

The Relationship between Nurse's Innovative Work Behavior and Their Job Satisfaction

Shaimaa Salah Abo Shama.*, Gehan Mohamed Ahmad **

Clinical Instructor at Nursing Administration Department *, Professor of Nursing Administration at Nursing Administration Department ** Faculty of Nursing- Helwan University

Abstract: Innovative work behavior is not part of the nurse's job. It is extra-role behavior, which refers to open behavior that not specify in the job description for attempts to organization benefit. Aim: The study aimed to explore the relationship between nurse's innovative work behavior and their Job satisfaction. Design: A descriptive, correlation design was utilized in carrying out this study. Subject: Composed of (97) nurses who were available at all available department at Badr University Hospital it is a Helwan University Hospital during the time of data collection in the selected hospital and who were present at the time of the study with at least one years of experience in the present work place. Tools: Personal characteristics' sheet of the nurses to assess demographic characteristics of the nurses, nurse's innovative work behavior questionnaire and job satisfaction questionnaire. Results: 81.46% the studied participants' had high level of innovative behavior and 69.08% the studied participants' satisfied toward work. Moreover, there was a highly significant statistical difference with weak positive correlations between total innovative behavior and total job satisfaction of the studied nurses and there was a highly significant moderate positive effect from job satisfaction on innovative behavior. Conclusion: there were statistical significant differences between job title, department of work and monthly income of the studied nurses and their total innovative behavior respectively and there was a statistical significant difference between monthly income of the studied nurses and their total job satisfaction. In addition, there were a highly significant statistical differences with weak positive correlations between nurses support , nurses encourage , nurses vision rewarding , monitoring , work communication and total job satisfaction of the studied nurses. Recommendation: Conduct workshops on innovative thinking and design strategies to improve and facilitate innovation behavior among nurses and Creating an appropriate work environment and facilitating knowledge sharing among nurses will encourage a more productive and constructive innovative environment.

Keywords: Innovative Work Behavior, Job Satisfaction, Nurses.

I. INTRODUCTION

Nurses play an important role in the healthcare system and in achieving high quality patient outcomes that have been recognized worldwide. Nowadays nurses spend a lot of time in contact and communicating with patients (Anderson, Potonik, & Zhou, 2014).

Innovative behavior as recognition of a problem, generation of ideas, mobilization of support, and realization of the ideas related to the initial problem. Employees see a problem in their daily job, and they begin thinking about it. They will consider this problem, so they need to have enough time and discretion to be able to consider the problem (Janssen, 2016).

Nurses have the knowledge identifying solve work environment issues through innovative solutions. Understanding employee innovation can be of value to the nursing profession to help solve some of the problems present within health care. Nursing innovation behavior can help improve quality of health care, improve the working environment of nurses, and attract new groups of prospective workers to health care (Amo, 2016).

Innovations by nurses within healthcare are important in addressing some of the problems present within the current system. As competition increases in the marketplace, innovative ideas of workers have become a highly valued resource. It appears evident that the challenges nursing faces, including work environment, and nurse education, will escalate in the future requiring new and innovative solutions. An innovative culture could lead to greater interest in the nursing profession by non-traditional candidates who are attracted by innovation opportunities (Needleman, 2015).

Innovation includes the implementation of ideas; that reflect the two-stage process: idea generation and application behavior. To initiate innovations, employees can generate ideas by engaging in behaviors in some activities to explore opportunities, identify performance gaps or produce solutions for problems and the social environment can also influence on both level and frequency of creative behavior (McClean, 2015).

Employee job satisfaction and employee innovation are both drivers of sustainability in organizations (Meyerding, 2019). As mentioned earlier, creativity refers to idea generation, whereas innovation demonstrates idea implementation; therefore, creativity is often considered the initial step of innovation (Aristovnik, Tomazevi, Seljak, 2014).

Job satisfaction as positive feelings based on an assessment of one's job experiences, when individuals have good feelings in an organization, they are more likely to display creative behavior. Employee job satisfaction affects organizational innovation. That is, when employees have good feelings at their work, the chance of having more positive expectancies and beliefs is likely to be higher, which leads to greater performance and beneficial outcomes such as innovation (Dedahanov, Bozorov, 2019).

