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## Magnet Hospital as Perceived by Nurses and its Relation to Patients'

### Safety Goals

Marwa Elsayed Mohammed(1) , Aya Ghoneimy Hasanin(2) and Gehan Mohamed Ahmed(3)

(1) Nurse Specialist at Biala Technical Secondary School of Nursing

(2) Lecturer of Nursing Administration, Faculty of Nursing, Benha University

(3) Professor of Nursing Administration, Faculty of Nursing, Helwan University

**Abstract:** Magnet hospitals are providing quality patient care and achieve nursing excellence where patient safety goals are important guidelines to promote specific improvements in the process of providing safe and high-quality patient care. *The study aimed to* assess nurses' perception toward magnet hospital and its relation to patients' safety goals. *Descriptive correlational design* was utilized to conduct this study. *The subjects of this study* included a convenient sample of 200 nurses who are working at Medical and Surgical departments at Benha University Hospital and with at least one year of experience. **Two tools were used for data collection: The first tool;** Essentials of magnetism questionnaire, **The second tool:** Patient safety goals questionnaire. **The results:** The findings of this study showed that there was nearly three quarters of studied staff nurses had high perception level regarding magnet hospital and the majority of them had high perception level regarding patient safety goals. **Conclusion:** There was a statistical significant positive correlation between total staff nurses' perception toward magnet hospital and patient safety goals. **Recommendation:** This study recommended that hospital should provide adequate resources that will be required to sustain work environment improvement strategies and developing a manual about patient safety goals for staff nurses to update their knowledge and skills regarding patient safety in their working area.

**Key words:** Magnet hospitals, Perception, Patient safety goals and Staff nurses.

### 1. Introduction

A way to empower nurses came along with the concept of a magnet hospital in the early 1980s. The immediate catalyst was the

result of the health care system experiencing a significant nursing shortage .Because of this shortage; recent efforts have been made to attract more nurses to the profession as well as retaining those who are already working as



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nurses (**Kieft, De Brouwer, Francke and Delnoij, 2014**). The American Academy of Nursing appointed a task force to investigate the factors impeding or facilitating professional nursing practice in hospitals. It had succeeded in creating nursing practice organizations that serve as ‘magnets’ for professional nurses; that is being able to attract and retain a staff of well-qualified nurses (**Ayse, Carla, Meg and Yulan, 2017**).

Magnet status is the highest national recognition awarded to a hospital or medical center for excellence in nursing. It is accepted nationally as the gold standard of patient care and provides healthcare consumers with a benchmark to measure quality of nursing care. The basis for Magnet Recognition includes 4 key domains: Transformational leadership; structural empowerment; exemplary professional practice; and new knowledge, innovations, and improvements (**Kutney et al., 2015**). A fifth domain, empirical outcomes, is embedded within each domain. Excelling in these areas not only supports nurses, which results in better retention and higher job satisfaction, but also appears to influence important patient

outcomes (**Stimpfel, Rosen, and McHugh, 2014**).

Magnet hospitals have “better work environments, a more highly-educated nursing workforce, superior nurse-to-patient staffing ratios and higher nurse satisfaction than non-Magnet hospitals. The education opportunities offered by magnet credentialing, help nurses work more confidently and successfully (**Cramer , Staggs, and Dunton, 2014**). Magnet hospital environments typically include a healthy sense of competition among nurses, who in turn provide increased quality of care through more specific knowledge in their fields (**Kieft et al., 2014**).

Magnet status yields a long list of benefits related to improved quality of care and nurse job satisfaction. Some benefits have a direct relationship to lower costs such as the decrease in the incidence of pressure ulcers and falls. Magnet hospitals tend to have a low patient-to-nurse ratio, lower mortality rates for patients, lower hospital-associated infection rates, a shorter average length of stay and nurse safety is significantly improved. Occupational health injuries for musculoskeletal injuries and blood and body



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fluid exposures are also lower in hospitals with magnet status (**Jones, 2017**).

The Essentials of Magnetism (EOM) are a psycho-metrically sound instrument that is composed of the eight dimensions which are highly inter-correlated and interdependent; all are essentials to a healthy work environment and for producing quality of patients care. These dimensions namely; positive nurses/physician's relationship, support for education, perceived adequacy of staffing, autonomous nursing practice, Control over nursing practice working with other nurses who are clinically competent, nurse-manager support and a culture of the patient care (**Kramer et al., 2014**).

