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# A Comparative Study on Factors Influencing Patient Safety Culture among Staff Nurses

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***Abstract:*** *Safety is a significant part of quality in health care settings; the health care organizations should continually have the attention on improving the safety of their services, while establishing the culture of safety.* ***Aim:*** *to compare factors influencing patient safety culture among staff nurses.* ***Research Design:*** *A comparative descriptive design was used.* ***Setting:*** *Minia University Hospital and Minia General Hospital.* ***Sample:*** *one hundred staff nurses working in critical care units.* ***Tool:*** *Hospital Survey on Patient Safety Culture questionnaire.* ***Results****: the mean score of patient safety culture categories between Minia University Hospital and Minia General Hospital was nearly the same, with no statistically significant differences; except hospital management support for patient safety was higher among nurses who were working in Minia General Hospital (8.5 ± 2.9) than those working in Minia University Hospital (7.2 ± 2.5) P – value .026.* ***Conclusion:*** *organization commitment, employee empowerment, management support, error reporting system, and reward system were the majority factors influencing patient safety culture among nurses working in the Minia General Hospital.*

***Keywords****: Factors influencing, Patient safety culture, Staff Nurses*

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## I. Introduction

The health care organizations should always have the attention to patient safety in order to improve the safety of their services because safety is considered a decisive component of quality in health care settings; with the avowal of establishing a safety culture [(1)]. The main health care organizations as: National Patient Safety Foundation (NPSF), the WHO, the Institute for Health Care Improvement (IHI), and the Joint Commission International (JCI) are encouraging organizations who provide healthcare to promote and enhance the safety culture, which can be a dynamic strategy for safety prospective improvement [(2)].

Patient safety was defined by the WHO (2017) as "the prevention of errors and adverse effects to patients associated with health care" [(3)]. Each member of the healthcare multidisciplinary team has to do his/her best and use all efforts to ensure patient safety. Thus, every team member have to reduce and prohibit errors and lessen the hazards of unintended outcomes or consequences through being able to realize situations that have possible harm. Reducing the danger of damage when supporting and providing care for the patient and exercising better practices to accomplish the optimal outcomes for the patient is another meaning for patient safety [(4)]. The consequences of nurses' shared values, faith, and a belief regarding patient safety is the culture of patient safety [(5)].

Many patients suffer from preventable hazards, and each year many persons die due to the medical errors during provision of the healthcare in hospitals, [(6)]. There are many popular medical errors such as: medication errors, poor infection control, poor communication, pressure or bed ulcers, surgical errors, falls, and treatment errors which must be prevented by the healthcare providers [(7, 8)].

Many attitudes and behaviors of the staff's were highly influenced by the safety cultures of organizations as: record incidents or possible mistakes, involvement in systems and liability for decisions. The error detection and reporting methods can be decreased by the penal safety cultures [(9)]. Safety culture is a serious matter for and not only for interest of the researches; because hospital managers utilize the worthy data from the research to enhance the patient safety culture in their hospital. However, health care providers are still aware that there is a culture of reprimand in their hospitals as well there is an awareness that a non-punitive safety culture for the patient is still absent in hospitals [(10, 11)].

## II. Significance of the study

The concept of patient safety plays an important role in improving the healthy environment. This concept due to the nurses vital roles as they are the frontline risk managers who provide care for patients 24

hours a day, as well as they assess and analyze their patient safety culture, controlling safety, and management activities for the patient safety which are requisite to hinder medical errors and improve patient safety.

Moreover, the developing countries have been fostered by the joint global initiative of the WHO, and the World Alliance for Patient Safety (WAPS) to start a planned effort and initiation which will support in the problem dimensions assessment. One of the most important studies in Arab countries that evaluated patient safety; and have used the Patient Safety Friendly Hospital Initiative (PSFHI) standards which is one of the WHO initiatives, which support institutions at many countries to begin a thorough patient safety program starting by the Eastern Mediterranean Regional Office of the WHO in 2007 to enhance the level of patient safety in the region

**Aim of the study**

To compare factors influencing on patient safety culture among staff nurses at Minia University Hospital and Minia General Hospital.

