

## Relation between Magnet Forces and Nursing Practice Environment at Suez Canal University Hospitals

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### Abstract

**Background:** The Magnet framework can be used to assess organizational culture, and where needed, improve the culture. Magnet hospitals promote a favorable work environment that facilitates better patient outcomes. **This study aimed to study:** the relationship between magnet forces and nursing practice environment at Suez Canal University Hospitals. **Subject and method:** A descriptive correlational research design was used in this study. The study conducted at Suez Canal University Hospitals that includes; Educational hospital, specialist surgery hospital and Oncology hospital. A Convenience sample of 350 nursing personnel, included; (317) staff nurses, (30) head nurses, and (3) nursing supervisors working at the previous study setting. The current study was collected using two different tools **Tool I:** "Forces of magnetism questionnaire". **Tool II** "Practice Environment Scale of the Nursing Work Index (PES-NWI)" **Results:** Majority (70.0 %) of nursing had positive total scores of the main dimensions of nursing practice environment in hospital affairs, and concerning three fifth (60%) of nurses had low forces of magnetism at Suez- Canal University hospital on supportive nurse managers and supervisors. **Conclusions:** There was statistically significant positive correlation between total score of all Nursing Practice Environment and total score of all forces of magnetism, there were two fifth of nurses had moderate forces of magnetism, over one third of nurses had low forces of magnetism while over one quarter had high forces of magnetism. There were three quarter of nurses had positive total scores of the main dimensions of nursing practice environment. **Recommendations:** The current study recommended that modification of hospital policies of remaining and recruiting nurses and establishing a climate of communication openness, teamwork and non-punitive response to errors.

**Key words:** *Environment, Magnet Forces, and Nursing Practice*

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### 1. Introduction:

It is noteworthy that nurses are known to provide superior quality of patient care and make a transformation every day, not only to their patients but also to their relatives, colleagues, and the public. Therefore, nurses pride themselves on delivering the best care for their patients and being recognized as leaders in their field, and magnet-recognized

organizations pride themselves on nursing excellence. **McCoach& Crookes, (2011).**

A magnet hospital is defined as an organization that is capable of attracting and retaining well-qualified nurses and then continually preparing them to deliver quality care. It has been shown to exhibit organizational features that permit nurses to practice their knowledge and expertise entirely

to deliver patient care. **Matalakala& Botha, (2016).**

The crucial components of the fourteen magnetism forces were as follows: Quality of nursing Leadership, Organizational Structure, Management Style, Personnel Policies and Programs, Professional Models of Care, Quality of patient Care, Quality Improvement, Working with other competent staff, Autonomy and accountability, Community and the Hospital, Nurse as Teacher, Image of Nursing, Interdisciplinary Relationships, and Support for education and research. **El-Demerdash, (2018).**

Moreover, working for a magnet-recognized hospital has been shown to improve nursing standards and practice. The characteristics that distinguished these organizations from others are known to this day as the "forces of magnetism. **Hajian&Tilaki,( 2011).**

The nursing practice environment, defined as the organizational characteristics in the work environment that make the professional practice easier or more difficult, is considered favorable when the nurses have autonomy, control over the work environment and good relationships with the health team. **Choi &Boyle, (2014).**

Enhancing the nursing practice environment is a focal point and challenge for

nursing administrators. In this way, hospitals are looking for identification as a magnet environment to build up its components that meet excellent nursing standards in giving quality and safe patient care. To achieve magnet status, hospitals ought to have a band of organizational elements such as professional practice model, structural empowerment, developments, knowledge and innovation, and transformational leadership. These elements interrelate to shape a positive work environment that should provoke better outcome. **Lakanmaa et- al, (2014).**

### **1.2. Significance of the study:**

Nowadays, building a safer healthcare system and excellent work environment has come to be the main concern to the world, nursing care excellence starts by advancing and promoting patient safety culture in magnet designation work environment to retain the qualified nursing staff. **Gheith& Zakaria, (2012).** So that, studying the relation between magnet forces and nursing practice environment at Suez Canal University Hospitals is very important because magnet designation is required in many hospitals with the faith that excellence in the workplace would prompt nurses' workplaces and better patient outcomes. It concentrated deeply on the structural components of the hospital and the work environment to improve nursing performance.

