learn and advance, and report progress and results. Building effective working alliances requires a relationship of trust and mutual care that adds to good cooperation, leading to the creation of a cooperative work environment characterized by a constructive civil climate [18, 20, 21].

Head nurses need to develop open communication behaviors including listen attentively to nurses' issues, participate in both formal and informal discussions, analyze

situations to explore the surrounding circumstances, and ensure information transparency [6]. A coach HN should focus on nurses' learning and advancing, on both personal and professional biases, and recognize nurses' strengths, and work on their weaknesses. Finally, a coach HN should assist nurses to create their own goals, develop achievable plans, and follow its progress and provide [22, 23].

1.1. Significance of the Study. The HNs' ability to manage polarities can result in better resource and time management and reduce resistance to change and contribute to goal achievement [9, 24, 25]. HNs, who develop polarity management skills, look at the benefits of the upside pole and decrease the suffering from the downside pole [26]. Therefore, healthcare organizations need to train nurse leaders to be able to manage polarities that can have a positive impact on their staff coaching behaviors. However, the limited healthcare budgets restrict this, so the educational institutions linked to the university hospitals should assume this responsibility to support their graduates in clinical settings [27, 28]. Moreover, polarity management is still a new concept in Egypt, and the health care polarities are still ambiguous for head nurses, and most of head nurses still treat health care issues as problems to be solved and not polarities need to be managed which make the situation worse; in spite of doing their best, the health care issues are still unsolvable. Consequently, this study aimed to explore the effect of an educational intervention for head nurses about workplace polarity management on their coaching behavior at Tanta International Teaching Hospital.

1.2. Aim of the Study. The aim of the study is to explore the effect of HNs' workplace polarity management educational intervention on their coaching behaviors.

1.3. Research Hypotheses

H1. Immediately after the educational intervention and 3 months later, HNs' knowledge about workplace polarity management scores will be increased compared to pre-educational intervention

H2. Immediately after the educational intervention and 3 months later, HNs' ability to practice workplace polarity management scores will be increased compared to pre-educational intervention

H3. Three months later, the nurses' level of perception of their HNs' coaching behaviors will be increased compared to pre-educational intervention

2. Methods

2.1. Design. A quasi-experimental (pre-posttest) research design was used, which has been commonly used to determine the impact of an intervention on target population [29].

2.2. Setting. The study was conducted at Tanat International Teaching Hospital (450-bed capacity), that is affiliated to the Ministry of Higher Education and Scientific Research.

2.3. Subjects. The total sample was 312 of whom 12 were HNs, and 300 nurses were selected using a simple random sampling technique. Inclusion criteria include the following: all nurses of any age, gender, education level, and employment status while exclusion criteria include those with less than one year of experience. They are working in various critical care units at the Tanat International Teaching Hospital: 104 from medical; 21 from cardiology; 21 from chest; 27 from surgical; 9 from burns; 15 from anesthesia; 21 from incubators; 4 from bone-marrow transplantation; 13 from pediatrics; 21 from nephrology; 27 from internal medicine; and 17 from neurology.

The researchers used "Epi Info" [30] to calculate the representative sample size. Epi Info is public domain set of software tools developed by the United States Centers for Disease Control and Prevention for use by public health professionals and researchers. It includes a tool for sample size calculation. The criteria used for calculation are as follows: Z = confidence level (95%) and d = error proportion (0.05). This yielded a sample size of 312 to achieve a study power of 0.80, according to the number of nurses in each department of total 1,360.

2.4. Educational Intervention. The educational intervention included three sessions of one hour duration; the first session is titled managing polarity and the keys to managing it, which covers three topics on definitions of polarity management (20 minutes), principles of polarity management (20 minutes), and characteristics of polarity management (20 minutes); the second session is titled polar mapping (stability vs. change), which covered two topics on polarity mapping steps (30 minutes) and polarity mapping techniques (30 minutes); the third session is titled the role of the head nurse in polar management and how it is reflected in their directive leadership behavior, which covered several axes, most notably work alliances and open communication, learning and progress, results, and review and summarization, which took about ten minutes for each of them. We used the following teaching methods: interactive lecture, brainstorming, polar map presentation, and group discussions with the help of some media such as data presentation (ppt) and flowchart.