**Research questions**

1. What are the factors influencing patient safety categories among Minia University Hospital and Minia General Hospital?
2. Is there a difference between patient safety culture categories at Minia University Hospital and Minia General Hospital?

## III. Subjects and Methods

**Research Design**

A comparative descriptive research design was used to achieve the aim of this study.

**Setting**

The study was carried out at Minia University Hospital and Minia General Hospital Minia City, Egypt.

**Subjects**

All available staff nurses working in Critical Care Units (CCU, ER, NICU, and Dialysis Unit) at the previously mentioned hospitals, their total number was 100 nurses; (Minia University Hospital N= 49 and Minia General Hospital N= 51 staff nurses).

**Data collection tool:** Hospital Survey on Patient Safety Culture questionnaire, it included three parts:
**Part I:** personal characteristics as; gender, age, education level, marital status, work experience, and department.

**Part II: Hospital Survey on Patient Safety Culture questionnaire,** it was designed by the American Research and Healthcare Quality Agency (2004). It contain 42 items classified as 12 categories which are: frequency of event reporting (3 items), overall perceptions of patient safety (4 items), supervisor/manager expectations and actions promoting patient safety (4 items), organizational learning/continuous improvement (3 items), teamwork within units (4 items), communication openness (3 items), feedback and communication about error (3 items), non-punitive response to error (3 items), staffing (4 items), hospital management support for patient safety (3 items), teamwork across hospital units (4 items), and hospital handoffs and transitions (4 items).

**Scoring system:** responses were scored on a five point Likert scale ranging from one to five (Strongly Disagree takes 1, Disagree takes 2, neither takes 3, Agree takes 4, and strongly Agree takes 5). The overall score for each category is calculated by taking the average of the respondent's score in each category and to convert it to percent score the result is multiplied by 100.

**Part III: Factors influencing patient safety:** contain 20 items classified into 5 categories: organizational commitment (4 items), management support (6 items), reward system (3 items), error reporting system (4 items) and finally employee empowerment (3 items).

**Scoring system:** participant responses were taken on a five point Likert scale ranging from one to five: (1 for never, 2 for rarely, 3 for sometimes, 4 for frequently, and 5 for always). The overall score for each category is calculated by taking the average of the participant's score for each category and multiply it by 100 to get a percent score. If the total score was $\leq 40\%$ it is considered as low factor, if the total score range from 41 % to $\leq$ 60% it is considered as moderate factor, and finally if the total score was $\geq 61\%$ or more it is considered as high factor.

**A pilot study**:

It was done on 10% of the total participating sample (10 staff nurses). The pilot study was conducted to test the easiness of the study, the sequence of items and to measure the time required for filling the tool. No corrections were needed after the pilot study so; nurses who were included in the pilot study were included in the main study, it was done during June 2017.

**Validity and reliability:**

In order to confirm content validity of the tool; it was examined by five experts in the field of Nursing Administration Minia and Assiut Universities. Reliability of part II & III of the tool was done to ascertain reliability of tool and calculated statistically. Cronbach's alpha test was used to measure the internal consistency and it was .910 and .87 respectively.

**Ethical considerations:**

A written agreement for research conduction was obtained from the research ethics committee / Faculty of Nursing / Minia University. In this study, all the ethical issues including plagiarism cases, respondent confidentiality, participating hospitals permission were assured, respect for scientific truth and integrity, full respondent's satisfaction from completing questionnaires were considered by researchers. Authoritative permission was obtained from the Director of the participating hospitals after clarifying the aim and nature of the study. Before collecting any data and after explaining the study aim in a simple and clear manner; an informed written consent was obtained from each staff nurse. The right of each nurse to withdraw from the study at any time without giving any reason was assured. Data assured confidentiality and not for use in any other research.