## 2. Subjects and methods

### 2.1. Aim of the study:

To study the relationship between magnet forces and nursing practice environment at Suez Canal University Hospitals.

### 2.2. Study design:

A descriptive correlational research design will be used to conduct this study.

### 2.3. Study setting:

This study was conducted at different departments and units in Suez Canal University Hospitals (30 departments/units) from three hospitals namely: educational hospital includes (16) departments and (8) units = (22); Specialist surgery hospital includes (6) departments and Oncology hospital includes (2) departments.

### 2.4. Study subjects:

#### Target population:

All nursing personnel (n=900) who working in the previous study setting.

- **Sample** The study sample included 350 nursing personnel; staff nurses (n=317), head nurses (n=30), and supervisors (n=3) working at the hospital during the time of the study

#### Sample size

The sample size was determined according to the following equation <sup>(18)</sup>:

$$n = Z_{\alpha/2}^2 X P q / d^2 = [(1.96)^2 X 0.35 X 0.65] \div (0.05)^2 = 249.5 \sim 350 \text{ nursing staff.}$$

Where :n= sample size.

$Z_{\alpha/2}^2$  = the value of standard normal distribution for type I error probability for the sided test equals 1.96.

P= the response rate = 35% <sup>(9)</sup>.

q = 1-p

$d^2$  = the accuracy of estimate = (0.05)

Sample size = **350**.

#### Sampling technique

A convenience sampling technique was used to select the study sample.

### 2.5. Tool of data collection

Two tools were used to data collection:

#### Tool I: Forces of magnetism questionnaire.

It consists of two main parts as follows:

**Part I:** This part included demographic data of study sample such as: name, age, gender, marital status, educational level, years of experience, name of department/unit.

**Part II:** It adopted by researcher based on Upenieks, (2002) and El-Demerdash, (2018).

to assess the extent of presence magnet forces in the hospital. It contains (116) items categories into 14 forces as; Quality nursing leadership (16 items), Organizational structure (8 items), Management style (11), Personnel policies and programs (8), Professional models of care (11), High quality patient care (11), Quality improvement (6), Working with other competent staff (4), Autonomy and accountability (6), Community and the hospital (8), Nurses as teachers (6), Image of nursing (7), Interdisciplinary relationships (5), and Support for education and research (9).

#### **Scoring system:**

Nurses' response were scored (two) for agree, (one) for neutral, and (zero) for disagree. Total scores were calculated and then converted into percent score. The Forces of magnetism considered low (<33%), moderate (33-66%), and high (>66%). This scoring system was applied to each magnetic force <sup>(1)</sup>.

**Tool II: Practice Environment Scale of the Nursing Work Index (PES-NWI).**

It was developed by Lake, (2002) and translated into Arabic language by El-Meghawri, (2016) to measure the extent to which a nurse's work setting facilitates professional nursing practice.

The PES-NWI scale comprises (28) items. Which are classified into five subscales that characterize the nature of professional nursing practice in the hospitals as; Nurse participation in hospital affairs (8 items), Nursing foundations for quality of care (8 items), Nurse Manager, leadership ability, and support of nurses (5 items) Staffing and resource adequacy (4 items), and Collegial nurse/physician relations (3 items).

#### **Scoring system:**

Nurses' response were scored (two) for agree, (one) for neutral, and (zero) for disagree. Total scores were calculated and then converted into percent score. The PES-NWI scale was considered positive if percent score was 50% or more and negative if less than 50% El-Meghawri, (2016).

#### **Tools Validity**

The study tools were previously validated its developer.

#### **Tools Reliability**

Study tools were tested for its internal consistency using Cronbach's Alpha. It was

0.783 for forces of magnetism questionnaire sheet and 0.815 for the Practice Environment Scale of the Nursing Work Index (PES-NWI) scale.

#### **2.6. Field work:**

Data was collected in four months from beginning of August, 2019 to ending of November, 2019. Firstly, the researcher obtained official approvals from hospital authorities to conduct the study and the applied tools then, the researcher met the eligible nurses, explained to them the aim of the study, and invited them to participate. Those who agreed were handed the questionnaire. The researcher was present all the time for any questions, and collected the filled forms after revising them for completeness. The work was done in the morning shift in Saturday, Monday, and Thursday weekly until the sample completed. The time required for filling the tools ranged from 35-45 minutes.