2.5. Tools

2.5.1. Tool I: Polarity Management Knowledge Questionnaire. This consisted of two parts. Part one: HNs' personal data which include: age gender, education level, employment status, years of experience, and the amount of time spent working in their current unit. Part 2: Polarity Management Knowledge Questionnaire which was developed by the researchers Beach and Joyce [7] to assess the HNs' polarity management knowledge before, immediately after, and three months after the educational intervention. It comprised 24 questions cover: polarity management definitions, principles, characteristics, and polarity mapping steps and techniques. Scoring: The HNs' responses were given a score of "1" if "correct" and "zero" if "incorrect." The total sum of the HNs' knowledge level ranged from 0 to 24 and was classified into three levels according to cutoff points: Good > 75% = (>18 grades), fair 60–75% = (14–18 grades), and poor < 60% = (<14 grades).

2.5.2. Tool II: Polarity Map Evaluation Observational Checklist. This tool, which was developed based on Yohe-mas [31], was used to evaluate the HNs' ability to apply the polarity map steps and manage polarity situations before, immediately after, and three months after the educational intervention. Scoring: The nurses' responses were given a score of "2" if "completely done," "1" if "partially done," and "zero" if "not done"; the head nurses' practice was classified into levels according to cutoff points: high >75%, moderate 60–75%, and low <60%.

2.5.3. Tool III: Nurses' Perception of HNs' Coaching Behaviors Questionnaire. This consisted of two parts. Part one: Nurses' personal data which include age gender, education level, employment status, years of experience, and the amount of time spent working in their current unit. This tool was developed based on the studies by Zuberbühler et al. [22] and Gomes and Resende [32]. It was used to assess the nurses' perception of their HNs' coaching behaviors before, immediately after, and three months after the educational intervention. The questionnaire included 25 items divided into four subscales: work alliances (3 items); open communication (5 items); learning and advancement (11 items); and progress and results (6 items). Scoring: the nurses' responses were given on a five-point Likert Scale from 5 = always to 1 = never. The total scores were then summed and classified to levels according to cutoff points as high >75%, moderate 60–75%, and low <60%.

2.6. Ethical Considerations. An approval of the Scientific Research Ethics Committee was obtained (Code No. 83-8-2022). Agreement for this study was given by the Tanta International Teaching Hospital manager. Nurses and HNs were informed about the study, each of whom then agreed to participate. They were also informed that their information would be kept confidential and that they could withdraw at any time.

2.7. Validity and Reliability. A pilot study was conducted to assess the tools' intelligibility on 10% ($N = 32$) of the nursing staff, who were then excluded from the final sample. The tools' reliabilities were assessed using Cronbach's alpha coefficient, and their content validities were checked by five nursing administration experts. Based on the feedback, the tools were then modified. The reliabilities were tested using Cronbach's alpha coefficient tests, with the respective values for tools I, II, and III being 0.771, 0.821, and 0.941. The respective Content Validity Index values were 78.4%, 82.2%, and 93% respectively.

2.8. Field Work

2.8.1. Assessment Phase. The researchers used tools I and II to assess the HNs' knowledge and their ability to practice workplace polarity management. Tools III was used to assess the nurses' perception regarding their HNs' coaching behaviors.

2.8.2. Planning Phase. The educational intervention was designed based on the participants' needs and included three sessions: polarity management and the keys to managing it; polarity mapping (stability versus change); and the HNs' role in managing polarity and the associations with their coaching behaviors. The estimated time needed to complete each questionnaire was between 7 and 10 minutes. This phase lasted for one month (October 2021).

2.8.3. Implementation Phase. HNs were divided into four groups each included three HNs. The total educational intervention time was three hours (one hour for each session/week) for each group. The educational intervention was conducted in the nursing room in the HNs' working units. The sessions started in the morning shift after they had finished their necessary work. The researchers utilized lectures, group discussions, and real work situations. The data collection stage lasted four months from the beginning of December 2021 until the end of March 2022.

2.8.4. Evaluation Phase. The knowledge of 12 HNs and their ability to practice polarity management were assessed three times with the first and second tools before the educational intervention and immediately and 3 months after the educational intervention, while 300 nurses were evaluated twice using the third tool, before and three months after the intervention.

2.9. Statistical Analysis of Data. The statistics were assessed using IBM SPSS software package version 20 (Armonk, NY: IBM Corp). The quantitative data were designated using numbers and percentages. The Kolmogorov-Smirnov test was used to verify the normality of the distributed quantitative data, which were described using range (minimum and maximum), mean, and standard deviation. The significance of the obtained results was judged at the 5% level. The marginal homogeneity test, ANOVA with repeated measures, the Wilcoxon signed ranks test, and the Friedman test were also used [29].

