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Head nurses' knowledge about polarity management and its effect on their leveraging of health care polarities

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Abstract
Background: Polarity management is an innovative strategy that helps healthcare leaders navigates complex, ongoing, chronic issues which are polarities that cannot be solved through traditional problem-solving methods but through recognizing and effectively leveraging of them. Treating these polarities as problems to be solved leads to its persisting over time and become impervious to resolution.
The study aim is to assess head nurses knowledge about polarity management and its effect on their leveraging of health care polarities.
Research design: The current research's aim was accomplished through the use of a descriptive correlational research strategy.
Sample: The study sample involved all head nurses who work in Minia University design (N= 80).
Two tools were employed for collection data; Tool (one): Self-administered questionnaire scale, it has two parts; 1st part: Personal data sheet, and 2nd part: Head nurses' knowledge about polarity management questionnaire.
Tool (two): Leveraging of health care polarities scale.
Results: The majority of head nurses have unsatisfactory level of knowledge about polarity management, while more than half of them have poor leveraging of health care polarities.
Conclusion: There were statistically significant differences and positive correlation between head nurses' knowledge about polarity management and their leveraging of health care polarities
Recommendations: Implement educational training programs for nurse's manager about polarity management as well as leveraging of health care polarities to guide hospitals' transformation.

Keywords: Head nurses, leveraging health care polarities, polarity management

Introduction

Everywhere there is life in the world, there are paradoxes or opposites. Polarities are a part of life and are present in all significant decisions and issues. These are not issues that have a solution. They are unavoidable but require management [1]. Two or more values or opposing viewpoints that may appear to be in opposition to one another or competing at first, but over time become interdependent and require one another to achieve a goal that neither can achieve on its own are known as polarities or paradoxes [2].

Additionally, managing a polarity involves situations in which the two poles are inextricably linked and dependent on one another. For instance, breathing in and out are opposing ideals that humans have had to perform throughout history in order to fulfill the larger goal of maintaining "life." If people prioritize one above the other, they will eventually perish [3]. Even though an either/or dilemma is one where selecting one option has no bearing on the other, problems are still solvable and often involve one or more exclusive solutions. Usually, there is a better answer than another. But there is a polarity that persists and cannot be addressed by a single fix [4].

As a result, a variety of challenges and polarities are the main concerns plaguing the healthcare industry today. Healthcare workers squander time, money, and energy when they are unable to distinguish between issues and polarity [5]. The reason for these recurring problems is not healthcare leadership's resistance to change, but rather the fact that most of these difficulties are organizational conundrums and paradoxes rather than issues with clear-cut answers [6].

In which health care providers must treat more patients with little staff and facilities, use criteria of evidence-based practices, implement new technologies, and maintain the personal touch to patient care as the healthcare industry evolves at an accelerating rate. And they are working to keep their organizations stable while welcoming the change required to advance. Their difficulties come in balancing both polarities seemingly that can complement one another when used in a thoughtful manner [7]. So that polarity management is a very powerful tool that facilitate assessing and handling conflicting issues in a quickly evolving health

care setting [8].

Because it aimed to produce a win-win solution by identifying the strengths and weaknesses of the two opposites that occur within the paradox, capitalizing on diversity without alienating the diverse groups, simplifying complexity without being simplistic, offering stability and predictability in the face of accelerating change, and turning resistance to change into a resource for long-term, sustainable change-ability [9]. Additionally, by recognizing and utilizing polarity, leaders may minimize the reasons behind organizational failures over time by avoiding making decisions that prioritize one crucial goal over another, either intentionally or subconsciously [10].

The three steps to leveraging polarities are as follows: first, recognize the polarities; second, map the polarities by naming each pole and filling it in so that we can understand the content of the positive and negative quadrants, the higher purpose, and the greatest fear; and third, tap the tension and energy between them by creating action plans that can maintain the strength of each pole. In order to leverage polarities, one must be vigilant and take deliberate action to sustain each pole concurrently across time, enabling them to work together to achieve an objective that neither could do on its own [11].