**Fieldwork*:***

Each participant was interviewed individually to fill the tool which was distributed by the researchers for the data collection in their workplace. It took 15- 20 minutes for the questionnaire sheet. After the participant filled the tool, it was checked by the researchers for completeness. Data collection was done during the morning, and afternoon shifts from July to September 2017.

**Statistical analysis:**

Data entry and statistical analysis were conducted using SPSS version 20. The qualitative variables were presented using descriptive statistics in the form of frequencies and percentages, and the quantitative variables were presented using the arithmetic mean, standard deviations and diacritics. The Chi square has been used to test the relationship between two variables or quality to detect differences between two or more dimensions. The Fisher test was used to test the relationship between two variables or quality to detect differences between two or more dimensions in small samples. The correlation coefficient test was also used and was considered statistically significant at P 0.05 0.05.

## IV. Results

**Table (1)** presents that, 89.8% vs 82.4% were female in Minia University Hospital and Minia General Hospital respectively with mean age 29 & 26 years. Regarding educational level, it was observed that 57.0 % vs 70.6 % of the study sample have diploma nursing degree. Regarding marital status, it was noted that 69.4 % vs 58.8 % were married. Also, the mean years of experience in work were 8 vs 10 year.

**Table 2** demonstrates that the mean score of patient safety culture categories between Minia University Hospital and Minia General Hospitals was nearly the same with no statistically significant differences. However, the hospital management support for patient safety was higher among nurses working in Minia General Hospital (8.5 ± 2.9) than nurses working in Minia University Hospital (7.2 ± 2.5) with statistically significant differences P – value was .026.

**Table 3** shows that the mean score of factors affecting patient safety between both hospitals was near to be the same with no statistically significant differences.

**Table 4** reveals that there was no statistically significant difference between personal characteristics and total mean score of patient safety culture at Minia University Hospital and Minia General Hospital among staff nurses. However, lower score among male staff nurses than female staff nurses was found with statistically significant differences *P* – value was .029

**Table 5** reveals that there was no statistically significant difference between both hospitals; except for the levels of reward system as it was low among staff nurses (57.1%) at Minia University Hospital versus staff nurses at Minia General Hospital (31.4 %), with statistically significant difference *P* – value was 0.021.

**Table 6** demonstrates that, there was no correlation between factors affecting patient safety regarding age and years experience in Minia University Hospital; while at Minia General Hospital there was fair positive correlation between organizational commitment and years of experience r=.312.

**Table 1**: Distribution of the staff nurses according to personal characteristics

| **Personal characteristics (n = 100)** | **Minia University Hospital (n = 49)** | | **Minia General Hospital (n= 51)** | |
|---|---|---|---|---|
| | **No.** | **%** | **No.** | **%** |
| **Gender** | | | | |
| • Male | 5 | 10.2 | 9 | 17.6 |
| • Female | 44 | 89.8 | 42 | 82.4 |
| **Age / years** | | | | |
| • 20 – 30 | 36 | 73.5 | 32 | 62.7 |
| • 31 – 40 | 12 | 24.5 | 11 | 21.6 |
| • 41 – 50 | 1 | 2.0 | 8 | 15.7 |
| **Mean ± SD** | **29 ± 5.4 years** | | **26 ± 5.3 years** | |
| **Education levels** | | | | |
| • Diploma in nursing | 28 | 57.1 | 36 | 70.5 |
| • Bsc. nursing | 19 | 38.8 | 14 | 27.5 |
| • Master degree | 2 | 4.1 | 1 | 2.0 |
| **Marital status** | | | | |
| • Single | 13 | 26.5 | 17 | 33.3 |
| • Married | 34 | 69.4 | 30 | 58.8 |
| • Divorced | 2 | 4.1 | 4 | 7.9 |
| **Years of experience in current work** | | | | |
| • 1 – 10 | 28 | 57.2 | 32 | 62.7 |
| • 11 - 20 | 20 | 40.8 | 12 | 23.5 |
| • 21 - 30 | 1 | 2.0 | 6 | 11.8 |
| • 31 - 40 | 0 | 0.0 | 1 | 2.0 |
| **Mean ± SD** | **8.0 ± 6.5 years** | | **10.0 ± 8.4 years** | |

