

## Creative Management among Head Nurses

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### Abstract

**Background:** Creative Management is a system of ideas, techniques and procedures applied to foster and control creativity in a group or company in order to accomplish particular objectives. **Aim:** To assess creative management levels among head nurses. **Study design:** Descriptive research design was used. **Setting:** The study was conducted at Sohag and Main Assiut Universities Hospitals. **Subjects:** 120 head nurses at two study settings 60 for each. **Tools:** One tool was used to collect data: Self-administered questionnaire sheet including two parts:-a) personal data sheet and b) Creative Management assessment scale. **Results:** The study revealed that about half of studied head nurses had very creative level at Sohag University Hospital and Main Assiut University Hospital (56.70 % and 50 %) respectively. **Conclusion:** There are positive correlations between all dimensions of creative management with statistical significant differences at Sohag and Main Assiut Universities Hospitals. There was statistical significant relation between studied head nurses creative management level and their educational qualifications at Main Assiut University Hospital. **Recommendations:** Conduct sessions about creative management culture and its impact in achieving goals at work.

**Keywords:** *Creative Management, Creativity, Head Nurses & Levels.*

### Introduction

Nursing and healthcare changes have brought new opportunities, increased diversity in nursing professions and substantial advancements in nursing education and expertise (Ali et al., 2020). Organizations aim to achieve multiple goals including as long-term survival, high profits and competitiveness. Taking into account the competition's complexity, creative management is seen as one of the main advantages of an organization (Knoff, 2019).

Scientific literature use a variety of approaches to characterize the essence and content of creative management. One approach to innovation management is creative management, which focuses primarily on developing novel product type. It addresses issues related to advances in terms of marketing and technology. The principles, techniques and types of managing the process of creativity, innovative behaviour and the personnel engaged in it are together referred to as creative management (Kuzmin et al., 2017).

Creative management uses ideas of the creativity processes and applies them to individuals, groups, organizations and cultures to increase creativity through management procedures that combine cultural symbolism, leadership orientation and staff skill. This enables the organization's tasks to be coordinated while fostering ongoing creative activity through the creativity spiral (Alzoud, 2019).

In its broadest definition, creative management is an intricate mechanism of interaction between controlling and controlled systems that strives to facilitate the creativity within the healthcare institution while achieving effective outcomes (Muzzio, 2018). Cost is correlated with enhancing present staff and recognizing their innate creativity because doing this saves the healthcare organization money and time in comparison to terminating them and hiring new staff, which would be more expensive. (Saleh & Al-Dhaafri, 2019).

Head nurses can evaluate the issues within the department in which they are employed, choose the greatest solutions, achieve the desired results and make their work more meaningful when they use creative management techniques. In order to accomplish certain hospital goals, creative management involves developing and implementing management protocols, frameworks, structures or techniques (Edwards, 2020).

The head nurse can foster a creative atmosphere in their unit, provide their employees the tools they need to be creative and publicly acknowledge creative activity after the new management procedures are fully put into place (Chase, 2020).

### Significance of the study:

Healthcare organizations face rapid changes, technological development and more challenges so, they must continually grow and improve services to

remain at the top, as advancement depends not only on tools and technology but also on staff growth. Thus, learning about creative management might be essential for handling those problems. Creative management enables head nurses to think clearly and effortlessly and incorporating both new and old methods of thinking. It also allows them to come up with ideas, answers or solutions in a variety of areas making it easier to accomplish hospital objectives (Abd-Elrhman et al., 2023). While the researcher reviewed of the literatures found that two internationally studies published in professional articles and journals, the first one titled by " Impact of the University Creative Management on the Students Enterprising Performance " reported by Muzakir et al., (2022) , second titled by " Formation of A System of Creative Management at The Enterprise " reported by Chychun et al., (2023) . Therefore the present study aimed to assess the creative management levels among head nurses.

#### **Aim of the study**

The aim of the study is to assess the levels of creative management among head nurses at Sohag and Main Assiut Universities Hospitals.

#### **Specific objectives:**

- Measure the levels of creative management among head nurses.
- Compare creative management levels among head nurses at Sohag University Hospital and Main Assiut University Hospital.

#### **Research question**

- What are the levels of creative management among head nurses in both Sohag University Hospital and Main Assiut University Hospital?
- Is there a difference about creative management levels in both Sohag University Hospital and Main Assiut University Hospital?

