

Relationship between Work Environment and Innovative Behavior among Staff Nurses

Shimaa Abd El-fattah Mahgoub *, Mona Mostafa Shazly **, Samah
Mohammed El-sayed ***

* *B.Sc. In Nursing Faculty of Nursing – Beni-sueif University* ** *Professor of Nursing Administration, Faculty of Nursing* *** *Lecturer of Nursing Administration, - Ain Shams University*

Abstract

Background: An attractive and supportive work environment is critical to innovation. Work environment have numerous properties that may influence both physical and mental wellbeing. **Aim of the study:** This study aimed tot assess the relationship between work environment and innovative behavior among staff nurses . **Design:** a descriptive correlational study design was utilized. **Subjects:** the study was conducted on 203 subjects of staff nurses. **Setting:** the study was carried out at Beni-sueif university hospital. **Tools:** two tools were used to collect data: Self-administered work environment questionnaire and innovative behavior inventory. **Results:** the study revealed that, there were statistical significant relations between work environment and staff nurses' demographic characteristics regarding age and experience years. There were statistical significant relations between innovative behavior and staff nurses' demographic characteristics regarding age and qualifications. Staff nurses have a high level of agreement upon work environment along with high level of agreement upon innovative behavior. Organizational structure dimension of work environment was the highest dimension, while incentives and rewards dimension of work environment was the lowest. **Conclusion:** There was a statistically significant correlation between work environment and innovative behavior. **Recommendations:** staff nurses need to :contribute and reinforce leading practices procedures done for innovation development .Integrate informatics and technology into nursing practices. Further research can be conducted to identify strategies that helping nursing staff to develop innovative behavior.

Key words: work environment, innovative behavior, staff nurses.

Introduction

Healthcare organizations put extensive dependence on nurses' work. Nursing work becomes more and more challenged as a result of the lacking in patients' care and rising international public awareness. Nurses are recognized as leaders in patient care. Nursing includes the implementation of goal-based interventions which focused on improving patients' conditions or comfort, as well as, coordinate and inspire care teams to assist patients' well-being . Proficient innovative nurses, with teamwork, and decision-making abilities are now required because of initiating new technologies in nursing practice. **(Francis, 2013).**

Healthcare organizations that would like to stay competitive and viable need to pay thorough attention to build an environment beneficial for the progress and implementation of valuable and constructive ideas of their staff. From the preceding, it is obvious that innovation is of top notch significance to the survival of any agency. Healthcare organization

therefore have to deliver attention to all those domains which are of direct and crucial importance to develop possibilities wherein the organizations' staff can appropriately understand as positive to their potential to innovate **(Obiora & Okpu, 2015).**

Creating the proper environment in which nurses can develop to their fullest potential and providing a conducive work environment is essential for enhancing nurse satisfaction and innovation, and increasing their performance. Furthermore, researchers and academics must be aware about the role that work environment plays in shaping the level of organizational performance, especially in developing countries. Managing for motivation and performance improvement is essential for work organizations, and providing a supportive work environment is directly related to nurses' motivation and performance **(Potočník & Anderson 2016).**

Innovation is to an oversized extent considered a social and communicative method, and input

from people probably improves the creation of novel and precious ideas additionally within the early period of idea production and development Innovative Work Behavior is defined as the intentional behavior of an individual to introduce or apply new ideas to their assigned work role (Bergendahl & Magnusson, 2015).

There are two factors that motivate people to engage in innovative behavior. First, people tend to engage in innovative activities if these activities will enhance their expected positive image inside the organization (expected image gain). Second, people tend to avoid innovative activities if these activities do not conform to the organization or group norms. Besides, innovation is a risky behavior, no guarantee of success, when people involve in innovative behavior, the future consequences maybe detrimental to their image (expected image risks) (Anderson et al., 2014)

Aim of the study

This study was aimed to assess the relationship between work environment and innovative behavior among staff nurses.

Research question :

Is there a relationship between work environment and innovative behavior among staff nurses?

Subjects and Methods

Technical design:

The technical design includes a description of research design, setting of the study, subjects, and tools for data collection.

Research design

A descriptive correlational, design was used in carrying out this study.

Setting

This study was conducted at Beni-sueif university hospital . Beni-sueif university hospital consists of seven main departments and units providing multi services.