**Table 2**: The relationship between Minia University Hospital and Minia General Hospital and patient safety culture categories among staff nurses

| **Patient Safety Culture Categories (n = 100)** | **Minia University Hospital (n = 49)** | **Minia General Hospital (n= 51)** | **t** | ***P* - value** |
|---|---|---|---|---|
| • Event reporting | 8.0 ± 3.1 | 8.4 ± 3.3 | 0.714 | 0.477 NS |
| • Perceptions of patient safety | 10.9 ± 3.2 | 11.0 ± 3.5 | 0.121 | 0.904 NS |
| • Supervisor/manager expectations and actions promoting patient safety | 10.7 ± 3.4 | 11.2 ± 3.9 | 0.757 | 0.451 NS |
| • Organizational learning – continuous improvement | 8.3 ± 3.3 | 9.3 ± 3.1 | 1.697 | 0.093 NS |
| • Teamwork within unit | 10.2 ± 3.9 | 10.3 ± 4.1 | 0.168 | 0.867 NS |
| • Communication openness | 7.6 ± 2.6 | 8.6 ± 2.5 | 1.835 | 0.070 NS |
| • Feedback and communication about error | 8.1 ± 2.9 | 8.6 ± 3.2 | 0.779 | 0.438 NS |
| • Non-punitive response to error | 7.9 ± 2.7 | 8.2 ± 3.3 | 0.431 | 0.667 NS |
| • Staffing | 10.9 ± 3.0 | 10.1 ± 3.0 | 1.377 | 0.172 NS |
| • Hospital management support for patient safety | 7.2 ± 2.5 | 8.5 ± 2.9 | 2.258 | **0.026*** |
| • Teamwork across hospital units | 10.4 ± 3.2 | 10.7 ± 3.4 | 0.319 | 0.751 NS |
| • Hospital handoffs and transitions | 10.0 ± 3.1 | 10.3 ± 3.7 | 0.549 | 0.584 NS |

NS = not significance *$P$ – value ≤ 0.05

**Table 3:** The relationship between Minia University Hospital and Minia General Hospital and patient safety factors among staff nurses

| **Patient Safety Factors (n = 100)** | **Minia University Hospital (n = 49)** | **Minia General Hospital (n= 51)** | **t** | ***P* – value** |
|---|---|---|---|---|
| • **Organization commitment** | 12.2 ± 3.8 | 12.2 ± 3.1 | 0.069 | 0.945 NS |
| • **Management support** | 17.3 ± 3.9 | 16.8 ± 4.2 | 0.694 | 0.490 NS |
| • **Reward system** | 7.1 ± 3.2 | 8.2 ± 2.7 | 1.855 | 0.067 NS |
| • **Error reporting system** | 11.4 ± 4.1 | 11.1 ± 2.8 | 0.326 | 0.745 NS |
| • **Employee empowerment** | 9.2 ± 3.4 | 8.4 ± 2.1 | 1.326 | 0.188 NS |

NS = not significance

**Table 4:** The relationship between personal characteristics and total mean score of patient safety culture in Minia University Hospital and Minia General Hospital among staff nurses