Furthermore, in order to achieve sustainable change, stop wasting time, money, or energy, and move their objectives beyond simply solving problems to creating new possibilities, executives, clinicians, managers, educators, researchers, or consultants must learn how to distinguish problems from polarities and how to use a framework that explains how to leverage all polarities [12]. In addition, using polarity can help head nurses work better, save time and money, develop trust, lessen resistance to change, and achieve goals more quickly and sustainably [13].

Significance of the study

The Elsevier Clinical Practice Model Resource Center (CPMRC) has spent the last thirty years working to transform health care at the point of care in order to maintain the best locations to provide as well as receive care. Through this work, it was discovered that there were common issues and problems between them, and that even after significant effort - including time, money, and resources - to solve these problems, the situation would temporarily improve before becoming more difficult than before [14], as managing polarity rather than solving issues is the goal [15].

Internationally there was the study of Wesorick & Shaha, [14] which claimed that using the polarity thinking model and tools can assess how well organizations are managing polarities and will improve the organization's capacity to self-diagnose and then succeed in achieving transformation toward sustainable desired outcomes. The study involved four hundred ninety-seven volunteers from two acute care organizations in the United States and two in Canada.

Also, nationally there were the study of Mohamed *et al*. [1] that have been conducted in Assiut University, and found that the knowledge and skill of managers about polarity management varied significantly.

The inability of healthcare professionals to distinguish between problems and polarities has resulted in a waste of time, money, and energy. Therefore, head nurses' capacity to recognize and handle polarities will enable them to save these resources, as well as foster trust and lessen resistance to change [16]. Moreover it was felt necessary to assess head nurses knowledge about polarity management and its effect on their leveraging of health care polarities at Minia University Hospitals to determine the level of knowledge about polarity management among head nurses and its effect on their leveraging of health care polarities to work as a base for achieving hospitals' transformation.

Research Aim

The aim of the actual research is to assess head nurses knowledge about polarity management and its effect on their leveraging of health care polarities.

Research questions

- What is the level of head nurses' knowledge about polarity management?
- What is the level of head nurses' leveraging of health care polarity dimensions?
- Is there a relation between head nurses knowledge about polarity management and leveraging of health care polarities dimensions?

Subjects and Methods

Research design

The purpose of the current research was accomplished by using a descriptive correlational research design.

Setting

The study was applied at Five Minia University Hospitals. These hospitals are Minia Emergency University Hospital, Renal and Urology University Hospital, Liver University Hospital, Pediatric and Gynecology University Hospital, also the Cardio Thoracic University Hospital.

Subjects

Sample: The study sample included all head nurses that work in Minia University Hospitals (total no 80).

Tools of Data collection

Two tools were employed to gather the data.

Tool (I): Self-Administered Questionnaire Scale; it included two parts

Part I: personal data sheet

It has been designed by the researcher; this part utilized to collect data related to personnel characteristics data such as (age, gender, marital status, residence, years of experience in head nurse position, educational qualification, department of head nurses, name of the hospital as well as attendance at the training course about polarity management).

Part II: Head Nurses' Knowledge about Polarity Management Questionnaire

This questionnaire developed by the researcher. It used to evaluate the head nurses' polarity management knowledge. This questionnaire encompassed of total (30) questions in the multiple choices form. It is classified into six dimensions; polarity definition as well as characteristics (4 questions), differences between polarity management and problem solving (10 questions), polarity management and

its benefits (7 questions), polarities in health care (2 question) polarity principles (4 questions), and polarity map (3 questions). Responses reflected three levels of responses ranged as (one for the correct answer, and zero for incorrect as well as don't know answer).

Scoring system

The responses were divided into two levels as follows; satisfactory that was ≥ 61% and unsatisfactory that was ≤ 60%.