#### **Subject & Method**

**The methodology pursued in the conduction of the study portrayed according to the following designs**

1. Technical design.
2. Administrative design.
3. Operational design
4. Statistical design.

**Technical design:** This design include research design, setting, subjects and data collection tools.

**Research design:** The present study was carried out using a descriptive research design.

**Setting :** The current study was carried at Sohag and Main Assiut Universities Hospitals.

**Subject:** The subject of the present study was including the total number of head nurses of Sohag University Hospital (n =60) and equal number from Main Assiut

University Hospital was selected systematic randomly from total number (120) by assigning numbers to the head nurses in each department and then randomly choosing from those numbers.

#### **Data collection tool:**

The data needed for the study was collected using one tool that includes two parts:

#### **Part (1): Personal data**

It was designed to collect personal data about head nurses which included data about: age, gender, marital status, educational qualification, years of experience and residence.

#### **Part (2): Creative Management Questionnaire**

Questionnaire was developed by Tawfiq, (2009), modified by Atyat et al., (2022) and adopted by the researcher to assess head nurses' creative management. It consists of 35 items divided into seven dimensions as follow: Originality (five items), Intellectual fluency (five items), Flexibility (five items), Sensitivity to problems (five items), Maintaining direction and focus of attention (five items), Risk taking (five items) and synthesis and analysis (five items). The items were measured using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

#### **Scoring system:**

The total score of the questionnaire ranged from 35 to 175 Scores were divided into three levels: Below average creativity  $\leq 60\%$  score , Average creativity 60% - 75% score and Very creative  $\geq 75\%$  score.

#### **Administrative design**

Official approval to carry out this study was obtained through official letters that sent to the Dean of the Assiut University Faculty of Nursing, the Directors of the Sohag and Main Assiut Universities Hospitals and the Nursing Director for both Sohag and Main Assiut Universities Hospitals requesting official approval to conduct this study and gather the required data.

#### **Ethical considerations**

The study proposal was approved by Ethical Committee in the Faculty of Nursing, Assiut University. Oral and written agreement was taken from all the participants. Confidentiality of obtained data was assured and the purpose, nature and the aim of the study was explained to all participants before starting of data collection.

#### **Operational design**

The operational design included preparatory phase, pilot study and field work.

#### **Preparatory phase:**

After reviewing the available literature concerning the study topic, which took about three months from the beginning of June to the end of August 2023 to end the proposal of the study.

**Pilot study:**

A pilot study was conducted in order to evaluate the tool's clarity, the amount of time needed to collect data, the head nurses' accessibility and potential issues that might arise when collecting data. It was done on 10% of total sample of studied head nurses (n =12) working at Sohag and Main Assuit Universities Hospitals (six head nurses from each hospital). The data was gathered during the pilot study was tested for its internal consistency by alph-cronbach's test the result was creative management questionnaire was 0.901. The pilot study's head nurses were included in the study's overall sample because no modifications were made thereafter. This period took about 2 weeks.

**Field work:**

The researcher obtained data from the study participants in the work unit by giving them self-

administered questionnaire. The researcher clarified the study purpose to the participants and explained that the data will only be utilized for scientific research. Filling out the study tool took from each participant about 30 minutes. The collection of data took about two months from the beginning of November to the end of December 2023.