Patient safety is an essential and vital component of quality nursing care and has become a main concern for healthcare organizations around the world. Safety is focuses upon preventing medical errors and is the outcome of interactions between attitudes, values, skills and behaviors to commit to workplace safety management (**Mazhari, Hessam, Arabloo, Zarnaq and Zhirafar 2014**).

Therefore, patient safety culture is a

multifactorial framework that aims at promoting a system approach to preventing and reducing harm to patients. In order to create a patient safety, many factors must be present and these include effective communication, appropriate staffing, procedure compliance, environmental safety, environmental security, culture, supportive leadership, orientation and training, and open communication about medical errors (**Ammouri, Tailakh, Muliira, Geethakrishnan and Al Kindi, 2015**).

The international patient safety goals (IPSG) are important guidelines at the international level to promote specific improvements in the process of providing safe and high-quality patient care. Joint Commission International and the WHO are conjointly promoting six international patient safety goals for increasing awareness about these goals and ensure safe delivery of care. These goals are: Identify patients correctly, Improve effective communication, Improve the safety of high-alert medications, Ensure correct-site, procedure and patient surgery, Reduce the risk of health care associated infection, Reduce the risk of patient harm resulting from falls (**Omer, Al-Rehaili, Al-Johani, and**



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**Alshahrani, 2018).**

Magnet hospital gives a valuable mechanism for evaluating and transforming nursing practice environments that can be attributed to nursing excellence and patient safety. The nursing workplace is a combination of different features that directly or indirectly influence the patient care system (**Kelly , McHugh, M. and Aiken, 2011**). Nowadays, building a safer healthcare system and excellent work environment has come to be the main concern to the world. Patient safety ought to be preserved in all hospitals either certified or not certified. Nursing care excellence starts by advancing and promoting patient safety in magnet designation work environment to retain the qualified nursing staff (**Gelinas, 2015**).

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

Several studies have found that magnet hospitals have lower mortality rates, shorter lengths of stay, greater job satisfaction, lower staff turnover and vacancy rates. Accordingly, magnet hospital has better patient safety and patient outcomes compared with their non-magnet counterparts. Patient safety practices refer to processes or structures which, when

applied, reduce the probability of adverse events resulting from exposure to the health-care system across a range of diseases and procedures (**Abdelwahed, 2017**). So, this study will be conducted to assess nurses perception toward magnet hospital and its relation to patients' safety goals at Benha University Hospital.

### **1.2. Aim of the Study**

The aim of this study was to assess magnet hospital as perceived by nurses and its relation to patients' safety goals at Benha University Hospital

### **1.3. Research Questions**

1. What are the nurses' perception levels toward magnet hospital at Benha University Hospital?
2. What are patients' safety goals as perceived by nurses at Benha University Hospital?
3. Is there a relation between nurses's perception toward magnet hospital and patients' safety goals?

## **2. Subjects and Methods**

The methodology of the current study was portrayed according to the following four designs:



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I- *Technical design.*

II- *Administrative design.*

III- *Operational design.*

IV- *Statistical design.*

### **I. Technical Design:-**

The technical design includes study design, study setting, subjects and methods and tools that used in data collection.

#### **Research Design:-**

Descriptive correlational design was utilized to conduct this study.

#### **Setting:-**

The study was conducted at Benha University Hospital in Medical and Surgical units. The total number of bed at this hospital is (880).The hospital composed of three separated buildings; medical building (478 beds), surgical building (384 beds) and ophthalmology building (18 beds). The Medical departments included (14) units and surgical departments included (11) units.

#### **Subjects**

Study subjects included a convenient sample of nurses (200) who are working in the above mentioned study setting with at least one year of experience. Sample size was calculated by using the following equation:-

N

$$n = \frac{N}{1+N(e)^2}$$

Where n is sample size.

'N' is total number of nurses who are at least one year of experience and zpresent at benha university hospital (N = 400)

'e' is coefficient factor = 0.05

#### **Tools of data collection:**

The data for this study were collected by using two tools:

#### **Tool I: Essentials of Magnetism Questionnaire:**

It was developed by **Abd Alrazek (2013)** and modified by the investigator after reviewing the related literature (**The American Nurses Credentialing Center (ANCC), 2017 ; Jones, 2017; Oshodi, Crockett, Bruneau, and West, 2017**). It was used to assess nurse's perception toward magnet hospital. It consisted of two parts:

**Part one:** Personal characteristics of staff nurses as (unit, age, sex, educational qualification and years of experience).