**2.7. Pilot study:** A pilot study was done on 35 nurses (10% of study sample). It was conducted to test the clarity and applicability of the tools, and to detect any obstacles or problems that may be encountered during data collection. The time consumed in filling the tools ranged from 35 to 45 minutes. It was included in study sample.

#### **2.8. Administrative design:**

An official letter obtained from the dean of faculty of nursing at Suez Canal University to administration authorities at Suez Canal university hospitals for collecting the data from nurses. This letter included the aim of the study and copy from data collection tools in order to get their permission and help for collection of data.

#### **2.9. Ethical considerations:**

Prior study conduction, ethical approval was obtained from the scientific research ethical committee of the faculty of nursing, Suez Canal University. The researcher met authorities of hospital administration at Suez Canal university hospitals where the nurses worked to clarify the aim of the study and take their consent

**2.10. Statistical design:** Data entry and statistical analysis were done using (SPSS) statistical software package. Data were presented using descriptive statistics in the form of frequencies and percentage for qualitative variables; mean and standard deviation for quantitative variable. T test was used to detect the statistical differences between variables. The correlation between study variables was calculated using Pearson's correlation coefficient the level of significant was adopted at  $p < 0.05$ .

### 3. Results

**Table (1)** shows that the mean age of the studied nurses was  $35.82 \pm 7.761$ , and the mean years of experience was  $11.76 \pm 8.52$ . As well as majority of them were female, married and had diploma degree in nursing (86.9%, 86.0%, and 56.9%) respectively.

**Figure (1)** shows that above two fifth (40.3%) of nurses had moderate perception for forces of magnetism, and nearly one third (32.6%) of nurses had low perception for forces of magnetism followed by (27.1%) of them were highly perceived forces of magnetism.

**Table (2)** reveals that majority (70.0%) of nurses had positively agreement score for nursing practice environment dimensions related to nurse participation in hospital affairs. While above half, (57.1%) of them had total negative total scores concerning collegial nurse- physician relations.

**Table (3)** indicates that there was a highly statistically significant between difference between nurses' years of experience and their total agreement scores for magnet forces regarding quality nursing leadership, organizational structure score for organizational supportive nurse managers and supervisors and support for education

and research.

**Table (4)** illustrates that there was a highly statistically significant differences between nurses' years of experience and their agreement for all dimensions of nursing practice environment with no statistically significant related to scores of staffing and resource adequacy.

**Table (5)** shows that there was statistically significant positive correlation between total scores for magnet forces and nursing practice environment dimensions as perceived by nurses.

### 4. Discussion

This study shows that nursing foundations for quality of care the percentage of Negative<50% (50.9%), Positive>50% (49.1%). This present study result agrees with the findings of a study in Korea, which revealed that nursing foundations for quality care was higher among nurses in Magnet hospitals (**Choi and Boyle, 2014**). On the same line, **Ulrich et al., (2007)**, in a study in the United States reported that nurses in magnet hospitals rated the quality of care significantly higher than did their counterparts in non-magnet hospitals.

In agreement to these results, **El meghawri et al., (2017)** found The magnetism dimension with the third highest rank of agreement among the nurses in their

present study was that related to the foundation of nursing for quality care. It was agreed upon by more than half of the participating nurses. This apparent paradox could have more than one explanation. Firstly, the nurses may have the feeling that they provide the best care possible given the scarcity of resources. Secondly, their responses may reflect their individual work, which they consider as high quality. Thirdly, they may be over-reporting to give a better image of themselves as well as their workplace.

This study shows that according to Total score for Nurse manager ability, leadership, and support of nurses, the percentage of Negative<50% (48.3%), Positive>50% (51.7%). Current results were consistent with that of **El meghawri et al., (2017)** found concerning nurses' agreement upon the magnetism dimension of manager/leadership ability and support, their study revealed that just one-half of them agreed. This indicates an equivocal attitude towards this issue, with half of them disagreeing with it. Hence, this dimension needs to be improved. The foregoing study finding may be attributed to the fact that the nurse managers in the hospital are more involved in day-to-day directions, which leaves no time for them to care for their subordinates to provide them with immediate

feedback, or positive reinforcement and recognition.