Subjects

The subjects of this study consisted of staff nurses who are working at a for mentioned study setting. A sample of 203 staff nurses out of 430 staff nurses working full time and they are responsible for providing direct nursing care activities to the patients , , using the sample size equation based on (Thompson,2010).

$$n = N \times p(1-p)$$

$$[[N-1 \times (d^2+z^2)] + p(1-p)]$$

Data collection tools

Collection of data of this study was achieved by using **two tools namely** :Self-administered work environment questionnaire and Innovative Behavior Inventory.

1. Self-administered work environment questionnaire:

This tool aimed at assessing the work environment. It consisted of two parts:

Part I: demographic data: this part was intended to collect data related to the characteristics of the study subjects as (age, sex, years of experience)

Part II: work environment questionnaire: consisted of (35) items distributed into seven dimensions of work environment, Developed by (**Saad, 2011**): Organizational structure, systems and instructions, Training, Participation in decision-making, Incentives and Rewards, Technology

Working conditions each have (5) items. **Scoring system:** the participant's responses were measured and graded based on a 5-degree Likert Scale. Where 1 stands for “strongly disagree” and 5 stands for “strongly agree”. Scores of items were summed-up and the total divided by the number of the items, giving a mean score of the part] the subjects were considered to perceiving organizational justice if the percent score was 60% or more and not perceiving organizational justice if the score percent less than 60%.

2. Innovative Behavior Inventory: this tool aimed at assessing the level of Innovation which will be measured using scale developed by (**Lukes & Stephan,2017**). Innovative Behavior Inventory: Consisted of 22 items and it will be categorized under 7 main dimensions, which are: Idea generation (3 items), Idea search (3 items), Idea communication (4 items), Implementation starting activities (3 items), Involving others (3 items), Overcoming obstacles (3 items), Innovation outputs (3 items).

Scoring system: the participant responses are graded based on a 5-degree Likert scale. Range from

never to always these respectively scored 1-5 this is applicable to all items. The scores of items were summed-up and the total divided by the number of the items, giving a mean score of the part, the staff was considered to be committed if the percent score was 60% or more and not committed if the score percent less than 60%.

II. Operational design

The operational design involves the preparatory phase, pilot study and field work

Preparatory phase

The researcher reviewed current and past, local and international related literature and knowledge aspects of the study using books, articles, journals, and internet to modify tools for data collection.

Pilot study:

A pilot study was conducted on (20) participants of the study subjects. They represent 10% of the study sample in the study setting. The aim of the pilot study was to examine the applicability and clarity of the tool and to identify obstacles and problems that may be encountered during data collection. Additionally, to estimate the time needed to fill it out. The time subjects took to fill in the questionnaire sheet was 15-20

minutes. These participants were excluded from the main study sample

Validity of the tools : Once the data collection tool was prepared in its preliminary form ,it was translated into Arabic language and distributed to a jury group of five experts specialized in nursing administration from three different universities [Ain Shams, Cairo and Beni suief]. one assistant professor from faculty of nursing Ain Shams University , one assistant professor and professor from faculty of nursing Cairo University and two assistants professor from faculty of nursing Beni suief University. Jury group reviewed the tools to judge its clarity, comprehensiveness and accuracy. Their opinions were elicited regarding the tools format, layout, and parts. According to juries recommendations the researcher modified items of the tools to be clear, accurate and comprehensive.

Reliability of tools: The reliability of the data collection tool scales was assessed using internal consistency method. The two scales showed good reliability as shown by their Cronbach's alpha coefficient Work environment questionnaire (0.926) & Innovative behavior inventory (0.935).

.Field work:

Before starting data collection, a written official permission was obtained from the responsible authorities in the study hospital. This was based on a letter sent from the Dean of the Faculty of Nursing, Ain –Shams University, explaining the aim and process of the study .

The researcher met with each staff nurse , explained to her/him the aim of the study and invited her/him to participate . Those who gave their consent were given the self- administered questionnaires to fill it. They were instructed in how to complete the form. Data were collected from the subjects in their work- areas and the researcher was present all the time to respond to any queries then the tools were collected and checked for completeness. The fieldwork was done over two months during the period from 15/5/2018 to 15/7/2018.