**Statistical design**

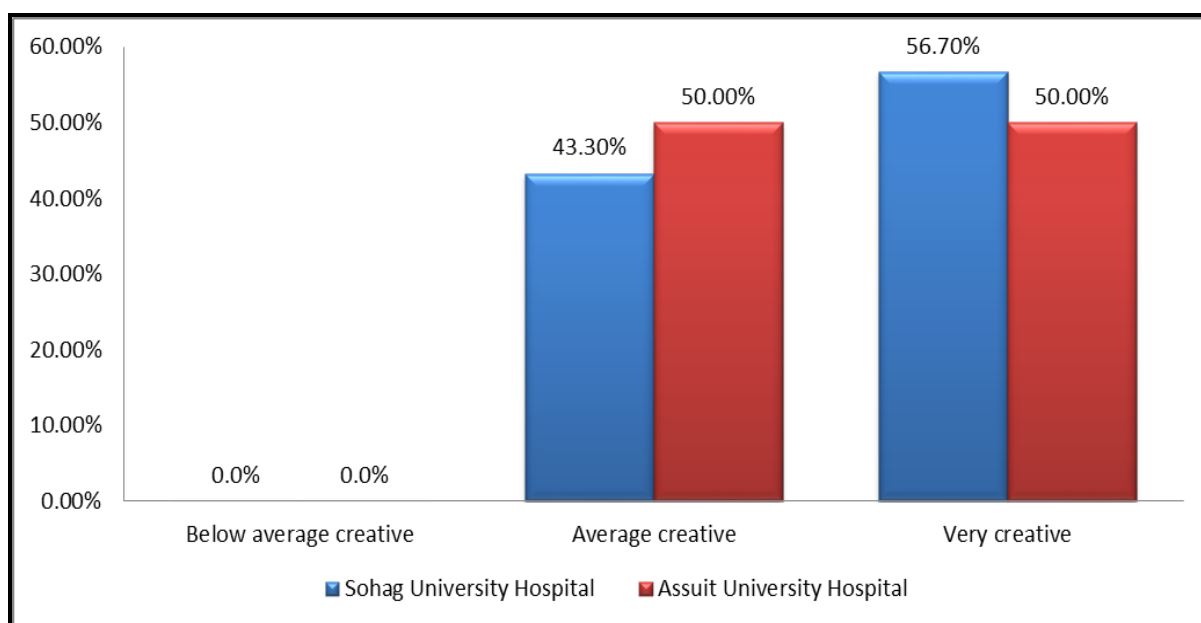
Data entry and statistically analysis were done using SPSS version 28 statistical software package for social science. Descriptive statistics were used to present the data as frequencies, percentages, means and standard deviations. The chi-square test, paired t-test and Pearson correlation matrix was used to compare quantitative variables and statistical significance was considered at  $P < 0.05$ .

**Results****Table (1): Distribution of personal data of head nurses in study sample (N= 120)**

Personal data	Sohag University Hospital (n=60)		Main Assuit University Hospital (n=60)		Total (N=120)	
	No	%	No	%	No	%
<b>Age</b>						
< 25	0	0.0	0	0	0	0.0
25<30	5	8.3	10	16.7	15	12.5
30<35	30	<b>50.0</b>	16	26.6	46	38.3
≥ 35	25	41.7	34	<b>56.7</b>	59	49.2
Mean ±SD	32.14±3.710		35.78±5.218			
<b>Gender</b>						
Male	11	18.3	10	16.7	21	17.5
Female	49	<b>81.7</b>	50	<b>83.3</b>	99	82.5
<b>Marital status</b>						
Single	5	8.3	9	15.0	14	11.7
Married	52	<b>86.7</b>	50	<b>83.3</b>	102	85.0
Widow	3	5	1	1.7	4	3.3
<b>Educational Qualifications</b>						
Bachelor Degree In Nursing	56	<b>93.3</b>	55	<b>91.7</b>	111	92.5
Master's Degree In Nursing Science	3	5.0	5	8.3	8	6.7
Doctoral Degree In Nursing Science	1	1.7	0	0	1	.8
<b>Experience years in nursing profession</b>						
< 5 years	1	1.7	3	5.0	4	3.3
5years < 10years	24	<b>40</b>	13	21.7	37	30.9
10 years < 15years	15	25.0	10	16.7	25	20.8
15years < 20years	17	28.3	29	<b>48.3</b>	46	38.3
. > 20years	3	5.0	5	8.3	8	6.7
Mean ±SD	6.21±1.43		9.631±.382			
<b>Residence</b>						
Rural	32	<b>53.3</b>	31	<b>51.7</b>	63	<b>52.5</b>
Urban	28	46.7	29	48.3	57	47.5

**Table (2): Compare mean and standard deviation scores of studied head nurses creative management levels at Sohag and Main Assuit Universities Hospitals (n =120)**

Domains	Sohag (n=60)	Assuit (n=60)	T test
	Mean± S. D	Mean± S. D	P value
Originality	20.1±2.672	18.65±3.302	2.414 <b>.019*</b>
Intellectual fluency	19.98±2.902	18.6833±.6799	2.165 <b>.034*</b>
Flexibility	20.366±2.623	<b>20.45±2.6707</b>	-.155 .877
Sensitivity to problems	19.90±2.672	19.516±2.258	.805 .424
Maintaining direction and focus of attention	20.40±2.337	19.65±2.857	1.669 .101
Risk taking	20.63±2.869	<b>20.15±2.950</b>	.825 .413
Synthesis and analysis	<b>21.00±2.107</b>	<b>20.55±.2720</b>	.825 .413
Total of creative management	142.38±12.885	137.65±13.702	1.801 .077



