Nurse leaders' behaviors, and its effect on Nurses creativity at Main Assiut University Hospital.

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Abstract: Creativity is important to any organization's innovation. Everyone has substation creative ability. Leader's who wish to foster creative process, and be able to facilitate this process in others. This study was ***aimed*** to assess the effect of Nurse Leaders' behaviors on nurses' creativity at Main Assiut University Hospital. The ***study subject*** consists of **(48)** nurse leaders **and (328)** staff nurses who worked in medical, surgical, and ICUs units. Data collected through personal interview by using the demographic data sheet, leader's behaviors questionnaire, and creativity questionnaire, the data collection took about four months. Reliability was high more than 0.9 for all tools. ***Results*** showed that; Nurses' leaders were below average and average level of creativity. Meanwhile staff nurses were below average level of creativity. There is a negative correlation between leaders behavior with creativity. In the light of the finding, the researcher recommended that, Provide atmosphere for values and trends to motivate creativity among leaders, provide psychological support to motivate nurses to use their opinions and suggestion without fear, provide training programs to develop leaders and nurses' knowledge which helps in improving their creativity, and provide incentives for creative activities.

1.Introduction

Creativity is the mental work or action involved in bringing something new it's a key to growth of both health care and nursing, **(Greenwood, 2000).** Leaders who wish to foster creative thinking and change must recognize the importance of all the facets of creativity. They must understand their own and others' creative abilities. **(West, & Hirst, 2003;** and **Tierney, & Farmer, 2004)**

In order for the nurses to be creative, it is necessary that the organization provide a supportive process and environment, **(Politis, 2005).** Reasons why people are motivated to be creative: need for novel, varied, and complex stimulation, needs to communicate ideas and values, and need to solve problems, **(Kuroda *et al.,* 2003).** Everyone has substantial creative ability, creativity has too often been suppressed through education, but it is still there and can be reawakened. Often, all that's needed to be creative is to make a commitment to creativity and to take the time for it, **(Carson *et al.,* 2005).**

"Creative" refers to novel products of value. **(Runco, 2004)**. In order to be creative, you need to be able to view things in new ways or from a different perspective. Among other things, you need to be able to generate new possibilities or new alternatives. Tests of creativity measure not only the number of alternatives that nurses can generate but the

uniqueness of those alternatives. The ability to generate alternatives or to see things uniquely does not occur by change; it is linked to other, more fundamental qualities of thinking, such as flexibility, tolerance of ambiguity or unpredictability, and the enjoyment of things heretofore unknown, **(Miller, & Cohen, 2001;** and **Kuroda *et al.,* 2003).**

Leaders may provide various types of feedback cues to subordinates related to their creative action affecting their decisions to creatively engage, **(Shalley&Gilson, 2004**). These feedback cues also serve as priming mechanisms that communicate leaders' expectations and beliefs about subordinates' identities, **(Lord & Brown, 2004).**

Leader is able to allow the creative process to evolve. He/she can encourage nurses to think creatively**.** The trends at the forefront of the competitive market within the health care industry are based upon the creativity of organizations, and it is a special talent and an important tool for survival in the 21st century **(Gillies, 1994).**

Leaders can affect creative behavior and creative performance of team members by influencing the followers' perceptions of a climate supportive for creativity and innovation, **(Gumusluoglu & Ilsev, 2009).** The leaders are the ones that make a work environment that encourages creativity. Through honest and transparent relations with co-workers,

internal characteristics of authentic leaders that are supposed to stimulate employees' creativity and innovativeness can be perceived by others, **(Amabile et al., 2004).**

Significance of the Study

There are many studies was done about leadership styles, leadership skills, and leadership roles with job satisfaction, but studies about Nurse leaders' behaviors and its effect on creativity didn't take the same interest. So, the researcher thinks to pursue this study.

Aim of study

This study aimed to assess the effect of nurse leaders' behaviors on nurses' creativity at Main Assiut University Hospital.

Study Question

Is there a relation between nurse leaders' behaviors and nurses' creativity?

2. Subjects and Method

1-Technical Design.

Involves the research design, setting, subjects and tools of data collection

A) Research Design;

The present study was a descriptive study.