Ethical consideration:

Prior to the study conduction, ethical approval was obtained from scientific research and ethical committee of faculty of nursing –Ain Shams University. In addition, an oral informed consent obtained from

every participant before collecting any data . The researcher explained the aim of the study to participants eligible to be included in the study and invited them to participate. They assured that confidentiality would be guaranteed, and informed that they can withdraw from the study at any time without penalty.

III. Administrative design:

Official approval to conduct the study was obtained from the hospital director . This was done through an official letter from the dean of the faculty of nursing- Ain Shams University explaining the purpose and procedure of the study.

IV.Statistical design

Data entry and statistical analysis were done using SPSS 20.0 statistical software package. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations and medians for quantitative variables. Cronbach's alpha coefficient was calculated to assess the reliability of the tools through their internal consistency. Qualitative categorical variables were compared using chi-square test. Whenever the expected values in one or more of the cells in a 2x2 tables were 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 .

Statistical significance was considered at p-value<0.05.

Spearman rank correlation was used for assessment of the inter-relationships among quantitative variables and ranked ones. In order to identify the independent predictors of commitment and justice scores, multiple linear regression analysis was used and analysis of variance for the full regression models done.

Results

Table 1: Socio-demographic characteristics of staff nurses in the study sample (N=203)

	Frequency	Percent
Age:		
<20	34	16.7
20-	115	56.7
30+	54	26.6
Gender:		
Male	47	23.2
Female	156	76.8
Marital status:		
Married	135	66.5
Single	68	33.5
Experience years:		
<5	81	39.9
5-	45	22.2
10+	77	37.9
Nursing qualification:		
Diploma	170	83.7
Bachelor	33	16.3

Table 1 illustrates that the majority of staff nurses in the study sample were female (76.8%) with age ranged from 20-29 years (56.7%) and married (66.5%). the highest percentage of them had nursing diploma (83.7%) and had experience <5 years (39.9%).

Table 2: Distribution of the staff nurses in the study sample by work environment (N=203)

Department	Frequency	Percent
Department:		
ICU	64	31.5
Hemodialysis	10	5
Surgical	42	20.7
Pediatrics	27	13.3
Emergency	18	8.7
Medical	32	15.8
Obstetrics	10	5

Table 2 shows that the highest percentage of staff nurses in the study sample were from intensive care units (31.5%). on the other hand, the lowest percentage was from hemodialysis and obstetrics unit (5%).

Table 3: Total agreement upon work environment among staff nurses in the study sample (N=203)

High agree (60%+) upon work environment:	Frequency	Percent
Organizational structure	169	83.3
Systems and instructions	143	70.4
Training	157	77.3
Participation in decision-making	151	74.4
Incentives and rewards	114	56.2
Technology	133	65.5
Working conditions	135	66.5
Total agreement upon work environment:		
High	150	73.9
Low	53	26.1

Table 3 demonstrates that the highest agreement upon the dimensions of work environment was upon the dimension "organizational structure" (83.3%) followed by "training" (77.3%). Conversely, the dimension "incentives and rewards" had the least agreement (56.2%). Regarding agreement upon work environment (73.9%) of the study sample view the work environment as positive while (26.1%) of them view work environment as negative environment.

Table 4: Total innovative behavior among staff nurses in the study sample (N=203)

High (60%+) innovative behavior:	Frequency	Percent
Idea generation	127	62.6
Idea search	130	64.0
Idea communication	127	62.6
Implementation starting activities	112	55.2
Involving others	130	64.0
Overcoming obstacles	129	63.5
Innovation outputs	138	68.0
Total innovative behavior:		
High	124	61.1
Low	79	38.9

Table 4 demonstrates that the highest agreement upon the dimensions of staff nurses innovative behavior was upon the dimension "Innovation outputs" (68%) followed by "Idea search & Involving others" (64%). Conversely, the dimension "Implementation starting activities" had the least agreement (55.2%). Regarding staff nurses innovative behavior (61.1%) of the study sample have high innovative behavior while (38.9%) of them have low innovative behavior.