Tool (II): Leveraging of health care polarities scale

The scale has been developed by the researcher to assess head nurses' leveraging of health care polarities based on the literatures of Mohamed *et al*. (2021) [1], Ahmed, *et al.* (2022), Allah & Nassar (2018) [11], Deaton (2017) [17], Manderscheid & Harrower (2016) [18], Roy (2016) [19], Wesorick (2016) [20], Wesorick & Shaha (2015) [14], Wesorick (2014) [21], and Elsevier/CPM Resource Center (2011) [22]. The questionnaire consisted of (156 items) that reflect 13 dimensions that represent common polarities of health care as prioritized by Elsevier Clinical Practice Model Resource Center (CPMRC) 2011, each dimension have 12 statements that indicate how well head nurses leverage each polarity, the 12 statements reflect 6 positive and 6 negative outcomes of the 2 poles that indicate the values and fears of each polarity. These polarities are:

Polarities	No. items
• **Patient and staff safety**	(12 items)
• **Routine task care and scope of practice care**	(12 items)
• **Individual competency and team competency**	(12 items)
• **Standardized care and autonomous care**	(12 items)
• **Conditional respect and unconditional respect**	(12 items)
• **Vertical and horizontal relationships**	(12 items)
• **Medical care and whole person care**	(12 items)
• **Technology platform and practice platform innovation**	(12 items)
• **Patient satisfaction and staff satisfaction**	(12 items)
• **Candor and diplomacy**	(12 items)
• **Change and stability**	(12 items)
• **Project/initiative driven change and framework driven change**	(12 items)
• **Margin and mission**	(12 items)

Scoring system

Responses rated on five point Likert scale ranging from (zero to one hundred) point Likert scale to reflect 5 levels of responses: (almost never= zero points), (twenty-five points =seldom), (fifty points = sometimes), (seventy –five points=often), and (one hundred points= almost always). The average (mean) of all respondents' responses for that particular dimension is then used to get the final score for each dimension. Next, the three components' combined average (mean) is calculated inside each quadrant, and subsequently across each of the poles within each polarity. Based on the aggregate viewpoints of respondents, the average score indicates the extent to which that polarity is being utilized, on a scale where 100 is the maximum. "Almost always equals a hundred points each in the positive quadrants, while the negative items are inversely scored in which almost never equals hundred points." The tool's scoring method was distributed as follows, with values ranging from zero percent to one hundred percent:

Poor leveraging of polarities	≤50%
Medium leveraging of polarities	51% - 75%
Excellent leveraging of polarities	≥ 75%

Tools validity as well as reliability

Validity

A panel of five nursing administration specialists with specialized knowledge in polarity management evaluated the tools' content validity, and any required adjustments were made. Also, the jury included 2 professors from Assiut University's Department of Nursing Administration, Nursing Faculty, and two assistant professors from Minia University's Department of Nursing Administration, Nursing Faculty, and one assistant professor from King Faisal University's Department of Nursing Administration, collage of applied medical sciences. The various expert panels evaluated the instruments in terms of their Content coverage, elements sequencing, clarity, fit, applicability, phrasing, length, shape, and overall appearance were all scrutinized. Furthermore, the requisite alteration was carried out by the jury committee.

Reliability

Tools of the research were tested for intrinsic consistency's stability by using Alpha Cronbach's test. The Cronbach alpha coefficients as (Tools I α=0.845 & Tools II α=0.872) which indicating high internal consistency.

Pilot study

A ten percent of participants (8 head nurses) participated in a pilot study. They were selected at random from the research setting in order to evaluate also ensure the viability, objectivity, applicability, clarity, as well as sufficiency of the study tools. They also estimated the time required to complete the study tools and identified potential obstacles and issues during data collection. The pilot study's results were taken into consideration while creating the final tools, meaning that the pilot study was integrated into the main research.

Data collection procedure

The dean of the Faculty of Nursing issued an official letter. The letter contained a concise elucidation of the study's goals. The researcher developed tools of the study, and translated in to Arabic. The jury approved the tools before their use for data collection in the study. The duration needed to complete the questionnaires was estimated after conducting the pilot study. The researchers obtained written approval from the directors of the Minia University Hospitals. Group interviews were conducted with head nurses in each hospital, and the tools for data collection were subsequently distributed to all participants following a comprehensive explanation of the purpose and methodology.