**Part two:** It consisted of (56) item divided in to eight dimensions as follows: Nurse-physician relationship(6 items), Support for education (3 items), Autonomous nursing practice (8 items) , Control over



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nursing practice (8 items), Perceived adequacy of staffing (6 items), Working with clinically competent nurses(4 items), Head Nurse support(10 items) and culture of the patient care (11 items).

#### **Scoring system:**

Subjects' responses were scored on three point likert scale as following: (1) for never, (2) for sometimes and (3) for always.

The scores of each dimension were summed up and converted to percent scores. The studied nurses had high perception level if the percent scores ( $\geq 75\%$ ), moderate perception level (60%-  $< 75\%$ ) and low perception level ( $< 60\%$ ).

#### **Tool II: - Patient Safety Goals Questionnaire:**

It was developed by the investigator after reviewing the related literature (**Ganz, Huang, and Saliba, 2013; Abdelwahed, 2017; Olds, Aiken, Cimiotti, and Lake, 2017**). It was used to assess nurses' perception toward patient's safety goals. It consisted of (46) items divided in to six goals as follows: Identify Patients Correctly (4 items), Improve effective Communication (14 items), Reduce the risk of health care associated infection (10 items), Reduce patient falls complication (8 items), Improve the Safety of High-Alert

Medications (3 items), Ensure Correct: Site, Procedure and Surgery for the patient (3 items).

#### **Scoring system:**

Subjects' responses were scored on three point likert scale as follows: (1) for never, (2) for sometimes and (3) for always.

The scores of each dimension were summed up and converted to percent scores. The studied nurses had high perception level if the percent scores ( $\geq 75\%$ ), moderate perception level (60%-  $< 75\%$ ) and low perception level ( $< 60\%$ ).

## **II. Administrative design**

An official permission was issued from Dean of the Faculty of Nursing to the Director of Benha University Hospital to obtain the approval for data collection, the objectives and the nature of the study were explained and then it was possible to carry out the study with minimum resistance.

## **III. Operational design**

### **Preparatory phase**

- ◆ A review of the past, current Arabic and English related literature covering various aspects of the problem was done, using available books, articles, periodicals, and



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magazines to get acquainted with the research problem and develop the study tools.

- ◆ **Validity of the study tools** were tested by panel of Experts consisted of (5) Professors and Assistant Professors in the field of nursing one Professor of Nursing Administration at Faculty of Nursing Tanta University, two Professors of Nursing Administration at Faculty of Nursing Monofia University and two Assistant Professor of Nursing Administration at Faculty of Nursing Monofia University,

### **Reliability of the tools**

Reliability of essentials of magnetism questionnaire was measured by using Cronbach's Alpha and the value was (0.76) and reliability of patient safety goals questionnaire was measured by using Cronbach's Alpha and the value was (0.86).

### **Pilot study**

Pilot study was conducted in May (2018) to assess tool clarity and applicability. It has also served in estimating the time needed for filling the form .The study was tested on 10 % of total subjects, it was done on 20 staff nurses from Benha University Hospital .No

modification was needed, so these staff nurses were included in the main subject. The necessary clarification for some statements related to their translation to Arabic was done.

### **Implementation phase**

- Each staff nurse was interviewed after explaining the purpose of the study and getting agreement of staff nurses to participate in the study.
- Data has been collected from staff nurses in above mentioned study setting in Benha University Hospital.
- Collection of data took four months in Benha University Hospital from beginning of May (2018) to the end of August (2018), the researcher applied interview for study sample for three days per a week.
- The time needed to complete essentials of magnetism questionnaire was 20 minutes and 15 minutes for completing patient safety goal questionnaire.
- The appropriate time of data collection was according to type of work and workload of each department, sometimes it was in the middle of the shift and other time before the end of the shift.



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### **Ethical Considerations**

- All subjects have their rights secured.
- Each subject was informed about the nature process on expected outcomes.
- All data was confidential and informed that it will be used only for the research purpose.
- Each study subject was informed time throughout the study

### **IV. Statistical Design**

Data were verified prior to entry into computer .Statistical package for social science (SPSS, Version twenty) was used for that purpose, followed by data analysis and tabulation. Descriptive statistics were applied such as arithmetic mean, standard deviation, frequency and percentage).A significance level value was considered when  $p\text{-value} \leq 0.05$  and a highly significance level was considered when  $p\text{-value} \leq 0.001$ , while  $p\text{-value} > 0.05$  indicates non-significance results.