Table 5: Relations between staff nurses' agreement upon work environment and their characteristics

Characteristics	Work environment				X ² test	p-value
	High		Low			
	No.	%	No.	%		
Department:						
ICU	45	70.3	19	29.7	--	--
Hemodialysis	8	80.0	2	20.0		
Surgical	37	88.1	5	11.9		
Pediatrics	26	96.3	1	3.7		
Emergency	8	44.4	10	55.6		
Medical	18	56.2	14	43.8		
Obstetrics	8	80.0	2	20.0		
Age:						
<20	23	67.6	11	32.4	3.51	0.17
20-	81	70.4	34	29.6		
30+	45	83.3	9	16.7		
Gender:						
Male	25	53.1	22	46.9	12.89	<0.001*
Female	125	80.1	31	19.9		
Marital status:						
Married	110	81.5	25	18.5	9.62	0.002*
Single	41	60.3	27	39.7		
Experience years:						
<5	46	56.8	35	43.2	22.73	<0.001*
5-	34	75.6	11	24.4		
10+	70	90.9	7	9.1		
Nursing qualification:						
Diploma	139	81.2	31	18.8	35.53	<0.001*
Bachelor	10	30.3	23	69.7		

(*) Statistically significant at $p < 0.05$

(--) Test result not valid

Table 5: illustrates the relations between staff nurses' agreement upon work environment and their characteristics. There were statistical significant relations between staff nurses agreement upon work environment and their gender ($p < 0.001$), marital status ($p = 0.002$), experience ($p < 0.001$) & qualifications ($p < 0.001$).

Table 6: Relations between staff nurses' agreement upon innovative behavior and their characteristics

	Innovative behavior				X ² test	p-value
	High		Low			
	No.	%	No.	%		
Department:						
ICU	49	76.6	15	23.4	--	--
Hemodialysis	7	70.0	3	30.0		
Surgical	19	45.2	23	54.8		
Pediatrics	5	18.5	22	81.5		
Emergency	11	61.1	7	38.9		
Medical	28	87.5	4	12.5		
Obstetrics	7	70.0	3	30.0		
Age:						
<20	24	71.6	10	28.4	11.80	0.003*
20-	79	68.7	36	31.3		
30+	22	40.7	32	59.3		
Gender:						
Male	30	63.8	17	36.2	0.22	0.64
Female	94	60.3	62	39.7		
Marital status:						
Married	81	60.0	54	40.0	0.11	0.74
Single	43	62.2	25	37.8		
Experience years:						
<5	68	83.9	13	16.1	31.45	<0.001*
5-	28	62.2	17	37.8		
10+	29	37.7	48	62.3		
Nursing qualification:						
Diploma	95	55.9	75	44.1	12.53	<0.001*
Bachelor	30	90.9	3	9.1		

(*) Statistically significant at $p < 0.05$

(--) Test result not valid

Regarding staff nurses innovative behavior, table 6 shows the presence of statistically significant relations between staff nurses innovative behavior and their age ($p = 0.003$), experience ($p < 0.001$) and qualification ($p < 0.001$).

Table 7: Relations between staff nurses' total work environment and innovative behavior

	Innovative behavior				X ² test	p-value
	High		Low			
	No.	%	No.	%		
Total agreement upon work environment:						
High	80	53.3	70	46.7	13.42	<0.001*
Low	44	83.0	9	17.0		

(*Statistically significant at p<0.05)

Regarding the relationship between staff nurses agreement upon work environment and their innovative behavior. Table 7 clarifies that there was statistical significant relation between work environment and innovative behavior (p<0.001). As showed in the table as staff nurse agreement upon work environment increased their innovative behavior decreased and vice versa.

Table 8: Best fitting multiple linear regression model for the work environment agreement score

	Unstandardized Coefficients		Standardized Coefficients	t-test	p-value	95% Confidence Interval for B	
	B	Std. Error				Lower	Upper
Constant	69.98	5.14		13.606	<0.001	59.83	80.12
Female gender	5.58	2.06	0.19	2.708	0.007	1.51	9.64
Bachelor degree	-9.99	2.39	-0.29	-4.180	<0.001	-14.71	-5.28
Innovative score	-0.19	0.05	-0.25	-3.764	<0.001	-0.30	-0.09

Model ANOVA: F=21.72, p<0.001

Variables entered and excluded: age, experience, marital status

In multivariate analysis, table 8 demonstrates that the statistically significant independent positive predictor of staff nurses scores of agreement upon work environment was their female gender. Conversely, the negative independent predictors were their bachelor degree and innovative score. The model explains 26% in the variations in work environment agreement score.