3. Findings

Table 1 shows that all HNs were female, with equal percentage of 41.7% and 41.7%, aged 30- <40 and 40- <50, with a mean age of 39.17 ± 7.76 . Half of HNs had bachelor's degrees in nursing, 91.7% worked a full time, and more than two-fifths (41.7%) had ≥ 20 years of experience, with a mean of 13.75 ± 7.28 . A majority (92%) of the nurses were female and 40.3% were <30 years of age, with a mean 32.73 ± 8.47 . More than two-fifths (42.3%) had bachelor's degrees in nursing, majority (88.7%) were working full time, and more than two-fifths (45.3%) had <10 years of experience, with a mean 10.81 ± 7.36 .

Table 2 shows that there were statistically significant differences in the HNs' knowledge at p value (0.040*) pre, post, and 3 months after the educational intervention, with the respective mean percentage being 46.5, 73.6, and 51.3. The results from the pre-educational intervention indicated

TABLE 1: Personal characteristics of nursing staff ($N = 312$).

Personal characteristics data	Head nurses ($n = 12$)		Nurses ($n = 300$)	
	No.	%	No.	%
Age group				
<30	2	16.7	121	40.3
30- <40	5	41.7	108	36.0
40- <50	5	41.7	65	21.7
≥ 50	0	0.0	6	2.0
Range	23.0-48.0		19.0-55.0	
$M \pm SD$	39.17 ± 7.76		32.73 ± 8.47	
Gender				
Female	12	100.0	276	92.0
Male	0	0.0	24	8.0
Level of education				
Post grad. studies	3	25.0	79	26.3
BSc. in nursing	6	50.0	127	42.3
Associate degree in nursing	3	25.0	94	31.3
Employment status				
Full time	11	91.7	266	88.7
Part time	1	8.3	34	11.3
Years of experience in current unit				
1- <10	3	25.0	136	45.3
10- <15	3	25.0	58	19.3
15- <20	1	8.3	69	23.0
≥ 20	5	41.7	37	12.3
Range	3.0-22.0		1.0-36.0	
$Mean \pm SD$	13.75 ± 7.28		10.81 ± 7.36	

Note. M, mean; SD, standard deviation; N, total sample size; n, subsample.

that about two-thirds (66.7%) of the HNs had a low polarity management knowledge and 16.7% had a fair and good levels. After the educational intervention, 58.3% of HNs had a fair and 25% had good polarity management knowledge. Three months after the intervention, 50.0% had a fair and 16.7% had a good knowledge level.

Table 3 shows that there were statistically significant differences in the HNs' practice (0.001*) pre, post, and three months after the educational intervention, with the total mean percentages being 32.5%, 78.3%, and 40.4%. The pre-educational intervention assessment found that all HNs had low ability level to practice polarity management; the assessment immediately after the intervention found that half had moderate practice levels, one-quarter had low polarity management, and a quarter had high ability level to practice polarity management, and three months after the educational intervention, half had low levels, more than two-fifths had a moderate level, and only 8.3% had high ability level to practice polarity management.

Table 4 shows that there were statistically significant differences between the staff nurses' perceptions of their HNs' coaching behaviors pre and 3 months after the educational intervention at p value (0.001*). Before the educational intervention, a high percentage of staff nurses perceived that their HNs had low levels for the progress and results, learning and development, working alliance, and open communication coaching behavior subscales, respectively (76.0%, 70.0%, 70.0%, and 68.7%), but 3 months after the educational intervention, these low level perceptions had, respectively, fallen to 49.0%, 43.0%, 43.0%, and 41.7%.

TABLE 2: HNs' polarity management knowledge pre, post, and after 3 months educational intervention ($n = 12$).

Head nurses' polarity management knowledge	Pre		Post		After 3 months		Test of sig.	p value
	No.	%	No.	%	No.	%		
Low	8	66.7	2	16.7	4	33.3	Fr. = 6.414*	0.040*
Moderate	2	16.7	7	58.3	6	50.0		
High	2	16.7	3	25.0	2	16.7		
Total mean score	5.5 ± 3.6		8.8 ± 1.6		6.1 ± 3.0		F = 4.835*	0.018*
Total mean percent	46.5 ± 30.2		73.6 ± 13.6		51.3 ± 25.0			

Note. Fr, Friedman test; F, test (ANOVA) with repeated measures; p , probability value; *, statistically significant at $p < 0.05$; n , subsample.