This study shows that the according to Total score for Staffing and resource adequacy the percentage of Negative<50% (48.3%), Positive>50% (51.7%). **El meghawri et al., (2017)** found, the magnetism dimension of sufficiency of staffing and resources had the lowest percentage of agreement among nurses. This indicates that this is the area of most concern for the participants in their study. This finding is quite expected given the shortage of work force, facilities, equipment, and supplies, which is often encountered in public hospitals.

Similar finding, especially that of lack of staff resources, was reported in previous studies as a significant problem consistently identified as an issue in the retention of nurses (**Chen and Johantgen, 2010**). Similarly, **Kaitelidou and Kouli, (2012)**, in a study assessing the health sector in a time of crisis in Greece found that the lack of resources was a major problem.

This study shows that the according to collegial nurse- physician relations the percentage of Negative<50% (57.1%), Positive>50% (42.9%). **Amsalu et al., (2014)**, who identified that neither nurses

nor physicians were satisfied with their current collaboration, and nurses demonstrated less satisfaction with the current nurse–physician collaboration.

This study shows that more than one third of the study sample had low to moderate nurse- physician relationship. On agreement with the present study results, a study conducted by **Hassen, (2002)** to assess the work empowerment as perceived by nurses and physicians working at the national heart institute demonstrated that more than half of the nurses were dissatisfied with the nurse-physician relationships.

This was particularly evident regarding the recognition of nurse's role by physicians. This was associated with a high degree of nurses' dissatisfaction with their current job. On the same line, a study conducted in Nigeria by **Ogbimi and Adebamowo, (2006)**

In contrast to these results, **El meghawri et al., (2017)** aimed to assess, magnetism in nursing practice environment at Fayoum University Hospital and revealed that, the magnetism dimension of the relations between nurses and physicians was the first in the ranking of the agreement upon the various dimensions. This could be attributed to in their study to the fact that a

large percentage of the staff nurses who participated in their study are professional nurses with bachelor degree in nursing, or a technical institute diploma.

In disagreement with **Getachew et al., (2014)**, who studied the nurse-physician work relationships and associated factors in public hospitals in Ethiopia found that approximately two thirds of the respondents had good collaboration or joint practice with physicians, which is very close to the current study figure. Also, **Barrere and Ellis, (2002)** mentioned that as the knowledge concerning nurse's role increased among physicians, important positive changes took place in the nurses' attitudes toward collaboration. Hence, physician's knowledge about a nurse's role can affect their attitudes toward collaboration.

In contrast, **Elithy et al., (2011)** concluded that, there were significant relationships among all dimensions with exception of nurse physician relationship dimension. In contrary, only third of the studied nurses in Mansura International Specialized hospital evaluated this force as a high magnetic force (**Abd ElKader, 2009**).

Regarding Autonomy and accountability, the study revealed that more than one third of the participants had from low to moderate autonomy and



accountability. From the researcher point of view, this result may be due to that the nurses are satisfied with the level of autonomy that is available to them. This level of autonomy is appropriate to their level of education and experience. Another contributor to this result is that there are many units in the hospital without head nurses and head nurses are only available at morning and late shifts so the nurses feel they are autonomous in the absence of the head nurses.

This result was comparable to result documented by **El-Demerdash et al., (2018)** who aimed to identify the relationship between the fourteen forces of magnetism and patient safety culture at Suez Canal University hospitals and found that about half of the studied nurses evaluated it as a high magnetic force at Suez Canal University hospitals. In the same line, **Gheith and Zakaria, (2012)** reported that autonomy is one of the most important factors that enhance magnetism at Pediatric Hospital of Mansoura University.

In contrary, the majority of the studied nurses at Alexandria German Hospital evaluated autonomous nursing practice at their hospital as a moderate magnet force (**El-Bialy and Abd Elaa, 2013**). Also, approximately half of the

studied nurses at a tertiary care center in Beirut, Lebanon reported that they don't possess autonomy (**Kaddourah et al, 2013**).