B) Setting:

The study was conducted at six general surgical units, (A1, A2, B1, B2, C1, C2) with bed capacity 154; Six general medical units with bed capacity 196; and four intensive care units, (CCU, trauma ICU, postoperative ICU, and general ICU)with bed capacity 58. Main Assiut university hospital with nursing personnel n=1630 (staff nurses = 1500, and nurses managers = 130)

C) Subjects:

The present study includes all staff nurses and nurses leaders who are working in the previous mentioned units, the total study subjects were **(376)** divided as follows:

- Nurses leaders' **48** includes: (**One** nurse director; **Five** assistants' director; **Forty two** nurses leader.)
- **All staff nurses** working in the selected units (**n = 328**) distributed as follows: **80** staff nurses at general surgical units, **98** staff nurses at general medical units and **150** staff nurses at Intensive care units.

D) Data Collection Tools.

Three different tools were used to collect study data include the following:

(1) Personal Characteristics of study subjects:

Included items related to: sex, age, educational level, and years of experience in nursing, units, and data about attending training about leadership, or creativity.

(**2) Leader's Behaviors Questionnaire**

Developed by **(Stogdll, 1963)** and modified by **(Zanaty, 1994)**. It includes **40** items divided into**; 6** factors related to leaders' behaviors:

- Initiating structure 7 items.
- Tolerance of freedom **6** items.
- Consideration **8** items.
- Production emphasis **8** items.
- Predictive accuracy **4** items.
- Persuasiveness **7** items.

To measure leaders' behavior among nurse director and the entire nurses leader. The response to each item was on a five points Likert scale ranging from; (**5 = always occurred; 4 = sometimes; 3 = don't know; 2 = rarely; and 1= not occurred).** Cut point at 60% or more consider high behavior, and less than 60% consider low behavior

(3) Creativity Questionnaire:

Developed by (**Field & House, 1995)** and modified by (**Moslem, 2002)**. It includes **40** items related to creativity, the response to each item was on a three points Likert scale ranging from; (Agree, Undecided, and Disagree). To measure the level of creativity among nurse leaders and staff nurses.

Creativity scores measured as, (95 - 116 exceptionally creative, 65 - 94 very creative, 40 - 64 above average, 20 - 39 average, 10- 19 below average, below 10 non creative).

2-Administrative Design;

- An official approval to carry out the study was obtained from responsible persons in the hospital (hospital director, nursing director, and heads of departments).

3-Operational Design:

A) Preparatory Phase.

After reviewing the available literatures concerning to the topic of the study, modification of the study tools was done and then Arabic translation and validity was done. This phase took about three months from *January, to March, 2010*.

B) Pilot Study:

A pilot study was fulfilled to test feasibility, understandability, and reliability of the study tools. It was carried out on (4) Nurses leaders' and (28) staff nurses selected from units not included in the study. Data collected from the pilot study were analyzed, reviewed and used in making necessary modifications prior to the final application of the study tools. The duration of this phase took about one month through *April 2010*. The reliability of the study tools clarified in this table.

Reliability of the study tools

Scale	No. of items	Crombach alpha coefficient
Leader's Behaviors	40	0.90
Creativity	40	0.89

C) Filed Work:

After ensuring the clarity of the tools, the actual data collection from nurse leaders' and staff nurses by personal interview with each participant in the study was carried out. Each interview took about 15 mints, started with clarifying the aim of study and interpretation if needed. The whole duration of data collection took about *four months from May to August, (2010).*

4- Statistical Design;
Statistical Analysis:

Data entry and statistical analysis were done using SPSS 14.0 statistical software package. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations for quantitative variables. Qualitative categorical variables were compared using chi-square test. Whenever the expected values in one or more of the cells in a 2x2 tables was less than 5, Fisher exact test was used instead. In larger than 2x2 cross-tables, no test could be applied whenever the expected value in 10% or more of the cells was less than 5. Pearson correlation analysis was used for assessment of the inter-relationships among quantitative variables. Statistical significance was considered at p-value <0.05.

3. Results

The aim of this study was assessing the effect of Nurse Leaders' behaviors on nurses' creativity at Main Assiut University Hospital.