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### 3. Results

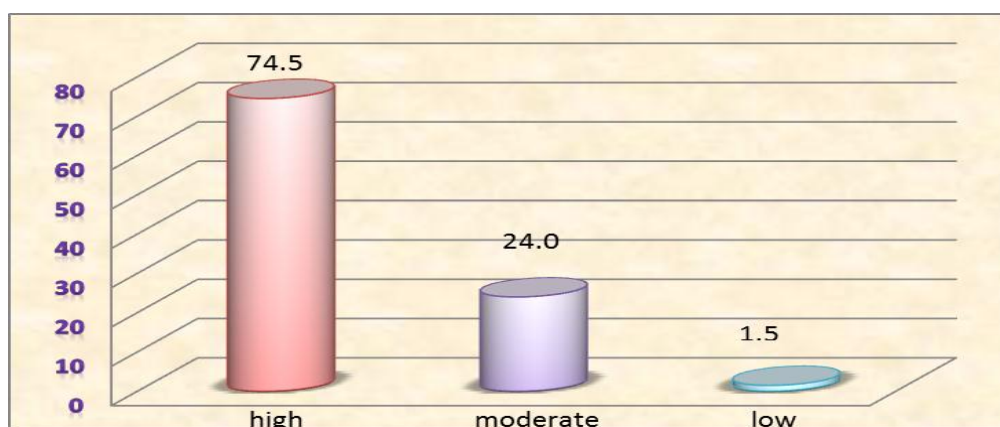
**Table (1): Distribution of Staff Nurses according to their Personal Characteristics (n =200).**

Personnel characteristics	No	%
<b>Age in years</b>		
< 25 year	44	22.0
25< 30 year	60	30.0
30< 35 year	27	13.5
35< 40year	34	17.0
≥ 40	35	17.5
<b>Mean ± SD</b>	32.95±9.47	
<b>Sex</b>		
Male	28	14.0
Female	172	86.0
<b>Educational qualification</b>		
Nursing diploma	86	43.0
Technical institute of nursing	63	31.5
Bachelor of nursing	51	25.5
<b>Years of experience</b>		
1<5	60	30.5
5<10	45	22.5
≥10	95	47.5
<b>Mean ± SD</b>	14. 3±7.3	
<b>Department</b>		
Medical departments	101	50.5
Surgical departments	99	49.5

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**Table (2): Distribution of Staff Nurses' Perception Levels toward Magnet Hospital (n=200).**

Perception toward essentials of magnetism	High		Moderate		Low	
	No	%	No	%	No	%
Nurse physician relationship	80	40.0	106	53.0	14	7.0
Support for education	145	72.5	36	18.0	19	9.5
Autonomous nursing practice	57	28.5	132	66.0	11	5.5
Control over nursing practice	115	57.5	77	38.5	8	4.0
Perceived adequacy of staffing	72	36.0	122	61.0	6	3.0
Working with clinically competent nurses	146	73.0	36	18.0	18	9.0
Head Nurse Support	154	77.0	37	18.5	9	4.5
culture of the patient care	174	87.0	23	11.5	3	1.5
<b>Total</b>	149	74.5	48	24.0	3	1.5

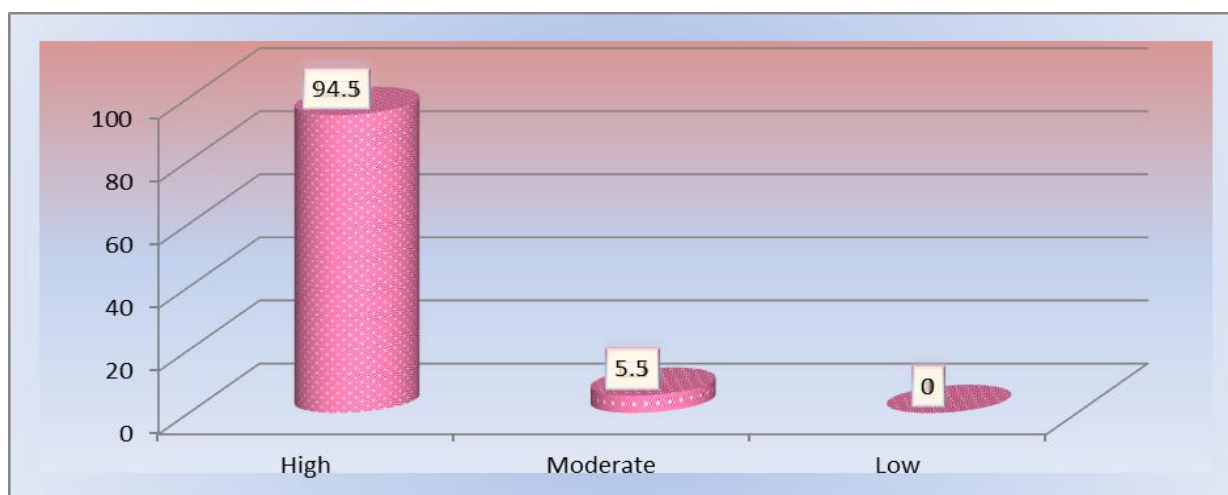


**Figure (1): Total Staff Nurses' perception level toward Magnet Hospital.**

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**Table (3): Distribution of Staff Nurses’ Perception levels regarding Patient Safety Goals (n=200).**