The researcher directly administered and supervised the tools. The researcher distributed tools to the head nurses during the morning shifts. Participants were allotted a time frame about half an hour to complete the tool. The data collection process was conducted over three months, spanning from 7th of July (2022) to 10th of November (2022), and involved the participation of head nurses.

Ethical Consideration

The Research Ethics Committee on the Faculty of Nursing at Minia University issued an official letter. The researchers obtained the necessary approval to perform the research from the dean of the Minia University "Faculty of Nursing". Approval was obtained from the directors of the Minia University hospitals. The researchers obtained informed consent from the head nurses at Minia University Hospitals. Pre conducting both the pilot study as well as the main study, Participants provided written consent prior to their involvement and expressed willingness to participate. The participants were provided with an explanation of the study's nature and objectives. Participants in research studies possess the prerogative to decline participation or discontinue their involvement without providing any justification. The preservation of privacy was taken into consideration through the data gathering process. The subjects were guaranteed that their data would be treated with utmost confidentiality. To ensure anonymity and privacy, each head nurse was assigned a numerical identifier instead of using their names.

Data statistical analysis

The data underwent analysis using version 20 of the Statistical Package for Social Science. The numerical data were represented using the mean as well as standard deviation. The quantitative data were represented in terms of frequency and percentage.

Various statistical tests were employed to analyze quantitative data and assess the relationships between variables. These tests are $\chi 2$ test and Kruskal-Walli's test. Pearson correlation was the statistical technique employed to examine the associations among various numerical variables. A probability value (p-value) below 0.05 was judged statistically significant, while a value below 0.001 was regarded as highly significant.

Results

Table 1: Distribution of studied head nurses according to their personal data at Minia University Hospitals (n = 80)

Personal Data	No.	%
Age / years		
22 ≤ 27 yrs. old	32	40.0
28 - 33 yrs. old	16	20.0
34 - 39 yrs. old	17	21.3
40 - 45 yrs. old	10	12.5
≥ 46 yrs. old or more	5	6.2
Mean ± SD	32.0 ± 7.6	
Gender		
Female	58	72.5
Male	22	27.5
Marital status		
Single	17	21.2
Married	63	78.8
Residence		
Urban	48	60.0
Rural	32	40.0
Years of experience as head nurse		
< 5 yrs.	48	60.0
6-10 yrs.	20	25.0
11-15 yrs.	3	3.8
16-20 yrs.	6	7.4
>20 yrs. or more	3	3.8
Educational Training qualification in nursing		
Bachelor degree	74	92.4

Master degree	3	3.8
Doctoral degree	3	3.8
Head nurse department		
General care unit	33	41.2
Critical care unit	47	58.8
Name of the hospital		
Minia Emergency University Hospital	15	18.8
Renal and Urology University Hospital	11	13.7
Liver University Hospital	7	8.8
Cardio Thoracic University Hospital	12	15.0
Pediatric and Gynecology University Hospital	35	43.7
Have you attended a training program on polarity management?		
yes	6	7.5
No	74	92.5

Table (1) shows that (40%) of head nurses are between age group (22 ≤ 27) years old; with mean age (32.0 ± 7.6 years). In relation to gender, (72.5%) of head nurses are females. Regarding marital status, there are (78.8%) of the head nurses are married. Concerning the residence, (60%) of them is live in urban area. Speaking about years of experience as a head nurse, there are (60%) of them has (1-5) years of experiences. Also, this table displays that (92.4%) of head nurses have Bachelor degree.

Regarding head nurse department there are (58.8%) of head nurses are working in critical care units while (41.2%) of them are working in general care units. For the hospital name (43.7%) of them work in Pediatric and Gynecology University Hospital. Also this table shows that (92.5%) of head nurses didn't attend a training program on polarity management, while (7.5%) of them attend a training program on polarity management.