Table 1. Personal characteristics of the study sample

Personal characteristics	Nurse leaders (n=48)		Staff nurses (n=328)	
	Frequency	Percent	Frequency	Percent
Age (years):				
<25	-		103	31.4
25-	22	45.8	97	29.6
30+	26	**54.2**	128	**39.0**
Range	24.0-49.0		19.0-59.0	
mean±SD	31.9±5.9		29.0±7.2	
Sex:				
Male	-		40	12.2
Female	48	100	288	**87.8**
Unit:				
General units (Medical & Surgical)	19	39.6	143	43.6
Intensive care units	29	**60.4**	185	**56.4**
Educational qualification:				
Secondary diploma	-	-	292	**89**
Specialty diploma	-	-	17	5.2
Technical institute diploma	-	-	19	5.8
Bachelor	41	**85.4**	-	-
Postgraduate (master – doctoral)	7	14.6	-	-
Years of Experience:				
<5	-		59	18.0
5-	32	**66.7**	132	40.2
10+	16	33.3	137	**41.8**
Range	3.0-21.0		0.0-40.0	
mean±SD	9.5±5.0		10.3±6.6	
Attendance of training courses at work about:				
Creativity	-	-	-	-
Leadership	**12**	**25.0**	12	3.7

Personnel characteristics of the study sample. *Table (1)* describes that, for nurses leaders, majority of them have bachelor degree of nursing science (85.4%), with less than five years of experience in their job (66.7%), aged more than 30 years old (54.2%), working at intensive care units (60.4%), and only quarter of them (25%) attended training course at work about leadership

On the same line for staff nurses, the majority of them were female (87.8%), have secondary technical school of nursing (81.2%), with years of experience ranged from 5 to more than 10 years in their job (40.2% and 41.8%) respectively, (39%) were more than 3o years old, (56.4%) working at intensive care units, only (3.7%) having attended training course at work about leadership.

Figure *(1);* show that, leaders' behavior of the study sample. *(For nurse director)* as perceived by nurse leaders, was high for all items (83%), ranged from (91.5%) for Production emphasis to (72.3%) for Consideration. While *(for head nurses)* as perceived by staff nurses, were about two third of staff nurses perceptions were head nurses have a high leaders behavior for all items (65.2%), ranged from (80.5%) for Production emphasis to (63.1%) for Predictive accuracy.
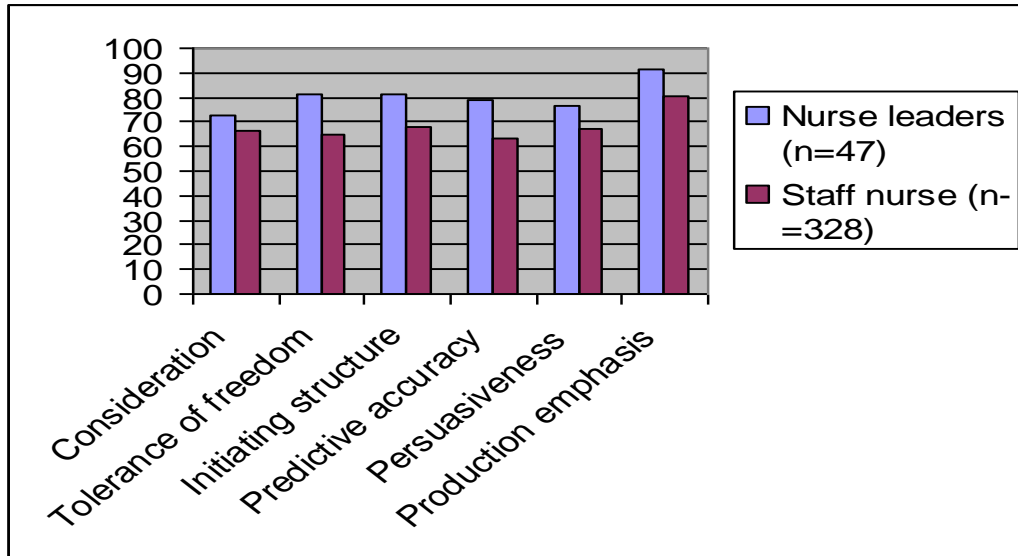

Figure 1. Leaders' behavior (for nurse director) as perceived by nurse leaders and (for head nurses) as perceived by staff nurses