Perception regarding patient safety goals	High		Moderate		Low	
	No	%	No	%	No	%
Identifying patients correctly	186	93.0	12	6.0	2	1.0
Improving effective communication	180	90.0	20	10.0	0	0.0
Reducing the risk of health care associated infection	185	92.5	15	7.5	0	0.0
Ensuring correct: site, procedure and surgery for the patient.	185	92.5	15	7.5	0	0.0
Improving the safety of high-alert medications	126	63.0	66	33.0	8	4.0
Reduce patient falls complication	183	91.5	12	6.0	5	2.5
<b>Total</b>	<b>189</b>	<b>94.5</b>	<b>11</b>	<b>5.5</b>	<b>0</b>	<b>0.0</b>



**Figure (2): Total Staff Nurses' Perception Level regarding Patient Safety Goals.**

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**Table (4): Relation between Staff Nurses' Perception toward Magnet Hospital and their Personal Characteristics (n=200).**

Perception level Personal characteristics	Low (n=3)		Moderate (n=48)		High (n=149)		Total (n=200)		X <sup>2</sup>	p-value
	No	%	No	%	No	%	No	%		
<b>Age</b>										
< 25 year	0	0.0	14	29.2	30	20.1	44	22.0	17.3	0.02*
25>30 year	0	0.0	12	25.0	48	32.2	60	30.0		
30>35 year	0	0.0	7	14.6	20	13.4	27	13.5		
35>40year	3	100.0	6	12.5	25	16.8	34	17.0		
≥ 40	0	0.0	9	18.8	26	17.4	35	17.5		
<b>Gender</b>										
male	0	0.0	6	12.5	22	14.8	28	14.0	0.65	0.72
female	3	100.0	42	87.5	127	85.2	172	86.0		
<b>Qualification</b>										
Nursing diploma	0	0.0	17	35.4	43	28.9	60	30.0	5.95	0.2
Technical institute	0	0.0	7	14.6	38	25.5	45	22.5		
Bachelor of nursing	3	100.0	24	50.0	68	45.6	95	47.5		
<b>Experience</b>										
1>5	3	100.0	21	43.8	62	41.6	86	43.0	4.106	0.39
5>10	0	0.0	15	31.3	48	32.2	63	31.5		
≤10	0	0.0	12	25.0	39	26.2	51	25.5		

\*A statistical significant difference (P≤0.05)



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**Table (5): Relation between Total Staff Nurses' Perception regarding Patient Safety Goals and their Personal Characteristics (n=200).**

Perception level Personal Characteristics	Moderate (n=11)		High (n=189)		Total (n=200)		X <sup>2</sup>	p-value
	No	%	No	%	No	%		
<b>Age</b>							0.41	0.98
< 25 year	2	18.2	42	22.2	44	22.0		
25>30 year	4	36.4	56	29.6	60	30.0		
30>35 year	1	9.1	26	13.8	27	13.5		
35>40year	2	18.2	32	16.9	34	17.0		
≥ 40	2	18.2	33	17.5	35	17.5		
<b>Gender</b>							0.77	0.62
male	1	9.1	27	14.3	28	14.0		
female	10	90.9	162	85.7	172	86.0		
<b>Qualification</b>							3.57	0.16
Nursing diploma	2	18.2	58	30.7	60	30.0		
Technical institute	5	45.5	40	21.2	45	22.5		
Bachelor of nursing	4	36.4	91	4.1	95	47.5		
<b>Experience</b>							2.59	0.27
1>5	4	36.4	82	43.4	86	43.0		
5>10	2	18.2	61	32.3	63	31.5		
≤10	5	45.5	46	24.3	51	25.5		