In contrary, **Papathanassoglou et al., (2012)**, who conducted a study to explore the levels of autonomy among European critical care nurses. They reported that European critical care nurses had lower autonomy and were associated with increased frequency and intensity of moral distress. A research was done to study the magnetism dimensions for satisfaction of nursing staff and patients at Mansoura University, it was concluded that, nursing staff who are working in general units reported their agreement on presence of all magnetism dimensions, while nurses in ICU unit reported low agreement and satisfaction with autonomy (**Abo Habieb, 2010**)

This study shows that regarding nurses as teachers more than half of the participants had high teaching skills. From the researcher point of view, this result is due to that, nurses in these hospitals perform their roles as teachers not only for patients but also to the new hired nurses and nursing students. This apparent teaching role of nurses increases their self-esteem and increases their job satisfaction.

In harmony with the present study, **El-Demerdash et al., (2018)** who found

that, the majority of the studied nurses evaluated it as a high magnetic force at Suez Canal University hospitals. In contrary, the highest proportion of the studied nurses at Mansura International Specialized hospital evaluates this force in their hospital as a low magnetic force (**Abd Elkader, 2009**).

This study shows that regarding interdisciplinary relationships, it was evaluated by the majority of the studied nurses at Suez Canal University Hospitals as a high magnetic force. From the researcher point of view, this result is due to that there is cooperation, coordination and respect among all health care providers. All disciplines at Suez Canal University Hospitals facilitate the work of each other.

In contrast, this force was evaluated as a low magnetic force at Mansura International Specialized hospital (**Abd Elkader, 2009**). Also, Weak interdisciplinary relationships were one of the most important factors hindering hospital magnetism at Pediatric Hospital of Mansoura University (**Gheith and Zakaria, 2012**).

Regarding respectable nurse-physician relations, it got higher percentage and was considered an area of potential improvement. From the researcher point of

view, this is due to higher levels of harmony, cooperation and coordination among nurses in the same unit. Also, head nurses do their best efforts to develop teamwork among nurses in their units. In the same line, nurses at three Northern Virginia magnet hospitals had the highest perception regarding this dimension and it was perceived as an area of strength (**Al-Ateeq, 2008**).

**Ibrahim, (2013)** reported that nurses at El Salama New Hospital had the highest perception concerning teamwork within units and it was considered an area of strength. **Bagnasco et al., (2011)** reported that this dimension was an area of potential improvement in the Italian hospitals included in their study. Also, **Drake, (2015)** in his study reported that nurses had the highest perception regarding teamwork within units and it was an area of strength.

In contrary, **Aboul-Fotouh and Wassif, (2012)** and **Falco, (2013)** found low levels of teamwork within units among care providers. This study shows that regarding supportive nurse managers and supervisors the percentage of low, moderate and high was (60%), (40%) and (0%) respectively. From the researcher point of view, this result may be due to that middle and first level managers at Suez Canal University Hospitals usually encourage their staff to follow safety

procedures, but there is some neglecting from the top management to safety problems.

This is in agreement with, **El-Demerdash et al., (2018)** who found that, regarding supervisor/manager expectations & actions promoting patient safety, it was an area of potential improvement in Suez Canal University Hospitals. In the same line, **AL-Izumi, (2012)**, reported that this dimension is an area of potential improvement at Hamad Medical Corporation in Qatar State.

**Aboul-Fotouh and Wassif, (2012)** reported that supervisor/manager expectations & actions promoting patient safety at Damamhur National Medical Institute is perceived as an area of potential improvement. In this respect, **Stone & Gershan, (2009)** reported that nurse managers play an important role in helping their staff to identify and implement improvements in patient safety field and ensure the understanding of their staff to the indicators of progress and improvement of patient safety procedures.

**Scherbet al. (2010)**, which reported that there was a statistically lower level of positive attitude toward supervisor/manager expectations and actions promoting patient safety, which required strengthening the role of healthcare management in

improving patient safety culture. On the other hand, **Drake, (2015)** reported that this dimension is an area of strength in the eight-hospital health system in Eastern North Carolina which are included in his study.

The results of the current study are in contrast to those of **Bluecheket al. (2013)** who found that nurses reported feeling a lack of support and recognition from their managers. A research was done concluded that, nursing staff who are working in general units reported low organization support. (**Abo Habieb, 2010**)

Regarding working with clinically competent nursing staff as magnet designation attribute for nursing excellence, the result showed higher perceptions of their nursing competence.