TABLE 3: Head nurses' ability to practice polarity management pre, post, and after 3 months of educational intervention ($n = 12$).

Head nurses' practice of polarity management	Pre		Post		After 3 months		Test of sig.	p value
	No.	%	No.	%	No.	%		
Low	12	100.0	3	25.0	6	50.0	Fr. = 22.167*	<0.001*
Moderate	0	0.0	6	50.0	5	41.7		
High	0	0.0	3	25.0	1	8.3		
Total mean score	6.5 ± 2.3		15.6 ± 2.1		8.0 ± 2.1		F = 50.906*	<0.001*
Total mean percent	32.5 ± 11.9		78.3 ± 10.7		40.4 ± 10.7			

Note. Fr, Friedman test; F, test (ANOVA) with repeated measures; p , probability value; *, statistically significant at $p < 0.05$; n , subsample.

TABLE 4: Nurses' perception of their HNs' coaching behaviors subscales pre and after 3 months of educational intervention ($n = 300$).

Coaching-leadership behaviors subscales	Pre		After 3 months		Test of sig.	p value
	No.	%	No.	%		
Working alliance						
Low	210	70.0	125	41.7	MH = 316.50*	<0.001*
Moderate	62	20.7	101	33.7		
High	28	9.3	74	24.7		
Total mean score	8.4 ± 3.3		10.7 ± 2.4		Z = 8.543*	<0.001*
Total mean percent	45.5 ± 27.9		64.6 ± 20.1			
Open communication						
Low	206	68.7	129	43.0	MH = 329.50*	<0.001*
Moderate	66	22.0	93	31.0		
High	28	9.3	78	26.0		
Total mean score	14.3 ± 4.7		17.4 ± 3.9		Z = 8.122*	<0.001*
Total mean percent	46.8 ± 23.9		62.4 ± 19.6			
Learning and development						
Low	210	70.0	147	49.0	MH = 292.50*	<0.001*
Moderate	62	20.7	115	38.3		
High	28	9.3	38	12.7		
Total mean score	32.2 ± 9.4		37.9 ± 5.6		Z = 8.014*	<0.001*
Total mean percent	48.3 ± 21.3		61.3 ± 12.9			
Progress and results						
Low	228	76.0	129	43.0	MH = 338.00*	<0.001*
Moderate	52	17.3	84	28.0		
High	20	6.7	87	29.0		
Total mean score	17.0 ± 4.4		21.6 ± 4.6		Z = 9.803*	<0.001*
Total mean percent	46.1 ± 18.4		65.1 ± 19.5			
Overall, nurses' perception						
Total mean score	72.2 ± 20.0		87.8 ± 12.4		Z = 9.538*	<0.001*
Total mean percent	44.4 ± 19.2		59.4 ± 11.9			

Note. MH, marginal homogeneity test; Z, Wilcoxon signed ranks test; p , probability value; *, statistically significant at $p < 0.05$; n , subsample.

Table 5 shows that before the educational intervention, there was no statistically significant correlation between the staff nurses' perceptions of their HNs' coaching-behaviors

and the HNs' ability to practice polarity management skills while three months after the educational intervention, there was a statistically significant correlation at $p \leq 0.05$ between

TABLE 5: Correlations between the nurses' perception of the coaching behaviors and the HNs' ability to practice polarity management.

Correlation variables	Head nurses' practice		Nurses' perception of coaching- leadership behaviors	
	<i>r</i>	<i>P</i>	<i>r</i>	<i>P</i>
Pre-educational intervention				
Head nurses' knowledge	0.479	0.001*	0.019	0.742
Head nurses' practice			0.098	0.092
After three months of educational intervention				
Head nurses' knowledge	0.105	0.070	0.012	0.833
Head nurses' practice			0.179	0.002*

Note. *r*, Pearson coefficient; *, statistically significant at $p < 0.05$; *p*, probability value.

the nurses' perceptions of their HNs' coaching behaviors and ability to practice polarity management.

Figure 1 shows that a high percentage (77.7%) of nurses perceived that HNs had low coaching behaviors before the educational intervention. Three months after the educational intervention, about half (54.7%) perceived that HNs had low coaching behaviors and only around one-tenth (8%) perceived that HNs had high coaching behaviors.