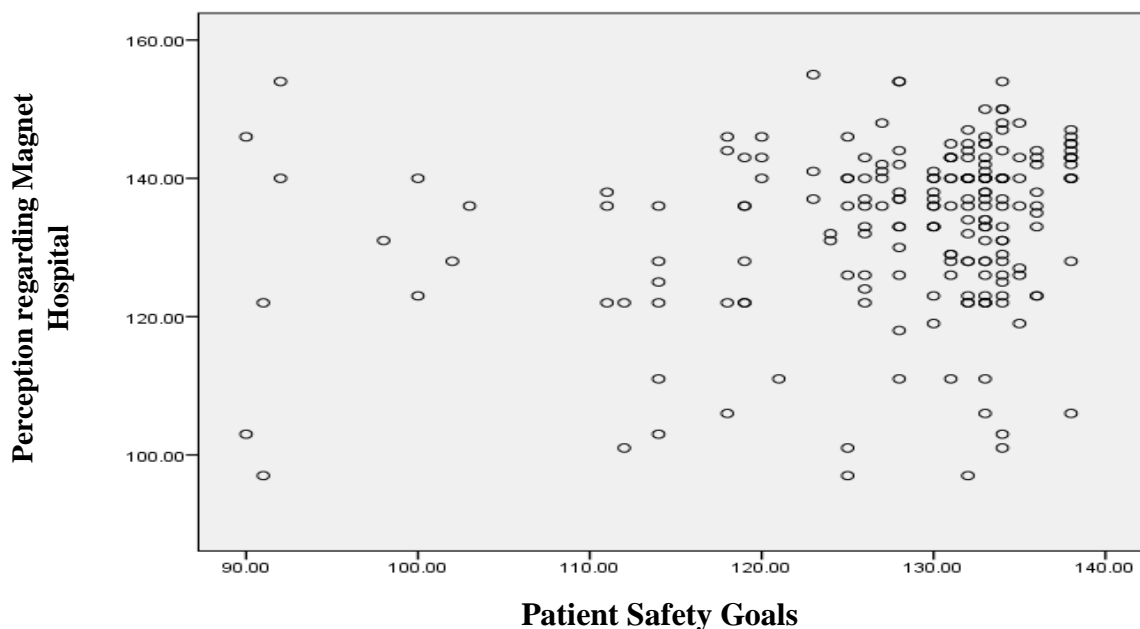
\*A statistical significant difference (P≤0.05)

**Table (6): Correlation between Total Staff Nurses' Perception regarding Magnet Hospital and Patient Safety Goals (n=200).**

Variables	Perception regarding Patient safety goals	
	R	P-value
Perception regarding magnet hospital	0.42	0.04*

\*A statistical significant difference (P≤0.05)

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**Figure (3): Correlation between Total Staff Nurses' Perception regarding Magnet Hospital and Patient Safety Goals.**

**Table (1):** Showed that less than one third (30 %) of the staff nurses had age from 25 to less than 30 years old with a mean of (32.95±9.47) years. As regarding to their gender, the majority (86.0%) of them were female. As for as to their educational qualification, more than two fifth (43.0%) of them had nursing diploma. According to their years of experience, less than half (47.5%) of them had more than 10 years of experience with a mean years of (14.3±7.3) while, 50.5% of them worked in medical department.

**Table (2):** Demonstrated that the majority (87.0%, 77.0%,) of studied nurses had high perception level regarding culture of the patient care and head nurse support respectively. while, 9.5%, 9% of them had low perception level regarding support for education and working with clinically competent nurses respectively.

**Figure (1):** Showed that nearly three quarters (74.5%) of studied nurses had high perception level regarding magnet hospital. while, 1.5% of them had low perception level



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**Table (3):** Showed that the majority (93%, 92.5%, 92.5%) of staff nurses had high perception level regarding identifying patients correctly, reducing the risk of health care associated infection and ensuring correct: site, procedure and surgery for the patient respectively. While, 4.0% of them had low perception level regarding improving the safety of high-alert medications

**Figure (2):** Demonstrated that the majority (94.5%) of staff nurses had high perception level regarding patient safety goals while, 5.5% of them had moderate perception level.

**Table (4):** Showed that there was statistical significant difference between staff nurses' perception toward magnet hospital and their age especially from 25 to 30 years old. While there was no statistical significance difference between staff nurses' perception toward essential of magnetism and their gender, year of experience and educational qualification.

**Table (5):** Showed that there was no statistical difference between staff nurses' perception toward patient safety goals and their personal characteristics.

**Table (6):** Demonstrated that there was statistical significant correlation between total staff nurses perception toward essential of magnetism and patient safety goals.

**Figure (3):** Illustrated that there was statistical significant correlation between total staff nurses' perception toward magnet hospital and patient safety goals.