Table 9: Best fitting multiple linear regression model for the innovative behavior score

	Unstandardized Coefficients		Standardized Coefficients	t-test	p-value	95% Confidence Interval for B	
	B	Std. Error				Lower	Upper
Constant	76.08	2.49		30.612	<0.001	71.18	80.98
Experience years	-5.94	1.07	-0.38	-5.558	<0.001	-8.04	-3.83

r-square=0.14

Model ANOVA: F=30.90, p<0.001

Variables entered and excluded: age, gender, qualification, marital status

As for staff nurses innovative behavior score, table 9 displays that their experience years was the statistically significant independent negative predictor of their innovative behavior score. The model explains only 14% of variation in innovative behavior score.

Discussion

Rapid changes in the global competition as well as increasing demands for services from the consumers make innovation a necessity for any organization to survive. The first phase of the innovation process is creating fresh ideas useful for the organization, so-called creativity. Creativity must be distinguished from innovation. Creativity refers to development of ideas that meet fresh, original, relevant, and useful criteria. On the other hand, innovation manifests the successful implementation of the

new ideas by the organization (**Paramitha & Indartib, 2014**).

The result of the present study indicated that the majority of the study sample were female and had technical degree. This result is not consistent with **Paramithaa and Indarti (2014)** who found that Majority of the respondents were male and had bachelor degree. This result is an expected finding since all nurses in Egypt in the old generation few decades ago were females as this profession was exclusively feminine in our country as in many other countries in the region and in the third world. Moreover, the bachelor

degree in nursing wasn't very popular until recently. Hence, the study sample is a true reflection of the nurses working in our community .

The current study assessed the staff nurses agreement upon work environment dimensions in the study setting. The finding indicates that the work environment dimension of organizational structure was the highest among them. This result indicates the clarity of roles and responsibilities within the organization this can be explained with that the organization is administered by high-qualified team with high educational and practical qualifications. This result is in the same line with study conducted by **AL-Meshwet (2011)** who found that organizational structure dimension was the highest dimension among work environment dimensions.

The results of the current study reveals that work environment dimension of incentives and rewards was the lowest among work environment dimensions. In contrast, of this finding **Baumann (2011)** study reflected that rewards had the highest mean score of organizational

characteristics among the studied registered nurses. This result is in the same line with study conducted by **AL-Meshwet (2011)** who found that incentives and rewards dimension was the lowest dimension among work environment dimensions.

This finding could be explained as study sample consisted of staff nurses who working at a governmental hospital. The rewards and incentives in these organizations usually were unsatisfactory in comparison with private organizations. This result follow the normal expectation and act as an un supportive factor for the innovative behavior.

In general, the study findings indicate a high level of staff nurses agreement upon work environment. This result is in accordance with **Hayes et al., (2015)** who found that the work environment for hemodialysis nurses was perceived positively and. This finding can be explained with that staff nurses viewing the work environment they work in as a positive work environment.

Current study in one hand indicates that the highest dimension

of innovative behavior perceived by staff nurses was Innovation outputs dimension. In contrast to this result a study conducted by (**kamel &Aref, 2017**) at Benha university hospital who found that idea championing and idea implementation was the highest mean score between innovative behavior dimensions. This could be referred to this organization gives their employees a space of freedom for innovation and help them implement innovative ideas.

In the other hand, implementation starting activities dimension came last in ranking between innovative work behavior dimensions. This result could be explained with that most employees can give great innovative ideas but had no plans for implementation of this ideas and don't take the appropriate measures to put this ideas in action .

The present study result was in-line with **Carmeli, A., Meitar, R., & Weisberg, J. (2006)**. They described innovative behavior as a the process of bringing new problem solving and transfer ideas into use. Innovative behavior in the workplace

begins by an employee identifying a work-based problem. This is followed by the development of new ideas and solutions for the problem/s. They added, the final step in the innovative process is to develop support for the new ideas and solutions, so they become embedded within the organization. This may be related to nurses at different care units usually dealing with patients who require complex assessments and interventions this enhance their ability to think critically and introduce innovative solutions.