**Figure (1): Distribution of studied head nurses at Sohag and Main Assuit Universities Hospitals related to the total creative management levels (N =120)**

Table (3): Correlation matrix between creative management dimensions at Sohag University Hospital

Variables		Originality	Intellectual fluency	Flexibility	Sensitivity to problems	Maintaining direction and focus of attention	Risk taking	Synthesis and analysis
Originality	r. p.		.450 <b>.000**</b>	.215 .099	.172 .188	.254 .050	.416 <b>.001**</b>	.286 <b>.027*</b>
Intellectual fluency	r. p.	.450 <b>.000**</b>		.428 <b>.001**</b>	.402 <b>.001**</b>	.481 <b>.000**</b>	.571 <b>.000**</b>	.310 <b>.016*</b>
Flexibility	r. p.	.215 .099	.428 <b>.001**</b>		.569 <b>.000**</b>	.327 <b>.011*</b>	.574 <b>.000**</b>	.506 <b>.000**</b>
Sensitivity to problems	r. p.	.172 .188	.402 <b>.001**</b>	.569 <b>.000**</b>		.576 <b>.000**</b>	.402 <b>.001**</b>	.460 <b>.000**</b>
Maintaining direction and focus of attention	r. p.	.254 .050	.481 <b>.000**</b>	.327 <b>.011*</b>	.576 <b>.000**</b>		.802 <b>.003*</b>	.361 <b>.005*</b>
Risk taking	r. p.	.416 <b>.001**</b>	.571 <b>.000**</b>	.574 <b>.000**</b>	.402 <b>.001**</b>	.802 <b>.003*</b>		.589 .688
Synthesis and analysis	r. p.	.286 <b>.027*</b>	.310 <b>.016*</b>	.506 <b>.000**</b>	.460 <b>.000**</b>	.361 <b>.005*</b>	.589 .688	

(\*) statistically significant at  $p < 0.05$ (\*\*) high statistically significant at  $p \leq 0.01$ 

Table (4): Correlation matrix between creative management dimensions at Main Assiut University hospital

Variables		Originality	Intellectual fluency	Flexibility	Sensitivity to problems	Maintaining direction and focus of attention	Risk taking	Synthesis and analysis
Originality	r. p.		.500 <b>.000**</b>	.427 <b>.001**</b>	.327 <b>.011*</b>	.389 <b>.002*</b>	.247 .057	.247 .057
Intellectual fluency	r. p.	.500 <b>.000**</b>		.373 <b>.003*</b>	.354 <b>.005*</b>	.171 .190	.359 <b>.005*</b>	.162 .217
Flexibility	r. p.	.427 <b>.001**</b>	.373 <b>.003*</b>		.644 <b>.000**</b>	.396 <b>.002*</b>	.497 <b>.000**</b>	.468 <b>.000**</b>
Sensitivity to problems	r. p.	.327 <b>.011*</b>	.354 <b>.005*</b>	.644 <b>.000**</b>		.443 <b>.000**</b>	.293 <b>.023*</b>	.445 <b>.000**</b>
Maintaining direction and focus of attention	r. p.	.389 <b>.002*</b>	.171 .190	.396 <b>.002*</b>	.443 <b>.000**</b>		.211 .105	.533 <b>.000**</b>
Risk taking	r. p.	.247 .057	.359 <b>.005*</b>	.497 <b>.000**</b>	.293 <b>.023*</b>	.211 .105		.549 <b>.000**</b>
Synthesis and analysis	r. p.	.247 .057	.162 .217	.468 <b>.000**</b>	.445 <b>.000**</b>	.533 <b>.000**</b>	.549 <b>.000**</b>	

(\*) statistically significant at  $p < 0.05$ (\*\*) high statistically significant at  $p \leq 0.01$