#### **4. Discussion:**

Magnet hospitals are most likely to perform better on the patient experience domain which comprises the hospital consumer assessment of health care providers and systems survey measures (Stimpfel, Sloane, McHugh and Aiken, 2015). Better patient experiences of care may reflect how the cultural and structural organization of magnet hospitals afford nurses the support and resources to deliver thorough and thoughtful care. Nurses working in supportive environments are most likely to have requisite time and resources to complete necessary care tasks, critically assess patient plans of care, and educate patients and families, which has been associated with greater patient safety (Brooks, Lasater, Sloane and Kutney, 2015).

The results of the present study revealed that less than one third of the studied nurses had age ranged from 25 to less than 30 years old. According to their gender, the majority of nurses were female .As regarding to their educational level, more than two fifth



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of studied nurses had diploma in nursing. Regarding to their years of experience less than one half of studied nurses had years of experience ranged from 10 years and more.

These finding is consistent with **Abd El Fattah, Abo El Ata and Morsy (2017)** who conducted a study about "Hospital magnet designation attributes for nursing excellence that promotes patient safety culture: certified versus noncertified hospitals" and reported that majority of the participants in this study were female and held a diploma degree in nursing. This finding is also in agreement with **Oshodi, et al., (2017)** who conducted study about "The nursing work environment and quality of care: A cross sectional study using the Essentials of Magnetism II Scale in England" and showed that most of the respondents were female, while a quarter of them were aged between 35–39 years old.

This finding is inconsistent with **Kol, İlaslan, and Turkay (2017)** who conducted a study about "The effectiveness of strategies similar to the Magnet model to create positive work environments on nurse satisfaction." and indicated that a significant proportion of nurses had Bachelor degree in nursing. In addition, the findings were inconsistent with

**De Brouwer, Fingal, Schoonhoven, Kaljouw and Van Achterberg (2017)** who conducted a study about "Measuring hospital staff nurses perception on quality of the professional practice environment" and showed that staff nurses age varied from 19-63 years with an average of 38.9 years. A third of the respondents had zero to 5 years of work experience (33.9%) and 29.8% had a bachelor degree in nursing.

Regarding staff nurses' perception toward magnet hospital the present study findings showed that nearly three quarters of studied nurses had high perception level regarding magnet hospital. This might be due to nurse's feeling of head nurses support toward them and there is good relationship between nurses and doctors with concern for patient.

This finding is consistent with **El-Demerdash, Elhosany and Hefny (2018)** who conducted a study about "Professional Forces of Magnetism and Patient Safety Culture at Suez Canal University Hospitals" and showed that the majority of studied nurses had high perception level about forces of magnetism especially (quality nursing leadership, nurses as teachers, consultation





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and resources, autonomy and interdisciplinary relationships). While, the finding is in disagreement with **Abd El razik (2013)** who conducted a study about "the relationship between nurse's perception toward the essential of magnetism and patient safety culture "and reported that nurses had moderate perception of total essentials of magnetism dimensions.

In relation to staff nurses' perception toward patient safety goals The present study illustrated that the highest percentage of the staff nurses had high perception level regarding patient safety goals. This might be due to the increase vigilance of professionals regarding adherence to safety goals, with hospital continuous educational program for nurses about patient safety goals.

This finding is consistent with the findings of a study done by **Abe and Tuppal (2018)** at Philippine about "Patient Safety Goals' Level of Attainment in Selected Tertiary Hospitals in Manila " which highlighted that the majority of staff nurses had a high level of attainment for patient safety goals and remains at the core of health service delivery in each organization. Also, this finding is consistent with **Al-Mandhari,**

**etal. (2014)** at Oman who conducted a study about " Patient safety culture assessment in Oman" who indicated that there is overall average positive response rate for patient safety culture dimensions of the hospital survey of patient safety culture (HSPSC) in Oman.

Furthermore, the finding is supported by **Costa et al., (2016)** who conducted a study about " Perception of nurses about patient safety in intensive care units " and reported that patient safety is a consequence of the culture adopted by professionals. Professionals understand patient safety as a set of strategies that minimize the risk of adverse events.

The present study revealed that there was statistical significant difference between staff nurses' perception toward magnet hospital and their age specifically at 25 to 30 years. From the investigator's point of view, nurses in this age are ready to learn and apply newest in the field and are more likely settled in their work, had a chance to explore other work environments and are committed to their position, which would improve perception of work environment.