As a general, the current study results revealed that more than half of staff nurses had high agreement upon innovative behavior. This result was in the same vein with **Jung&Yoon, (2018)** whose study that was conducted at Republic of Korea revealed that Participants showed a moderate level of innovative behavior. This finding may be the result of personal characteristics of staff nurses that support innovative behavior beside organization characteristics that give employees the opportunity to show their innovative abilities.

Regarding the relation between work environment and innovative

behavior. The current study results showed that there was a statistically significant correlation between work environment and innovative behavior. This answer our research question "is there is a relationship between work environment and innovative behavior". The present findings supported by **Dul and Ceylan (2014)** who emphasized that work environment promotes employee innovative behavior. As well as, **Sameer & Ohly (2017)** showed a significant correlation between work environment's characteristics and participants' innovation behavior.

This promotes this study assumption that positive work environment can promotes innovative behavior and vice versa. As work environment communications and procedures are clear and with continuous training beside adequate rewards and incentives all this can promotes employees innovative behavior.

Present study finding revealed that there were statistical significant relations between staff nurses' innovation behavior as a total with all work environment dimensions. This result supported by **Abo Gad, (2018)** who recommended that organizations need to build positive work practice environment (supportive management, openness to novel ideas, promoting thinking) to enhance nursing staff innovative behavior.

Female gender was knowing as a positive predictor of

work environment. This means that female staff nurses tend to have a more agreement upon work environment than male staff nurses. Female staff nurses tend to be more consistent with work environment than male staff nurses, as male staff nurses tend to take the challenge and change in their work environment than female. Conversely, a study conducted by **mudallali et al., (2011)** revealed that no relations founded between work environment and staff nurses gender.

Conversely, bachelor degree identified as a negative predictor of work environment, bachelor staff nurses have more tendency to comment on work environment dimensions and engage in trials to improve their work environment. The higher education was staff nurses the more tendency for innovation and change resulting in low level of agreement upon work environment. This study finding contrasted with **Oswald, (2012)** who indicated that there were no statistically significant correlation between work environment and educational degree .

In addition, innovative behavior score identified as a negative predictor for work environment. This means as innovative behavior score increased work environment score decreased and vice versa. Innovative employees always not fully satisfied with the work environment, for this reason they tend to innovate in their work environment for better working

conditions. This result not consistent with **Abukhait, (2012)** whose study indicate that there was a positive correlation between work environment and innovative behavior.

Regarding innovative behavior negative predictor, the current study indicated that experience was innovative behavior negative predictor. Innovative behavior decreased with increased staff nurses experience. May be this result due to most staff nurses with high experience was technical and diploma and with increased experience and age the youth enthusiasm and power of youth decreased. Usually experience increased with increased age and increased experience lead to employees accustoms their work environment. On the contrary, **Baumann (2011)** who found that there was no significant correlation between years of experience and nurses' innovation behavior.

Conclusion

- Staff nurses have a high level of agreement upon work environment along with high level of agreement upon innovative behavior. Organizational structure dimension of work environment was the highest dimension, while incentives and rewards dimension of work environment was the lowest.
- There were statistical significant relations between work environment and staff nurses' demographic characteristics regarding age and

experience years. There were statistical significant relations between innovative behavior and staff nurses' demographic characteristics regarding age and qualifications. There was a statistically significant correlation between work environment and innovative behavior.

Recommendations

- Based on the current study findings the following recommendations are proposed:
- Nursing staff and nursing management need to work together to provide an atmosphere that is conducive to innovation.

Nursing profession need to:

- Provide funding for supporting nursing leadership professional development programs.
- Rethink on the basic education of nursing leaders to provide the hospital with effective leaders that they work through a constructive way with their teams.
- Encourage innovation as a job requirement.

Nurse Managers need to:

- Design and implement in-service educational programs to enhance staff nurses' innovative development.

Further research can be conducted to:

- Identify strategies that helping nursing staff to develop innovation behavior.

References

Abo Gad, R. A. E. S. A. (2018):

The Influence of Nurse Managers' Leadership Practices and Organizational Characteristics on Staff Nurses' Innovation: A Comparative Study, *IOSR Journal of Nursing and Health Science, Vol7(5), PP 73-86.*

Abukhait, R. (2012): The Impact of Employee Perceptions of Organizational Work Environment and Job Satisfaction on Innovative Climate, Doctorate Dissertation, the University of Western Sydney, March 2012, Pp: 60-85.