**Table (5): Relation between the studied head nurses creative management level and their personal data (N=120)**

Personal data	Sohag University Hospital				P.value X2	Main Assuit University Hospital				P.value X2
	Average creativity		Very creativity			Average creativity		Very creativity		
	No	%	No	%		No	%	No	%	
<b>Age</b>										
< 25	0	0.0	0.0	0.0	4.916 .086	0	0.0	0.0	0.0	1.431 .698
25<30	0	0.0	5	8.3		4	6.7	6	10.0	
30<35	11	18.3	19	31.7		6	10	10	16.7	
≥ 35	10	16.7	15	25.0		18	30	16	26.7	
<b>Gender</b>										
Male	4	6.7	7	11.7	.266	6	10.0	4	6.7	.480
Female	22	36.7	27	45.0	.606	24	40.0	26	43.3	.488
<b>Marital status</b>										
Single	1	1.7	4	6.7	4.267 .118	2	3.3	7	11.7	1.862 .394
Married	25	41.7	27	45.0		29	48.3	21	35.0	
Widow	3	5.0	0	0.0		1	1.7	0	0.0	
<b>Educational Qualifications</b>										
Bachelor Degree In Nursing	26	43.3	30	50.0	--	25	41.7	30	50.0	6.259 <sup>a</sup> .044*
Master's Degree In Nursing Science	0	0	3	5.0		1	1.7	4	6.7	
Doctoral Degree In Nursing Science	0	0	1	1.7		0	0	0	0.0	
<b>Experience years in nursing profession</b>										
< 5 years	1	1.7	0	0.0	1.272 .529	3	5.0	0	0.0	3.170 .530
5years < 10years	10	16.7	14	23.3		4	6.7	9	15.0	
10 years < 15years	5	8.3	10	16.7		3	5.0	7	11.7	
15years < 20years	4	6.7	13	21.7		11	18.3	18	30.0	
. > 20years	2	3.3	1	1.7		3	5.0	2	3.3	
No	13	21.7	14	23.3		18	30.0	11	18.3	
<b>Residence</b>										
Rural	15	25.0	17	28.3	.350	18	30.0	13	21.7	1.669
Urban	11	18.3	17	28.3	.554	12	20.0	17	28.3	.196

**Table (1):** Shows that at Sohag and Main Assuit Universities Hospitals high percentage of studied head nurses had bachelor degree in nursing (93.3% and 91.7%) respectively, are female (81.7% and 83.3%) respectively and married (86.7% and 83.3%) respectively. Also about half of them living in rural (53.3% and 51.7%) respectively. At Sohag University Hospital, half of studied head nurses aged 30 years to less than 35 years old (50%) and having experience 5 years to less than 10 years (40%). At Main Assuit University Hospital, about half of studied head nurses aged 35 years and more (56.7%) and having experience 15 years to less than 20 years (48.3%).

**Table (2):** Shows that at Sohag University Hospital the highest mean scores are Synthesis and analysis domain (21.00±2.107). At Main Assuit University Hospital the highest mean scores are flexibility, risk taking and synthesis and analysis domains (20.45±2.6707, 20.15±2.950 and 20.55±.2720)

respectively. There are statistical significant differences between mean scores related originality and intellectual fluency domains at both Hospitals at p value <0.05.

**Figure (1):** Shows that at Sohag University Hospital more than one third of studied head nurses had Average creative level (43.30%). While at Main Assuit University Hospital about half of studied head nurses had Average creative level (50%). Also at Sohag University Hospital more than half of studied head nurses had very creative level (56.70%). While at Main Assuit University Hospital half of studied head nurses had very creative level (50%).

**Table (3):** Shows that at Sohag University Hospital there are positive correlations between all dimensions of creative management with statistical significant differences (p<001\*\*, p< 0.05\*).

**Table (4):** Shows that at Main Assuit University Hospital there were positive correlations between all

dimensions of creative management with statistical significant differences ( $p \leq 0.001^{**}$ ,  $p < 0.05^{*}$ ).

**Table (5):** Shows that at Sohag University Hospital, there are no statistical significant relation between studied head nurses creative management level and their personal data. While at Main Assuit University Hospital there are statistical significant relation between studied head nurses creative management level and their educational qualifications ( $p < 0.05^{*}$ ).

## Discussion

The only thing that is permanent in this world is change. The nature of the business environment is dynamic. The global environment, client preferences, technology breakthroughs and government restrictions are all constantly changing. These changes may have an impact on a company's ability to expand or even survive. One of the key instruments that might improve an organization's managerial performance is creative management. Undoubtedly, effective creative management is a powerful tool for achieving organizational success. Since creativity has a major influence on an organization's ability to survive and expand, it is imperative that they manage and foster it with care (**Al Homud, 2021**).