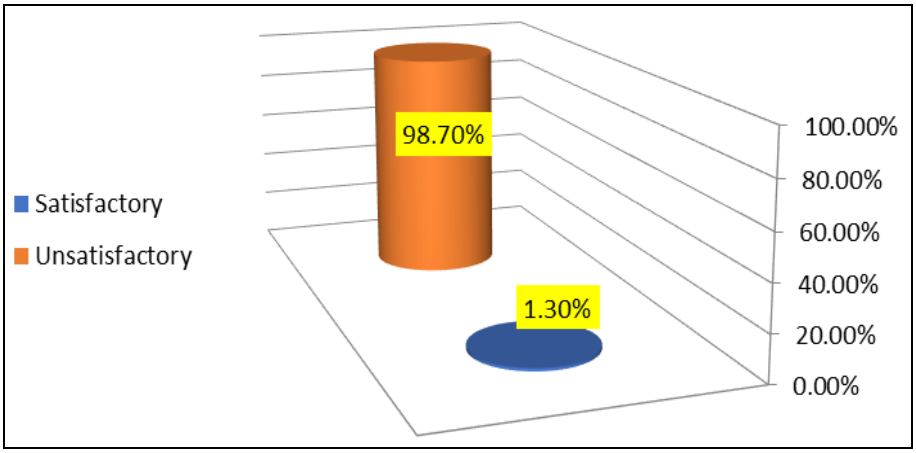

Fig 1: Total score of head nurses' levels of knowledge about polarity management

Figure (1) illustrates that (98.7%) of head nurses have unsatisfactory level of knowledge about polarity management while (1.3%) have satisfactory level.

Table 2: Distribution of head nurses' regarding level of knowledge about polarity management dimensions (n = 80)

Polarity management dimensions	Level of head nurses' knowledge about polarity management (n = 80)				
	Un Satisfactory		Satisfactory		Mean ±SD
	No	%	No	%	
Polarity definition and characteristics (4 questions).	74	92.5	6	7.5	1.0 ± 1.0
Differences between polarity management and problem solving (10 questions).	77	96.3	3	3.7	2.6 ± 2.4
Polarity management and its benefits (7 questions).	78	97.5	2	2.5	1.7 ± 1.7
Polarities in health care (2 questions).	77	96.3	3	3.7	0.3 ± 0.5
Polarity principles (4 questions).	76	95.0	4	5.0	0.8 ± 0.9
Polarity map (3 questions).	78	97.5	2	2.5	0.4 ± 0.6

**Statistically significance at 0.01 Kruskal Wallis test

Table (2) displays that head nurses have unsatisfactory level for all knowledge dimensions; polarity management and its benefits, polarity map, differences between polarity management and problem solving, polarities in health care, polarity principles, polarity definition and characteristics with (97.5%, 97.5%, 96.3%, 96.3%, 95.0% & 92.5% respectively) with mean score (1.7 ± 1.7, 0.4 ± 0.6, 2.6 ± 2.4, 0.3 ± 0.5, 0.8 ± 0.9 & 1.0 ± 1.0 respectively).

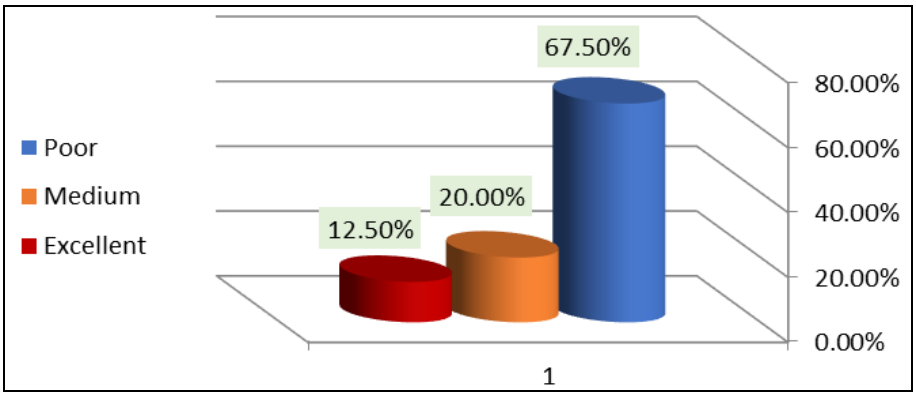

Fig 2: Total score of head nurses' levels of leveraging of health care polarities