| Personal characteristics (n = 100) | Total mean scores of Patient Safety Culture | | | |
|---|---|---|---|---|
| | Minia University Hospital (n = 49) | Minia General Hospital (n= 51) | F | *P* - value |
| | Mean ± SD | Mean ± SD | | |
| **Gender** | | | | |
| • Male | 83.4 ± 33.8 | 105.0 ± 24.7 | t=2.250 | 0.029* |
| • Female | 113.3 ± 27.5 | 117.1 ± 29.3 | | |
| **Age / years** | | | | |
| • 20 – 30 | 108.5 ± 30.6 | 112.7 ± 30.3 | | |
| • 31 – 40 | 113.4 ± 26.4 | 124.0 ± 31.7 | 0.790 | 0.435 NS |
| • 41 – 50 | 133.0 ± 29.3 | 112.9 ± 33.2 | | |
| **Education levels** | | | | |
| • Diploma in nursing | 114.4 ± 26.7 | 116.3 ± 31.3 | | |
| • Bsc nursing | 104.1 ± 32.7 | 113.7 ± 31.4 | 1.183 | 0.243 NS |
| • Master degree | 109.5 ± 37.5 | 99.0 ± 30.4 | | |
| **Marital status** | | | | |
| • Single | 107.9 ± 36.7 | 111.8 ± 32.3 | | |
| • Married | 109.5 ± 26.6 | 117.9 ± 30.9 | 1.063 | 0.307 NS |
| • Divorced | 136.5 ± 13.4 | 105.0 ± 34.8 | | |
| **Years of experience in current work** | | | | |
| • 1 – 10 | 109.9 ± 32.9 | 113.0 ± 29.9 | | |
| • 11 – 20 | 109.4 ± 24.9 | 117.7 ± 28.5 | 0.693 | 0.494 NS |
| • 21 – 30 | 133.0 ± .00 | 126.3 ± 42.3 | | |
| • 31 – 40 | 110.2 ± 29.3 | 87.0 ± 30.8 | | |

**Table 5**: Relations between Minia University Hospital and Ministry of Health Hospital regarding levels of factors affecting patient safety

| Factors Affecting Patient Safety (n = 100) | Minia University Hospital (n = 49) | | Minia General Hospital (n= 51) | | $X^2$ | *P* - value |
|---|---|---|---|---|---|---|
| | N. | % | N. | % | | |
| **Organization commitment** | | | | | | |
| Low | 9 | 18.3 | 11 | 21.5 | | |
| Moderate | 21 | 42.9 | 14 | 27.5 | 2.636 | .266 |
| High | 19 | 38.8 | 26 | 51.0 | | NS |
| **Management support** | | | | | | |
| Low | 4 | 8.2 | 8 | 15.7 | | |
| Moderate | 29 | 59.1 | 24 | 47.0 | Fisher | .364 |
| High | 16 | 32.7 | 19 | 37.3 | | NS |
| **Reward system** | | | | | | |
| Low | 28 | 57.1 | 16 | 31.4 | | |
| Moderate | 9 | 18.4 | 20 | 39.2 | 7.691 | .021* |
| High | 12 | 24.5 | 15 | 29.4 | | |
| **Error reporting system** | | | | | | |
| Low | 14 | 28.6 | 8 | 15.7 | | |
| Moderate | 20 | 40.8 | 26 | 51.0 | 2.477 | .286 |
| High | 15 | 30.6 | 17 | 33.3 | | NS |
| **Employee empowerment** | | | | | | |
| Low | 13 | 26.5 | 9 | 17.6 | | |
| Moderate | 18 | 36.7 | 31 | 60.8 | 5.828 | .057 |
| High | 18 | 36.7 | 11 | 21.6 | | NS |

NS = not significance *$P$ – value ≤ 0.05

**Table 6:** Correlation between Minia University Hospital and Ministry of Health Hospital regarding factors affecting patient safety with nurse's age and their years of experience