AL-Meshwet, M. S. (2011) *The Impact of Work Environment on Managerial Innovation. An Applied Study on Saad Al-Abdullah Academy for Security Sciences in Kuwait State. Master Dissertation of Business Administration, Faculty of Business, Middle*

East University for graduate Studies, Amman.

Baumann P.K., (2011). The

relationship between individual and organizational characteristics and nurse innovation behavior. Published PhD thesis, Faculty of the University Graduate School, Indiana University.

Bergendahl, M., & Magnusson, M.

(2015). Creating ideas for innovation: Effects of organizational distance on knowledge creation processes. *Creativity and Innovation Management, 24(1), 87-101.*

Carmeli, A., Meitar, R., & Weisberg, J. (2006). Self-leadership skills and innovative behavior at work. *International Journal of Manpower, 27(1), 75-90.*

Dul, J., & Ceylan, C., (2014): The

Impact of a Creativity-supporting Work Environment on a Firm's Product Innovation Performance, *Journal of Product Innovation Management 31(6), Pp: 15-18.*

Francis, R. (2013). Report of the

Mid Staffordshire NHS Foundation Trust public

inquiry: executive summary
(Vol. 947). The Stationery
Office..

Hayes B. Douglas C. Bonner A

(2015): Work environment,
job satisfaction, stress and
burnout among
hemodialysis nurses,
Journal of Nursing
Management, J Nurs
Manag. 2015 Jul;23(5):588-
98. doi:
10.1111/jonm.12184. Epub
2013 Dec 30,
[https://www.ncbi.nlm.nih.g
ov/pubmed/24372699](https://www.ncbi.nlm.nih.gov/pubmed/24372699)

Jung, H. S., & Yoon, H. H. (2018).
Improving frontline service
employees' innovative
behavior using conflict
management in the
hospitality industry: The
mediating role of
engagement. *Tourism
Management*, 69, 498-507.

**Kamel, F., F., & Aref, M.,
A.,(2017):**Staff Nurses
Perception Toward
Organizational Culture and
Its Relation to Innovative
Work Behavior at Critical
Care Units, *American
Journal of Nursing Science*,
Volume 6, Issue 3, June
2017, Pp: 251-260 .

Lukes, M., & Stephan, U. (2017).

Measuring employee
innovation: a review of
existing scales and the

development of the
innovative behavior and
innovation support
inventories across cultures.
*International Journal of
Entrepreneurial Behavior &
Research*, 23(1), 136-158.

**Mudallali, R. H. I., Abou-Moghli,
F., & Booth, J. (2011):**
work environment and
nurses' job satisfaction on
the quality of nursing care
provided, Doctorate
Dissertation, the University
of Jordan.

Obiora, J.N. & Okpu, T. (2015).
Opportunity for innovation
and organizational
citizenship behaviour in the
nigerian hospitality
industry. *European Journal
of Hospitality and Tourism
Research*, March 2015;3(1),
pp.1-13.

Oswald, A., 2012: The Effect of
Working Environment on
Workers Performance: The
case Of Reproductive and
Child Health care providers
in Tarime district. Tanzania
Public Health. Dissertation
Muhimbili University of
Health and Allied Sciences.

Potočnik, K., & Anderson, N.

(2016): A constructively
critical review of change
and innovation-related
concepts: towards
conceptual and operational
clarity. *European Journal of*

Work and Organizational Psychology, 25(4), 481-494.

Paramitha A and Indarti N.,

(2014): Impact of the Environment Support on Creativity: Assessing the Mediating Role of Intrinsic Motivation *Procedia - Social and Behavioral Sciences* 115 (2014) =102 – 114

Saad M., (2011): The Impact of Work Environment on Managerial Innovation, Master thesis, Saad Al-

Abdullah Academy for Security Sciences in Kuwait State.

Sameer, Y., & Ohly, S. (2017):

Innovative Behavior of Employees: A model of

Antecedents and Consequences, A Deeper Look at Psychological and Organizational Factors, Faculty of Management Technology.