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This result is consistent with **Boev (2012)** who conducted a study about "The relationship between nurses' perception of work environment and patient satisfaction in adult critical care" and found that there was statistical significant difference between studied subjects total perception of work environments and their ages. On the other hand, this finding is inconsistent with **Stalpers, Van Der Linden, Kaljouw and Schuurmans (2017)** who found no associations between nurse characteristics with work environment characteristics.

Moreover, The results of the present study showed that there was no statistical significant difference between staff nurses' perception toward magnet hospital and their gender, year of experience and educational qualification. These results disagree with **Er and Sokmen (2018)** who conducted a study about "Investigation of the working conditions of nurses in public hospitals on the basis of nurse-friendly hospital criteria" and found that nurses who have worked for 11–15 years had a higher mean score for the "nurse orientation" criterion compared with those who have worked for 0–5 and 6–10 years, and the difference between their mean scores was

statistically significant. Moreover, these results are inconsistent with **Boev (2012)** indicated significant differences in terms of nurses' highest level of education and perception of work environment.

Additionally, the present study showed that there was no statistical difference between staff nurses' perception toward patient safety goals and their personal characteristics. This finding is in contradiction with **Tschannen, McIish, Aebersold, and Rohde, 2015** who conducted a study about " Targeted communication intervention using nursing crew resource management principles " and emphasized that years of experience of the nurse was significantly related to openness of communication among nurses and physicians. Higher levels of education were associated with greater perceptions of nurse-physician communication.

According to the current study, there was statistical significant correlation between total staff nurses' perception toward essentials of magnetism and patient safety goals. From the researcher's point of view, hospital administration always seek to improve hospital work environments that lead to improving safety and quality in patient care



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and increase patient satisfaction. This finding is in agreement with **Kutney et al. (2015)** who conducted a study about "Changes in patient and nurse outcomes associated with magnet hospital recognition" and showed an association between Magnet recognition and better outcomes for both patients and nurses. Patients treated in Magnet hospitals had lower odds of mortality following surgery compared to patients in non-Magnets. And there is improvement in patient outcomes for magnet hospitals in terms of falls.

This finding also goes with **Weller, Boyd and Cumin (2014)** who conducted a study about " Teams, tribes and patient safety: overcoming barriers to effective teamwork in healthcare" and found that increasing complexity and even more specialization of skills in the healthcare environment demand effective communication and teamwork to reliably deliver best patient care. Additionally, **Cho, Lee, Kim, Park and Sung (2016)** who conducted a study about " Nurse staffing level and overtime associated with patient safety, quality of care, and care left undone in hospitals: a cross-sectional study" suggested that ensuring appropriate nurse staffing and working hours is important

to improve the quality and safety of care and to reduce care left undone in hospitals.

Finally, This finding is supported by **Stimpfel, Djukic, Brewer and Kovner (2019)** who conducted a study about " Common predictors of nurse-reported quality of care and patient safety" who indicated that magnet hospital offering significantly better work environments and patient outcomes is better improved including lower mortality rates, fewer medication errors, less post-surgical treatment for general surgery and orthopedics, and fewer falls and pressure ulcers.

## **5. Conclusion:**

The present study concluded that nearly three quarters of staff nurses had a high perception level toward magnet hospital. The majority of staff nurses had a high perception level regarding patient safety goals. Moreover, there was a statistical significant positive correlation between total staff nurses perception toward magnet hospital and patient safety goals.



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knowledge and skills regarding patient safety in their working area.

## 6. Recommendations

### **Nursing level:**

- ❖ Hospital should provide adequate resources required to sustain work environment improvement strategies such as adequate staffing and budget for training nursing staff.
- ❖ Giving nurses the chance to function in an autonomous manner that makes innovation and creativity flourish side by side with accountability.
- ❖ Encouraging all members of the nursing profession to contribute to the development of a hospital policy that supports a professional work environment.
- ❖ Using a checklist or other tools to verify preoperatively the correct site, correct procedure, and correct patient and that all documents and equipment needed are on hand, correct, and functional

### **Educational level:**

- ❖ Nursing staff should have opportunities for continuing education, especially training which is evidence-based.
- ❖ Developing a manual about patient safety goals for nurses to update their

### **Research level:**

Further studies are recommended as following:

- ❖ Investigating which kind of work-place cultures and management can enhance the patient safety competence of health care staff.
- ❖ Studies are required that focus on the specific safety knowledge and skills areas required by different nursing levels like head nurses and staff nurses.
- ❖ Assessing the working conditions of nurses with respect to hospital criteria in other sample groups.

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