| Factors Affecting Patient Safety | Minia University Hospital | | | | Minia General Hospital | | | |
|---|---|---|---|---|---|---|---|---|
| | Age | | Years of experience | | Age | | Years of experience | |
| | r | *P* – value | r | *P* – value | r | *P* – value | r | *P* – value |
| • **Organization commitment** | 0.141 | 0.244 | 0.083 | 0.495 | 0.165 | 0.113 | **0.312** | **0.002**** |
| • **Management support** | 0.036 | 0.766 | 0.067 | 0.579 | 0.074 | 0.479 | 0.183 | 0.077 |
| • **Reward system** | 0.139 | 0.250 | 0.032 | 0.795 | 0.050 | 0.630 | 0.043 | 0.684 |
| • **Error reporting** | 0.128 | 0.289 | 0.018 | 0.883 | 0.034 | 0.748 | 0.175 | 0.092 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **system** | | | | | | | |
| • **Employee empowerment** | 0.076 | 0.531 | 0.126 | 0.298 | 0.034 | 0.746 | 0.115 | 0.268 |

** Correlation coefficient *P* – value ≤ .01

## V. Discussion

Regarding mean score of patient safety culture categories between Minia University Hospital and Minia General Hospital, it was nearly the same with no statistically significant differences; except hospital management support for patient safety. Similarly, Kiaei et al. (2016) conducted a study to assess the patient safety culture from 552 medical staffs' viewpoint; the included staff was chosen randomly as healthcare providers at Iran hospitals. They found that there were no statistically significant differences between Tehran, Alborz, and Qazin hospitals about the safety of patient culture categories [(13)]. This result in the researcher's point of view may be due to the increasing awareness among staff nurses about patient safety at both Minia General Hospital and Minia University Hospital, in order to decrease the consequences of unsafe care that is provided for patients.

This study showed that the highest mean score was for the general perception of patient safety, among Minia University Hospital and Minia General Hospital. This result was in the same line with Sarhadi et al. (2015) who pointed out that Ali Ibn Abi Taleb Hospital had the lowest score about perception of patient safety [(14)]. Also, Nekoei-Moghadam and Amiresmaili (2009) agreed with our study result in this perspective [(15)].

A higher mean score was found regarding supervisor/manager expectations among staff nurses at Minia General Hospital than Minia University Hospital staff nurses. This result was supported by Nekoei-Moghadam, miresmaili (2009) [(15)], Agharahimi et al (2011) [(16)] and Ebadi Fard Azar et al (2012) [(17)], as they found that manager and supervisor expectations and actions promoting patient safety gained moderate score for patient safety [(15-17)]. This finding is not compatible with the findings of Fajardo-Dolci et al. (2010) [(18)], Salavati et al. (2013) [(19)] and Sarhadi et al. (2015) [(14)], when they indicated in their study that the manager and supervisor in the hospital obtained the lower score regarding expectations of patient safety [(14, 18, 19)]. This result may be due to the increased follow-up from managers in Minia University Hospital to improve patient safety and provide high quality of care to patient.

Concerning mean score of patient safety culture categories, it was observed that teamwork within units had the highest mean score among staff nurses at Minia University Hospital and Minia General Hospital, with no statistically significant differences. In the same context, Kiaei et al. (2016) reported that teamwork within units was the most powerful point of safety culture for patient [(13)]. Thus, this study indicated that both hospitals have an acceptable level of patient safety.

Regarding non-punishment reaction to error, it was found that its mean score was higher among staff nurses at Minia General Hospital than Minia University Hospital Nurses. This was in line with the findings of Abdi et al (2011) [(20)], Aboul-Fotouh et al (2012) [(21)], Ebadi Fard Azar et al (2012) [(17)], Nekoui-Moghaddam and Amiresmaili (2012) [(22)], Yaghoubi-Far et al. (2013) [(23)], and Fujita et al. (2014) [(24)], when they assessed patient safety culture in health care organization for reducing medical errors and improving patient safety. Also, it was in accordance with Sarhadi et al. (2015) [(14)] and Salavati et al. (2013) [(19)]. So, mangers should consider errors as an opportunity for teaching staff how to promote patient safety.

Concerning mean score of patient safety culture categories, it was observed that staffing category showed the same result in the both hospital; this was in line with the findings of Ebadi Fard Azar et al. (2012) [(17)], Izadi et al. (2013) [(25)], Yaghoubi-Far et al. (2013) [(23)], and Sarhadi et al. (2015) [(14)], while; this result contradicted the findings of Mahfoozpour et al. (2012) [(26)].