Figure (2) clarifies that regarding total leveraging of health care polarities; (67.5%) of head nurses have poor level of leveraging, while (20%) of them have medium level of leveraging while (12.5%) of head nurses have excellent leveraging of health care polarities.

Table 3: Distribution of head nurses' regarding level of leveraging of health care polarities dimensions (n = 80)

Health care polarities dimensions	Level of head nurses' leveraging of health care polarities dimensions (n = 80)						
	Poor		Medium		Excellent		Mean ±SD
	No	%	No	%	No	%	
Patient and staff safety	41	51.2	30	37.5	9	11.3	54.7 ± 19.5
Routine task care and scope of practice care	53	66.2	24	30.0	3	3.8	53.8 ± 18.2
Individual competency and team competency	53	66.3	24	30.0	3	3.7	53.6 ± 19.7
Standardized care and autonomous care	35	43.7	24	30.0	21	26.3	55.6 ± 19.7
Conditional respect and unconditional respect	29	36.6	41	51.3	10	12.4	58.8 ± 19.9
Vertical and horizontal relations	46	57.5	24	30.0	10	12.5	56.2 ± 19.1
Medical care and whole person care	30	37.5	40	50.0	10	12.5	57.1 ± 18.4
Technology platform and practice platform innovation	24	30.0	35	43.7	21	26.3	60.4 ± 18.5
Patient satisfaction and staff satisfaction	53	66.3	24	30.0	3	3.7	53.8 ± 19.7
Candor and diplomacy	51	63.7	18	22.5	11	13.8	54.0 ± 19.2
Change and stability	60	75.0	10	12.2	10	12.5	53.5 ± 19.1
Project/initiative driven change and framework driven change	35	43.7	24	30.0	21	26.3	56.9 ± 19.3
Margin and mission	46	57.5	24	30.0	10	12.5	55.5 ± 20.9

Table (3) notifies that all studied head nurses have medium level of leveraging for each health care polarity dimensions. Also, clarifies that the highest mean score (60.4 ± 18.5) was for technology platform and practice platform innovation polarity while the lowest mean score (53.5 ± 19.1) was for change and stability polarity.

Table 4: Relation between head nurses knowledge about polarity management and leveraging of health care polarities dimensions.

Items		Knowledge about polarity management
Leveraging of health care polarities	r	0.425
	p - Value	0.0001**

*Correlation is significant at the 0.05 level **Correlation is significant at the 0.01 level

Table (3) justifies that there are highly statistically significant differences and positive correlation between head nurses' knowledge about polarity management and leveraging of health care polarities (p= 0.0001**).

Discussion

Organizational paradoxes are inherent tensions arising from competing demands, contradictory goals, or opposing forces within an organization. They defy simple solutions and require nuanced approaches. Hospitals, as complex systems, are fertile ground for paradoxes to emerge [23]. Moreover treating these paradoxes as problems to be solved leads to persist of these paradoxes over time as well as become unbreakable to solution [24] and potentially hazards or leading to negative organizational results [25]. However when these polarities are properly managed, they are able to generate a prosperous future [26]. Therefore, the aim of the current study is to assess head nurses knowledge about polarity management and its effect on leveraging of health care polarities.