4. Discussion

Head nurses as first-line nursing leaders confront various unavoidable workplace polarity issues that affect workflows especially in critical care units. HNs face many polarities in critical care units such as urgency while keeping effectiveness. HNs must have the ability to view situations in new ways such as polarizations to contain costs while maintaining quality management. Therefore, this study was conducted to explore the effect of HNs' workplace polarity management educational intervention on their coaching behaviors.

The first hypothesis was supported. The data indicated that regarding head nurses' knowledge, the current study findings exposed that a high percentage of HNs had a low knowledge level about polarity management concepts and polarity mapping pre-educational intervention compared with immediately after intervention. These findings may be due to majority of head nurses in critical care units were not able to distinguish between problem solving and polarity management process correctly, and they lack the awareness about polarity management principles, techniques, and their role in managing polarity and set polarity maps. Also, this is might be because most university hospitals focus only on providing workshops and training programs to improve only the clinical practices of nursing staff [4]. This result was improved immediately and 3 months after intervention as about half of HNs had moderate levels of knowledgeable about workplace polarity management, but over one third of them still at low level.

In the same line of the current study results, Rushdy et al. [4] revealed that wholly planned sample had lowly knowledge about all polarity management items beforehand the educational sessions. Also, Sushil [33] stated that some key principles for managing polarities require significant knowledge, skills, plus the ability to balance between paradoxes, maintain open communication channels, and building alliances as well as

develop team members. Subsequently, healthcare leaders should adapt their coaching style.

Additionally, Haan and Nilsson [14] confirmed the necessity to advance skills to catch equilibrium between paradoxes that requires significant skills such as self-government, elastic integrity, self-confident modesty, vigilant risk-taking, bifocal visualization, wobbly stability, doubtful profits, and compassion. In this regard, Allah and Nasser [8] found that an effective manager must recognize whether the situation he faces symbolizes a problem to be solved or whether it is a continuing polarity that must be managed over time.

In support of the second hypothesis, the current study found that in pre-educational intervention, all HNs had low practice level regarding applying polarity management. This result could be due to lack of head nurses' knowledge about polarity management and mapping; therefore, they did not design any polarity maps before. However, immediately post educational intervention, half of head nurses had moderate practice level and one-quarter of them had high practice level regarding polarity mapping skills, while after 3 months of the intervention, more than two-fifths had moderate practice level.

This may be resulted from attending the educational intervention where researchers displayed photos and allowing head nurses to design their own polarity maps. The raise in HNs' knowledge supported their practice of polarity mapping skills but they require more practicing to exercise mapping process; this was clear in the drop in their practice 3 months post intervention, so more reinforcement will be required to maintain HNs practice level on admitting any novice notion they were not familiar with it.

The present study results also revealed that there was no significant correlation between overall knowledge and polarity management practice levels for head nurses after three months of educational intervention compared to pre-educational intervention. This is because before the educational intervention, the head nurses did not possess knowledge and skills regarding polarity mapping. While after three months of educational intervention, half of head nurses' practice of polarity management is still of low level as they require more training and practicing on designing polarity map.

Kowalski [34], Faller and Gogek [26], Alabdulkareem et al. [6], and Bozer and Jones [35] concluded that several choices made in organizations were difficult to solve, especially with time and budget constraints as well as the

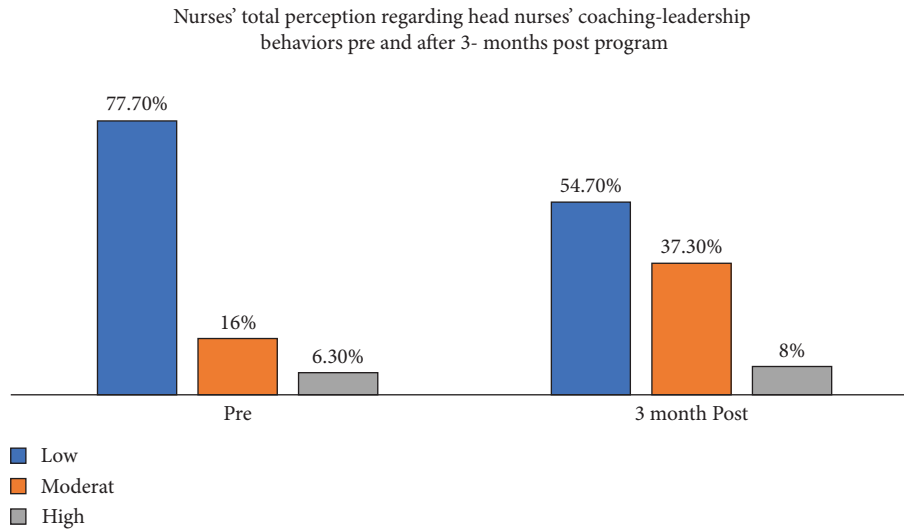


FIGURE 1: Nurses' total perceptions of the HNs' coaching behaviors pre and after three months of educational intervention.