This finding is in agreement with **Lakanmaa et al. (2015)**, who reported that the studied sample rated themselves as good in clinical competence. As documented, the competence concept is multidimensional (e.g. focusing on clinical practice, ethics, collaboration, leadership, education, and development work) and strongly related to, for example, work experience, and frequency of using specific competencies

This study shows that according to staffing and resource adequacy the percentage of negative <50% (48.3%), Positive >50% (51.7%). According to **Kramer and Schmalenberg, (2008)** adequate staffing provides the nurse the ability to deliver excellent care. Moreover, **Robert et al., (2011)** stated that appropriate staffing involved the effective match among patient needs, nurse competencies, and an equitable workload.

Current results were consistent with that of **Matlakala and Botha (2016)**, who conducted a qualitative study to explore the critical care nurse managers' perspectives regarding nurse staffing in the large CCUs. One of the drawbacks that emerged from the data was the shortage of competent and trained nurses. Shortage of competent and trained nurses was associated with the global shortage of nurses and led to increased patient-to-nurse ratios and the use of other categories of nurses, other than professional nurses.

**El-Demerdash et al., (2018)** found that, regarding consultation and resources, the highest proportion of the studied nurses evaluated it as a high magnetic force at Suez Canal University hospitals. In contrary, the highest proportion of the studied nurses at Mansura International Specialized hospital evaluated consultation and resources at their

hospital as a low magnetic force (**Abd ElKader, 2009**).

The present study found There were statistically significant increase in total score for quality nursing leadership, total score for organizational structure, total score for supportive nurse managers and supervisors, total score for personnel policies and programs and total score for support for education and research among 1-10 years than > 10 years.

There was no statistically significant difference between 1-10 years and >10 years regarding total score for professional models of care, total score for high quality patient care, total score for quality improvement, total score for working with other competent staff, total score for autonomy and accountability, total score for community and the hospital, total score for nurses as teachers, total score for image of nursing, respectable nurse- physician relationships.

There was no statistically significant difference between 1-10 years and >10 years regarding total score for staffing and resource adequacy. There was statistically significant increase in total score for nurse participation in hospital affairs among 1-10 years than > 10 years. There was statistically significant decrease in total score for nursing foundations for quality of care, total score for

nurse manager ability, leadership, and support of nurses, and total score for collegial nurse- physician relations among 1-10 years than > 10 years

Current results were consistent with that of **El-Bialy and AbdElaa, (2013)** found in relation to years of experience in nursing a significant difference was found with "support for education, control of and over nursing practice, working with other nurses who are clinically competent and nurse manager support dimensions. It was evident from the results of this study that, significant differences were detected with years of experience of staff nurses.

In agreement to these results **El meghawri et al., (2017)** found identified certain characteristics that had a significant influence on nurses' perception of the magnetism of their practice environment. revealed different characteristics for different magnetism dimensions The effect of experience on the concept of quality could be more evident in the junior nurses with the enthusiasm of relatively new graduates, and the senior ones with longer experience who provide support at work with their acquired competencies.

In contrast, **Safadi and Ahmed, (2013)** found that the nurses with over ten

years of experience most probably pioneer in their field and are more capable to supervise others and are more satisfied with magnetism. **El-Bialy and AbdElaa, (2013)** found as regards to, "control of and over nursing practice" dimension there were significant differences with staff nurses' age and their experience in nursing where, the highest mean score was found with youngest staff nurses' with less experience in nursing.

This may be attributed to that the youngest staff nurses may participate in different hospital committees through which staff nurses control nursing practice in this hospital as well as they may control over unit issues that directly affected them such as floating system, type of uniform and infection control.

In this respect, **Kramer and Schmalenberg, (2003)**, indicated that effective control of and over nursing practice requires some kind of empowered, formal organization structure, extending beyond clinical decision making at the patient care interface. In contrast, **Kramer and Schmalenberg, (2009)** stated that almost 60% of the magnet hospital staff nurses stated that little or no control of and over nursing practice have existed.