The current research's findings of personal data for the head nurses shows that less than fifty percent of head nurses were between the age (22 to ≤ 27) yrs. old. Speaking about gender as well as their marital status; it was discovered that the nurse's majority were females and married. Concerning the residence; above fifty percent of them were coming from urban area. Speaking about years of experience as a head nurse; more than half of them had (1-5) years of experiences. Also, the highest percent of them had Bachelor degree. For the hospital name; low fifty percent of them employed in Pediatric and Gynecology University Hospital. Regarding head nurse department; more than half of them

were working in critical care units. Also it was observed that the highest percent of them didn't attend a training program on polarity management.

Regarding head nurses' knowledge about polarity management: The actual research found that the highest percent of head nurses had unsatisfactory polarity management knowledge level, this might be due to the novelty of the concept and poor attendance of head nurses to training programs about polarity management in which the continuous training units in university hospitals give attention to develop head nurses basic skills for patient care and management while marginalize the new trends. This supported by the study of Taie [16] who disclosed that, prior to awareness exercises, every member of the study sample was ignorant of every polarity item.

And this in the same line with Gab Allah & Nassar [9] who asserted that all nurse managers' have lack knowledge in all items as well as a total score of polarity management before awareness sessions. Also, Mohamed *et al*. [1] they discovered that prior to awareness sessions, none of the study sample members knew anything about the polarity of any object. Additionally, in harmony with Sorour *et al*. [27] they discovered that a significant portion of head nurses lacked understanding of polarity mapping and ideas related to polarity management. Also in the same line with Elsayed *et al*. [13] who said that inadequate understanding of polarity management was had by more than half of head nurses.

Regarding head nurses' level of leveraging of health care polarities dimensions: The current research found that above fifty percent of head nurses had poor level of leveraging of health care polarities; this might be due to poor knowledge of head nurses about polarity management which lead to poor skills in mapping and leveraging of these health care polarities. This is compatible with the study of Wesorick & Shaha [14] who found that the survey which conducted in the four participating organizations for all thirteen polarities assessed in the research provided numeric results which reflect that these typical polarities aren't well handled. And this in the same line with Gab Allah & Nassar [9] who found that the entire studied sample had poor skills in applying a polarity map before training sessions. Also was supported by the results of Mohamed, Abo Elmagd & Yussief [1] who found that all studied sample have poor skills in using polarity maps and its application before awareness sessions.

And in harmony with the study of Sorour *et al*. [27] they found that, as a result of head nurses' ignorance of polarity management and mapping, all head nurses had poor practice levels when it came to using polarity management. Also in harmony with the study of Elsayed *et al*. [13] who asserted that higher fifty percent of head nurses have poor practice regarding polarities management. Also consistent with the study of Saleh & Ali [26] who revealed that increased of fifty percent study subjects (nursing staff) have poor level of polarity map application.

Additionally, the present research found that regarding the greatest score of head nurses' leveraging of health care polarities dimensions was for technology platform and practice platform innovation polarity dimension. This might be due to the new direction of Minia University hospitals to replace manual records and reports of the hospital to be electronic health record (EHR). Which begin to be implemented in the last two years in most units of the hospitals in which focusing of everyone's attention in preparation for obtaining accreditation by General Authority for Healthcare Accreditation and Regulation (GAHAR) Which includes information management and technology as a basic standard for accrediting hospital, So that the hospitals continuous training units organized a lot of training sessions for all nursing staff to apply EHR and readiness of head nurses to use EHR, also the researcher noticed this by herself, which lead to over focusing technology platform over practice platform innovation which lead to poor leveraging of that polarity.

This supported by the study of Wesorick & Shaha [14] reported that there was more focus on technology with a higher mean score than practice, with a stronger focus on the implementation of technology HER platform at the expense of practice platform support, such as bolstering evidence-based practice and inter-professional integration, which had the lowest mean score. They discovered that the clinical settings treated the mandate to implement the EHR as a problem to be solved and few identified it as a polarity that needed to be leveraged, which led to the practice platform pole being frequently neglected.