The current study was carried with the aim to assess creative management levels among head nurses at Sohag and Main Assiut Universities Hospitals. From the findings of the current study, it showed that at both Sohag and Main Assiut Universities Hospitals high percentage of studied head nurses had bachelor degree in nursing, are female and married (**Table, 1**). These findings were consistent with **Abd-Elrhaman et al., (2023)**, they reported in their study on head nurses that over two-thirds of head nurses have a Bachelor of Nursing Science degree, all of them are female and the majority of head nurses are married.

Regarding age at Sohag University Hospital, half of studied head nurses aged 30 years to less than 35 years old. While at Main Assiut University Hospital more than half of studied head nurses aged 35 years and more (**Table, 1**). These findings were consistent with **Saleh, (2013)**, they reported that more than half of the nursing leaders at Assiut University Hospital were aged  $>30$  years. These findings were inconsistent with **Aly et al, (2016)**, they reported in their study on head nurses in Alexandria University Hospitals' critical care units that the minority of them were aged 55-  $< 57$  years.

With respect to years of experience at Sohag University Hospital about two fifth of studied head nurses had experience 5 years to less than 10 years. On the other hand at Main Assiut University Hospital more than two fifth of studied head nurses had experience 15 years to less than 20 years (**Table,1**). These findings were inconsistent with **Al sayaydeh,**

**(2015)**, who reported in their study of leaders that more than third of them have less than 5 years of experience.

From the findings of the present study, it showed that at Sohag University Hospital the highest mean scores were Synthesis and analysis domain. Also at Main Assiut University Hospital the highest mean scores were flexibility, risk taking and synthesis and analysis domains (**Table, 2**). This result may be due to head nurses constantly face challenges, needing to analyze situations, identify root causes and synthesize solutions that consider various factors like patient needs, staff capabilities and resource constraints. Also flexibility allows head nurses to consider different approaches and be open to taking calculated risks when presented with new information or unforeseen circumstances.

These findings were partially consistent with **Awad et al, (2021)**, who reported that highest mean percentage of study participants was given to the ability analysis, originality and risk taking. Moreover this result was partially consistent with **Fariwan, (2022)** who found that the highest mean scores domain was flexibility. This result was inconsistent with **Al-Ajmi, (2021)**, who reported that fluency had the the highest mean scores .

From the findings of the current study, it showed that there are statistical significant differences between mean scores related originality and intellectual fluency domains at both Hospitals (**Table, 2**). These findings were consistent with **Sadana et al, (2021)**, they found that there is strong significant correlations between fluency and originality.

From the findings of the current study that at Sohag and Main Assiut Universities Hospitals about half of studied head nurses had very creative level (**Figure, 1**). This result may be due to head nurses feel support and freedom from the hospital leaders and administration which encourage them to be creative in both hospitals. These findings were inconsistent with **El-Demerdash & Mostafa, (2018)** they reported that more than half of head nurses had moderate level of creativity.

From the findings of the current study, it showed that there are positive correlations between all dimensions of creative management with statistical significant differences at Sohag and Main Assiut Universities Hospitals (**Table 3, 4**). These findings were partially consistent with **Sadana et al, (2021)** they found that there is strong significant correlations between fluency, flexibility and originality.

From the findings of the current study, it showed that at Sohag University Hospital there are no statistical significant relation between studied head nurses creative management level and their personal data (**Table, 5**). These findings were consistent with

**Thomas et al, (2023)** they reported that there was no significant relationship between demographic factors and creativity.

From the findings of the present study it showed that at Main Assiut University Hospital there are statistical significant relation between studied head nurses creative management level and their educational qualifications (**Table, 5**). These findings were inconsistent with **Thomas et al, (2023)**, they reported that there was no significant relationship between educational qualification and creativity.

### Conclusions

**In the light of the study results, the following conclusions can be drawn:**

About half of studied head nurses had very creative level at Sohag and Main Assiut Universities Hospitals. There were positive correlations between all dimensions of creative management with statistical significant differences at Sohag and Main Assiut Universities Hospitals. At Main Assiut University Hospital there was statistical significant relation between studied head nurses creative management level and their educational qualifications.

### Recommendations

**In the light of the study results, the following recommendations are suggested:**

- Conduct sessions about creative management culture and its impact in achieving goals at work.
- Establish a prize for head nurses' creative management with the idea and philosophy centred on the head nurses' ability for creative problem-solving and their use of new management techniques.

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