The result of current study about the subject of teamwork across hospital units showed that the highest mean score was among Minia General Hospital than Minia University Hospital. This result contradicted with Fajardo-Dolci et al (2010) [(18)], Aboul-Fotouh et al (2012) [(21)], Mikušová et al (2012) [(27)] who observed a significant difference about this point in their studies. Also, Sarhadi et al., (2015) [(14)] presented that the lowest score in Khatam Ol Anbia and Bu Ali Hospital was regarding teamwork across these hospital units. This explained the significance of coordination and cooperation to provide patient the best care [(28)].

Regarding management support as one factor of patient safety, it was noticed that staff nurses at Minia University Hospital had high mean score of management support than staff nurses at Minia General Hospital with highest mean score among other factors. This result was in the same line with Jones et al (2007) [(29)], Baghaee et al (2012) [(30)] and Sarhadi et al. (2015) [(14)] who mentioned that management support had the higher mean score in Khatam-al-Anbiya and Ali Ibn AbiTaleb hospitals. In contrary with this result, Aboul-Fotouh et al (2012) evaluated the safety of patient culture among healthcare team at a teaching hospital in Cairo and observed that management support acquired the lowest score [(21)].

Concerning error reporting system among staff nurses, it was found that one third of the studied nurses who were working at Minia General Hospital do it; versus near to more than one quarter of nurses who were working at Minia University Hospital. In the same context, Masror et al (2012) displayed that 38.5% of nurses

report error [31]; and Salavati et al. (2013) found that 33.7% of nurses report error when they provide care to patients [19]. Also, the study that was done by Sarhadi et al. 2015 found that 27.5% of errors were reported in Khatam ol Anbia hospital, while 11.6% and 6.7% of errors occurred in Ali Ibn Abi Taleb and Bu Ali Hospital respectively. And the low frequency score for incidences means that such incidences are not reported in these hospitals [14].

Some studies showed that positive safety patient culture can be connected to the growing numbers of documenting errors [32]. Thus, it can be concluded that fear of nurses to mention their errors as well as reporting them, still found in hospitals and supervisors haven't yet developed a culture that minimize these errors. In addition, Bidgoli et al. (2011) found that staff nurses cannot declare their errors due to the fear of losing their jobs [33]. Staffs try to hide their errors as they fear to left the job in hospital, as they think that hiding errors will keep them in their positions [22]. Moreover, it must be recognized that healthcare providers reports of errors, is considered a positive advantage for safety culture in their unit of work. In fact, hospitals that provide healthcare services can increase the quality of patient safety care by reporting adverse incidences of their staffs [23].

Regarding correlation between factors affecting patient safety with staff nurses' age and their years of experience in both hospitals, there was no significant correlation between them. This result was in the same line with Alimohammadzadeh et al. (2017) who evaluated the effective factors that influence the patient safety culture as perceived by the nursing staff, and they observed that; personal factors such as age, work experience have no effect on patient safety culture as organizational commitment, management support, equipment distribution, employee empowerment, and error reporting system [34].

## VI. Conclusion

Organization commitment, employee empowerment, management support, error reporting system, and reward system, were the most significant factors influencing patient safety culture among nurses working in Minia University Hospital and Minia General Hospital.

## VII. Recommendations

1. Staff nurses commitments and empowerments of in Minia University Hospital and Minia General Hospital is to be Increased in order to increase patient safety and decrease errors by encouraging management support and development of a national agency or a unit of patient safety in Minia university Hospital and Minia General Hospital which include development and optimizing data collection and reporting systems
2. Establishment of a patient safety committee in hospitals.
3. Routine measurement of patient safety for detecting the weaknesses, taking trends in patient safety aspects and improvement planning, are practices that mostly proposed.

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