Also in the same line with the study of Nyandekwe *et al*. [28] who cited that the Egyptian law number two 2018 acknowledge that the (GAHAR) is an Egyptian government body affiliated with the President of the republic that was established pursuant to and its executive regulations as one of the three main pillars (the Insurance Authority, the Welfare Authority, and the Oversight Authority) for implementing the comprehensive health insurance system.

Also in harmony with Alrasheeday *et al*. [29] who found that the higher number of nurses had good overall attitudes for using the EHRs. And consistent with the study of Mahfouz & Mohamed [30] who discovered that there were high significant statistical positive correlations between the study participants' total knowledge and total technological skills toward EHRs and career success throughout program phases. In contrast with Cho *et al*. [31] who found that all studied nurses were found to be significantly connection with user resistance to use EHR systems, either directly or indirectly.

However the actual research noted that the lowest mean score regarding head nurses' leveraging of health care polarities was for change and stability polarity, this might be because of decreasing of nurses' knowledge as well as skills required for practicing hospitals' change while maintaining the stability of the hospital. This supported by the study of Jennifer [32] who asserted that change in the organization is a direct cause of paradoxical tension inside companies and that it is the duty of a leader to both welcome change and uphold stability. Also it was supported by the study of Wang & Kebede [33] who discovered that nurses' perceptions of organizational change were poor. Also Emam [34] who stated that nurses' perceptions of organizational transformation were poor. And in harmony with the study of Davidson & Patel [35] who first proposed that a crucial leadership talent required to effectively lead any business is the capacity to navigate the stability and change polarity by being able to preserve consistency and accept changes with a both/and

mentality.

While, In contrast with El said *et al*. [36] they stated that over half of nurses had a negative opinion of organizational change and suggested that this might be because a large percentage of nurses prioritize continuity. Also, Milovanovic, *et al*. [37] that revealed nurses' perceptions of organizational change were highly positive.

The actual research found that there were statistically significant differences and positive correlation between head nurses' knowledge about polarity management as well as leveraging of health care polarities. This explained that the more nurses' knowledge about polarity management, the higher level of leveraging polarities and vice versa. This consistent with the study of Cunha & Putnam [25] who explained that through applying paradox theory Through navigating paradox with existing maps, we may benefit from the trade-offs and synergy that arise.

Also, this compatible with Adams *et al*. [38] who disclosed that by utilizing the polarity map as a guide, Summit attendees produced early warning indicators and action actions to promote values, which improved the use of poles to create effective, efficient, and integrated healthcare. Also in harmony with the study of Lewis & Smith [39]. They developed the polarity assessment tool, which focuses on "both/and" and facilitates the development of leverage for the complex and crucial problems that all leaders, teams, and organizational systems encounter. The tool is an accurate way to measure the dynamics of complex and interdependent systems, the same line with Ahmed *et al*. [11] who showed how polarity mapping utilizing the (PACT) ™ model provides a fresh perspective on crisis decision-making. It is necessary to regard managing educational crises as polarity rather than as an either / or procedure for making decisions. In contrast the study of Elsayed *et al*. [13] who found that there was no connection among total knowledge as well as practice regarding polarity management also the performance among head nurses.

Research's Conclusion

Based on the actual research, it can be summarized that the majority of head nurses have poor knowledge about polarity management and poor level of leveraging of health care polarities. Also there were statistically significant differences and positive correlation between knowledge of the head nurses about polarity management and leveraging of health care polarities. Moreover, improving of nursing staff knowledge about polarity management and practicing on polarity thinking models can work as an effective tool for diagnosing of healthcare polarities and dealing with ongoing, never end healthcare issues, which lead to better leveraging of healthcare polarities and consequently achieving of the greater purpose of hospitals transformation.

Recommendations

The study recommended the following

- Intensify educational training programs to nursing staff at all levels about polarity management.
- Instruct using of polarity thinking model as a tool to diagnose the never end dilemmas.
- Instruct nursing managers to take the results of the current study into consideration, and use it as a base for achieving hospitals transformation.

Conflict of Interest

Not available

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Not available

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