Figure *(2)* declares that, Creativity among study sample. For nurse leaders' slightly more than half of them (54.2%) have average level of creativity, while (43.8%) have below average. But staff nurses more than three quarters of them (79.3%) below average and (3.4%) non creative.
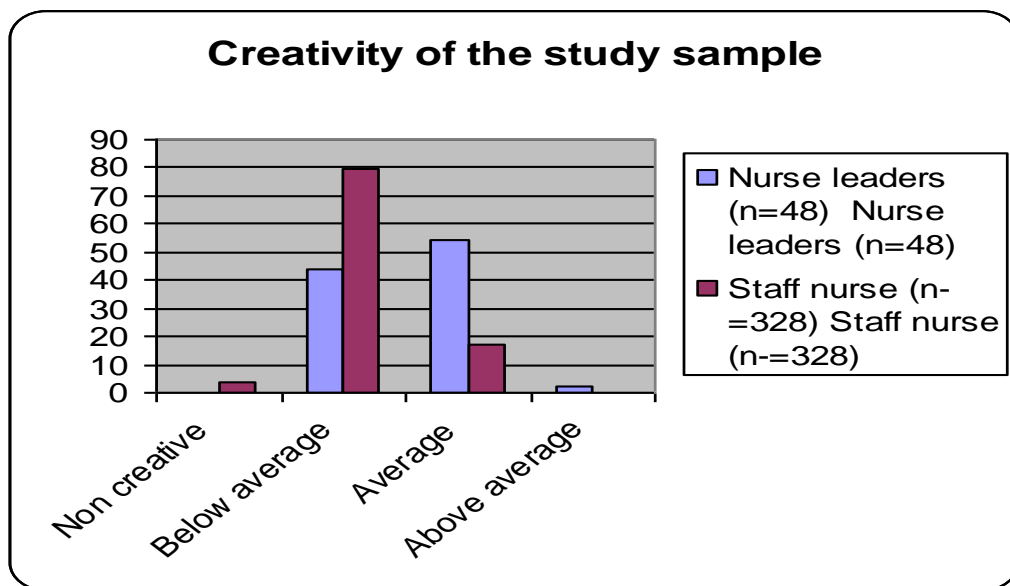

Figure 2. Creativity of the study sample

Table 2. Relation between leaders' behaviors and creativity, of the study sample

Items	Nurse leaders (n=48)						X^2	p-value	Staff nurses (n=328)						X^2	p-value
	Leaders behaviors								Leaders behaviors							
	High		Low						High		Low					
	No.	%	No.	%					No.	%	No.	%				
Creativity:																
Non creative									8	3.7	3	2.6				
Below average	2	5.0	1	12.5					175	81.8	85	74.6			3.72	0.16
Average/ Above average	38	95.0	7	87.5			Fisher	0.91	31	14.5	26	22.8				

(*) Statistically significant at $p<0.01$

Relation between leader behaviors with creativity of the study sample, *Table (2);* indicates that, among nurse leaders. *Most of them* (95%) and (87,5%) have average/+ level of creativity *in both* *high and low level of leaders behavior*. On the other hand *most of staff nurses in both high and low leader behaviors* have below average level of creativity(81.8%, and 74.6%) respectively.

Table 3. Correlation between creativity, and leaders' behaviors among nurses leader and staff nurses personal characteristics

Study variable	Pearson correlation coefficient					
	Staff nurses (n=328)			Nurse leaders' (n=48)		
	Age	Qualification[#]	Experience	Age	Qualification[#]	Experience
Creativity	.091	.149[**]	.062	.016	-.005	.017
Leaders behaviors	.035	-.097	.074			

(**) Statistically significant at p<0.01   (*) Statistically significant at p<0.05
(#) Spearman rank correlation

Correlation between creativity, and leaders behavior among staff nurses and nurses' leaders' personnel characteristics *Table (3);* shows that there were positive correlation in both nurses leaders and staff nurses among age and experience with creativity (.016, & .017) and (.091, & .062) respectively. Meanwhile there were negative correlation in leader behaviors qualification with creativity (-.005), and staff nurses qualification with leader behaviors (-.097).

4. Discussion

Leaders not only serve as a behavioral role models for creative ideas, but they also serve as important means for enhancing creative behaviors and modifying attitudes that are beneficial to creative activities, **(Oke *et al.,* 2009).**

The present study was implemented in an attempt to assess the effect of Nurse Leaders' behaviors on nurses' creativity at Main Assiut University Hospital. The study subject was **(48)** nurse leaders and **(328)** staff nurses. **The highest percent of the nurses' leaders** have Bachelor degree of nursing science; about two third of them have more than five years of experience in their job; slightly more than half of them aged more than 30 years old, and

working at intensive care units. The result showed that, only about one quarter of them attended training course about leadership.