This study showed that, there was no statistically significant difference

between 1-10 years and >10 years regarding Total score for working with other competent staff. In contrast with the present study, **El-Bialy and AbdElaa, (2013)** found Concerning "Working with other nurses who are clinically competent" dimension, significant differences with were detected, where the highest mean scores were found with less experience in nursing working.

In this respect, **Sherman et al., (2009)** stated that nurses feel very comfortable when having a clinical competence from nurses found in their units to support their nursing practice and give them important feedback to further develop their skills in caring for complex patients. This study showed that, there were statistically significant decrease in total score for nurse manager ability, leadership, and support of nurses among 1-10 years than > 10 years

**El-Bialy and AbdElaa, (2013)** found as regards "nurse manager support" dimension. The highest mean score was found with staff nurses with least years of experience. This may be attributed to the fact that the nurse manager in In-patients Care Units may directly be involved with day-to-day directions, they may also provide immediate feedback, provide positive reinforcement and recognition

when staff nurses work together to improve patient care, provide needed resources to all staff to get the job done.

In this regard, **Schmalenberg et al., (2015)** stated that nurse manager can support her staff nurses through making expectations clear and known, listen without judging, suggest alternative approaches and provide feedback, work as a role model, for a collaborative approach and stressing collaboration not competition bringing together partnership equity, responsibility and authority.

## **5. Conclusion**

**Based on the study findings, it can be concluded that:**

This study concluded that there was highly statistically significant relation between nurses' experience and forces of magnetism at Suez Canal university hospitals on the following items: total score for organizational structure, total score for supportive nurse managers and supervisors, and total score for support for education and research. Also, there were a statistically significant relation between nurses' experience and forces of magnetism at Suez Canal university hospitals on the following items: total score for quality nursing leadership, and total score for personnel policies and programs.

There was highly statistically significant relation between nurses' experience and all items of nursing practice environment except total score for staffing and resource adequacy had no statistically significant relation

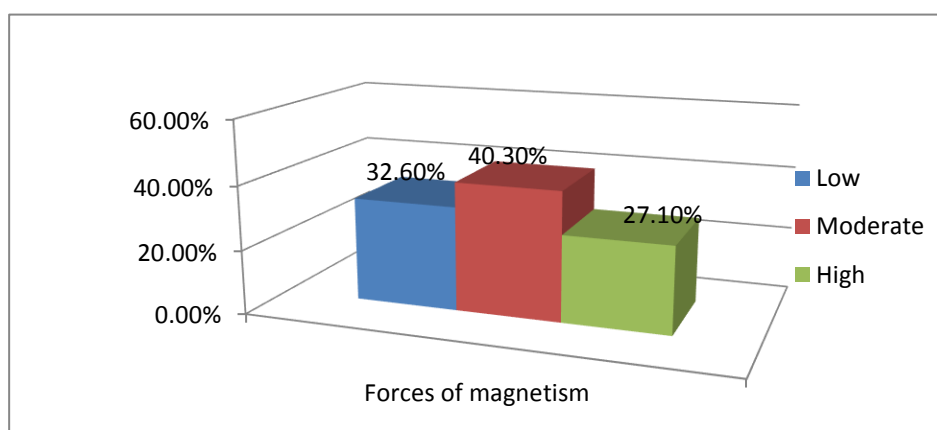
## **6. Recommendations**

**In the light of results of this study, the following recommendations were suggested that:**

- Modifying of hospital policies of retaining and recruiting nurses and establishing a climate of communication openness, teamwork and non-punitive response to errors.
- Providing in service training program for staff nurses and different levels of nurse management as well as all other health care providers about magnet process and the importance of magnetism dimensions.
- Striving toward magnetic designation to have a competitive advantage in the requirement of all nurses as well as for health care providers to attractive practice environment are needed.
- Determining the health care needs though survey the external environment.
- Awarening all health care providers about personnel responsibilities and rights throw boosters or booklets.
- Empowering nurses to have a voice in decision-making, thus encouraging diverse and creative input that will help advance the healthcare mission of the organization is recommended to improve their agreement upon magnetism.
- Better understanding of the Egyptian nursing practice environment by conducting an increased number and broader range of studies.