suitability of each option for the situation and different existed poles. However, Johnson's [36] model affords a tool for hypothesizing polarities and constructing action steps to simplify the ability to activate with the completeness of the noticed polarities that require adapting new approach and possessing polarity thinking mindset by the effective leader. Hence, polarity management is a bright simple model and can assist nursing leaders and their staff to confront workplace polarities through shifting from either/or to both/and judgments that requires nursing leaders to be a coach more than manager to manipulate strong as well as weak points in each problematic issue to achieve balance between different poles.

The third hypothesis was three months later, the nurses' level of perception of their HNs' coaching behaviors will be increased compared to pre-educational intervention, which was supported by the study findings that confirmed that there was a statistically significant difference between nurses' overall perception of their head nurses' coaching leadership behaviors pre and after 3 months of polarity management intervention, as well as all coaching-leadership behaviors subscales. In addition, there was a statistically significant correlation between nurses' perception of coaching leadership behaviors and HNs' knowledge and practice after 3 months of educational intervention about polarity management. This can be justified as after intervention, HNs paid more attention for communication with their nurses to be able to investigate the raising polarities and understand it from different perspective; they attempted to get support from their staff and build work alliances to pass conflicting issues in workplace. On the same line, Cardoso et al. [37] highlight the skills a nurse leader needs including communication, provide and receive feedback, delegate power and exert influence, and upkeep the staff which are all dimensions of the coaching process.

Furthermore, HNs know that their power stems from their staff capabilities so they provided nurses a chance to learn and progress. All these were the main components of coaching-leadership behavior. It is important for leaders to practice positive not toxic leadership behaviors with their

nurses, which was proved in the study conducted by [38] that the presence of toxic leadership, even at a low level, has a significant negative impact on the nurses. Subsequently, the polarity management educational intervention supported the coaching-leadership behaviors for HNs.

4.1. Limitations. As for generalizability, it is a limiting factor for the large variation in the number of basic nurses in the units studied, and the duration of the educational intervention takes three hours, so it may not be sufficient, so the hospital administration needs a periodic procedure. Also, in terms of conducting research in critical care units only, so in future studies, different nursing units will effectively serve the objective. Furthermore, most of the participants were female, so we recommend that nurses of both sexes be significantly included in future studies.

5. Conclusion

The educational intervention was found to improve the HNs' polarity management knowledge and ability to practice immediately and 3 month after the implementation. There was a statistically significant correlation between the HNs' ability to practice polarity management and the nurses' perception of the coaching behavior three months after the intervention.

Based on the results of this study, the researchers recommended the following strategies to assist nursing administrators and leaders in their roles as administrators. First at the hospital level, workshops and training programs should be offered frequently to all nursing managers in new positions as well as those in old positions on polarization management principles and techniques, how to manage polarization, and polarization mapping in order to improve managerial skills, especially those related to nurse training; this reinforcement method could be more effective for improving HNs polarization management techniques practice. Also, train nursing leaders and managers to distinguish which issues are problematic, which need to be

resolved, and which poles need to be managed and learn how to manipulate the strengths as well as the weaknesses of each issue to balance the different poles.

The second is at the individual level, HNs in their units should practice polarity mapping to improve their polarization skills. Also, they should pay more attention to communicating (maintaining open communication channels) with their nurses and building work alliances to pass conflicting issues in the workplace. HNs need to assist nurses to learn more skills and grow professionally, recognize nurses' achievements, and provide them with adequate feedback.

Data Availability

All information produced or analyzed during this study are included within this paper.

Additional Points

Clinical Resource. Nurses as leaders: Evolutionary vision as leadership https://books.Google.com/eg/books?id=yyYODAA AQBAJ&pg=PA176&dq=clinical+resource+of+polarity+management&hl=en&sa=X&ved=2ahUKEwin3M_sirr9AhWajFwKHWMDCt4Q6AF6BAGIEAL.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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