On the same line for *staff nurses* most of them were females, have diploma of secondary nursing school; more than one third of them have more than ten years of experience in their job, and their age more than 30 years old; slightly more than half of them working at intensive care units. The majority of them not attended any training courses at work, **table *(1).***

Ongoing the present study result clarified that, leaders behavior of nurse director (top management) as prescribed by nurse leaders (middle and lower level of management), and head nurses as perceived by staff nurses, were high. Both nurse leaders and staff nurses agreed that production emphasis is the highest percent of leader behaviors. While, the lowest percent goes to consideration item for nurse leaders and predictive accuracy item for staff nurses **figure *(1).***

This result may be due to nurses feeling that, nurse leaders are not a friend to them, she doesn't Looks to satisfy nurses, and does not follow the work of others, also may be due to that, nurse leaders put her concentration on work only and first priority for her was to achieve the work rather than to take care of the staff, and this done with routine manner through

nursing administration and hospital policies but not by concentration on efficiency of work. This result was in disagreement with **Darvish & Farzance-dokht, (2011),** in their study; "*studying the effect of leader-member exchange in creating energy and creativity at workplace*": a case study at Alzahera University. Who reported that Leaders should create high level of communication and concerned with staff through behaviors and performance, because concentration on work has a negative attitude which effect on organization growth and creativity.

Regards to creativity among nurse leaders and staff nurses the finding of present study revealed that there is slightly more than half of the leaders were in average level of creativity, and slightly less than half of them were below average level of creativity**.** Meanwhile more than three quarters of staff nurses were below average level of creativity *(**Figure 2).**

As regards relation between creativity among nurse leaders as perceived by top, second, and first level of nursing management, and nurse leaders as perceived by staff nurses *(**Table 2).** Slightly more than half of nurses leader have average/+ level of creativity. *Meanwhile* slightly less than half of staff nurses were both non/below and average/+ levels of creativity. This results agreed with **(Faizanul, 2010):** in his study *Main Title: Creativity is the key to Success; who* reported that*, most people are not ready to change there thinking because they don't have the courage to take risk and they hesitate to change themselves. The main factor is they are afraid of losing the things they have already got and they believe that god has already given them so much, then why they should try different things and take risk **(Schuler, 2003)**. *Moreover* in our schools did not accustom to learn how to become creative person in all stages of education.

As regards to correlation between nurse leaders behaviors, and creativity among staff nurses and nurse leaders personal characteristics; there was high statistical significance relations among creativity with nurses' qualification, *(**Table 3).** This may be attributed to that, staff nurses were young in age, have less experiences and they need more training about creativity. This result in agreement with **(Zanaty (1994);** and **Farmer and Tierney, 2007),** who reported that, leaders must have creative capabilities and characteristics to guide subordinates.

In this table there was positive correlation in both nurses leaders and staff nurses among age and experience with creativity, meanwhile there was negative correlation in leader behaviors and with qualification, , *(**Table 3).** This result may be attributed to that, leaders may be afraid of any mistake or blame for their behavior, which make them did not give the staff nurses a chance to be creative or give innovative

ideas for updating their job, beside lack of training courses about good leader behaviors, that enhance creativity and organizational change. *Moreover* in our schools did not accustom to learn how to become creative person in all stages of education.

This result was in disagreement with **Amabile's et al. (2004),** in their study; *"Leader behaviors and the work environment for creativity."* and **Farmer &Tierney, (2007)** in their study; *"Leader Behavior, Creativity, and the Creative Self-Concept,"* at USA, they found that there is a positive relation between leader behaviors and creativity. Creative climate requires a certain quality of leaders who serve this climate.

Conclusion(s)
In the light of the study results, the following conclusions can be drawn:

- Both nurse leaders and staff nurses had high level of leaders' behaviors. Nurse leaders had an average level of creativity while staff nurses had below average level of creativity.
- Both nurse leaders and staff nurses had a negative correlation between leaders' behaviors with creativity.

Recommendation(s)
Consequently based upon such results, the following recommendations were desirable*:*
Encourage nurses' creative abilities by;
- Mustn't provide easy solution for nurses to give them chance to think and use their personal abilities.
- Respect individual differences between nurses and encourage the persons who have limited creative abilities.
- Encourage creative activities by provide incentives and focus on immediate reward for the creative work to motivate the staff to continue.
- Build on the creative thinking early from a child school age to encourage creativity all over the life.

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