**Table (1): Demographic characteristics of the studied nurses (n=350)**

Demographic characteristics		Range	Mean ± SD
Age(years)		22 – 56	35.82 ± 7.761
		<b>No.</b>	<b>%</b>
Gender	Male	46	13.1
	Female	304	86.9
Marital status	Married	301	86.0
	Widowed	30	8.6
	Divorced	19	5.4
Level of education	Nursing school Diploma	199	56.9
	Technical nursing institute	71	20.3
	Nursing Baccalaureate	75	21.4
	Master	3	0.9
	Doctorate	2	0.5
		Range	Mean ± SD
Experience in nursing field		1 – 10	16.13 ± 7.93
		More than 10	11.76 ± 8.52



**Figure (1): Forces of magnetism as perceived by studied nurses at Suez Canal University Hospitals. (n=350)**



**Table (2) Dimensions of Nursing Practice Environment as perceived by the studied nurses. (N=350).**

<b>Nursing Practice Environment Dimensions</b>	<b>Positive<math>\geq</math>50%</b>		<b>Negative<math>&lt;</math>50%</b>	
	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>
(1) <b>Nurse participation in hospital affairs</b>	245	70.0	105	30.0
(2) <b>Nursing foundations for quality of care</b>	172	49.1	178	50.9
(3) <b>Nurse manager ability, leadership, and support of nurses</b>	181	51.7	169	48.3
(4) <b>Staffing and resource adequacy</b>	181	51.7	169	48.3
(5) <b>collegial nurse-physician relations</b>	150	42.9	200	57.1

**Table(3): The relation between forces of magnetism and years of experience as perceived by studied nurses at Suez Canal university hospitals. (N=350).**

Years of experience  Magnet Forces	1-10 year (No.=75)	>10years (No.=275)	t-test	P.value
	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Quality nursing leadership	21.86 ± 10.13	18.14 ± 8.95	3.107	0.002
Organizational structure score for Organization	11.33 ± 3.42	8.59 ± 4.63	4.791	0.000
Supportive nurse managers and supervisors	8.33 ± 4.84	6.03 ± 4.25	4.034	0.000
Personnel policies and programs	7.60 ± 3.98	6.12 ± 4.38	2.650	0.008
Professional models of care	13.13 ± 5.98	12.47 ± 6.29	0.818	0.414
High quality patient care	11.66 ± 7.17	10.79 ± 5.67	1.114	0.266
Quality improvement	6.40 ± 3.78	5.49 ± 4.01	1.760	0.079
Working with other competent staff	3.66 ± 2.37	3.46 ± 2.47	0.630	0.529
Autonomy and accountability	5.80 ± 4.39	5.85 ± 3.66	0.102	0.919
Community and the hospital	8.66 ± 6.91	9.04 ± 5.069	0.520	0.604
Nurses as teachers	7.86 ± 4.59	6.97 ± 3.79	1.738	.083
Image of nursing	7.53 ± 5.30	7.67 ± 4.14	0.236	0.813
Respectable nurse- physician relationships	7.86 ± 4.59	6.97 ± 3.79	1.738	.083
Support for education and research	12.07 ± 7.31	8.52 ± 5.94	4.349	0.000

(\*) statistically significant at P<0.05

**Table (4): Relation between Dimensions of Nursing Practice Environment and years of experience as perceived by the studied nurses. (N=350)**

Years of experience  Nursing practice environment	1-10 year (No.=75)	>10years (No.=275)	t-test	P.value
	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD
Nurse participation in hospital affairs	7.07 ± 5.18	11.58 ± 4.48	7.464	0.000
Nursing foundations for quality of care	4.33 ± 4.137	10.46 ± 5.25	9.351	0.000
Nurse manager ability, leadership, and support of nurses.	2.67 ± 2.56	5.62 ± 3.22	7.356	0.000
Staffing and resource adequacy	3.53 ± 2.91	4.16 ± 2.59	1.818	0.070
Collegial nurse- physician relations	1.53 ± 2.12	2.59 ± 2.33	3.565	0.000

(\*) statistically significant at P<0.05.

**Table (5): The relation between Nursing Practice Environment and Forces of magnetism as perceived by studied nurses at Suez Canal university hospitals. (N=350).**

Items	Nursing Practice Environment Dimensions	
	R	P-value
Magnetism Forces	.161	.041*

(\*) statistically significant at P<0.05

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