Significance of the Study

Innovation plays a critical role in today's highly competitive and technologically advanced world. Successful organizations create competitive advantage in the organization through individuals' innovations (Afsar, Cheema & Bin, 2018). Recently, global nursing experts have been strongly encouraging nurses to be follow creativity and innovation in nursing to improve nursing outcome. Nurse's creativity plays a significant role in health and well-being. In most health systems, nurses are providing up to 80% of the primary health care therefore, they are basically positioned to provide creative solutions for present and future global health challenge (Isfahani et al., 2015).

II. AIM OF THE STUDY

The aim of this study was to explore the relationship between nurse's innovative work behavior and their Job satisfaction through:

1. Assess nurses' innovative work behaviors.
2. Assess levels of nurses' job satisfaction.
3. Explore the relationship between nurse's innovative work behaviors and their job satisfaction.

Research Questions:

1. What are nurses' innovative work behaviors?
2. What are the levels of job satisfaction?
3. What is the relationship between nurses' innovative work behaviors and their job satisfaction?

I. Research Design

Descriptive correlational research design was used in this study.

Study Settings

The study was conducted at all available department at badr university hospital it is a helwan university hospital It consists of one building consists of two floors, the first floor consisting of (The director's office, the nursing office, intensive care unit, cardiac care unit, the emergency department, the dialysis unit, the outpatient clinics, the sterilization department, the radiology department, and the kitchen). The second floor consists of (The Operations department,

neonatal intensive care unit, the inpatient department, Admission department and Human resource management department).

Subjects

Subject of this study were composed of all nurses who were available at the time of data collection in the selected hospital and who were present at the time of the study with at least one years of experience in the present work place. The total number of nurses who were available and accepted to participate in the study was (N=97).

Tool of data collection

Two tools was used to collect necessary data:

- **Tool (1): Nurses Innovative Work Behavior Questionnaire:** It was consist of two parts:

Part 1: personal characteristics' sheet of the nurses: This was include (Age , Gender, years of experience, marital status, nursing qualifications, job title and hospital department).

Part 2: Nurses Innovative Work Behavior Questionnaire: It was developed by (**Harby, 2016**) and was modified by the investigator to assess nurses innovative work behavior. It was include 7 dimensions consists of 35 questions to assess nurses innovative work behavior which include (nurse support for innovation 9 items, nurse encourages new scientific information diffusion 11 items, nurse vision 5 items, rewarding 3 items, performance evaluation 2 items, monitoring 2 items and work communication 3 items).

Responses: It was measured on three-point Likert scale. The rating scale range from always to never in which (1) mean never, (2) sometimes, (3) always.

Tool (2): Job Satisfaction Questionnaire: It was developed by (**Dyer & Quine , 2006**) . It will be modified by the investigator to assess job satisfaction regarding work behavior. It was include three factors consists of 22 questions: (staffing plan schedules 7 items, organizational policy 7 items, and motivational system 8 items).

Responses: It was measured on three-point Likert scale. The rating scale range from 1 to 3 in which (1) dissatisfaction, (2) satisfaction, (3) high satisfaction.

Scoring system:

- Low: less than 50
- Moderate: 50 to less than 65
- Slightly high: 65 to less than 80
- High: 80 and more

II. Operational Design

The operational design includes: preparatory phase, Validity, reliability, pilot study and field work.

Preparatory Phase

It include reviewing of past, current, national and international related literature and theoretical knowledge of various aspects of the study using books, articles, internet, periodicals, journals and magazines to develop tools for data collection.

Content validity:

Content validity was conducted to determine the appropriateness of each item to be included in the questionnaire sheet. Minor modifications were done based on jury recommendation

Reliability

Cronbach's Alpha is commonly used as a measure of the internal consistency (reliability). The coefficient normally ranges between 0 and 1. The closer it is to 1.0, the greater the internal consistency of the items in the scale. Nunnally (1978) has indicated (0.7) to be an acceptable reliability coefficient but lower coefficient (0.6) are sometimes used in the literature.

Pilot Study

It was conducted on 10% of the study subject of the total sample size (97). The aim of the pilot study was to determine clarity, understanding applicability, clarity and the efficiency of the tools. It also aims to ensure simplicity, relevance and feasibility of conduction of the study tools. In addition, it helps in estimation of the time needed to collect data and determine the obstacles. Accordingly, the tools will be modified and the nurses participated in it was included from the study sample.

Fieldwork

Data was collected upon two months started at the beginning of July 2020 and completed by the end of August 2020. After securing all official permissions the investigator met nursing director of the hospital to explain the aim of the study to gain the approval of data collection.

Before beginning to collect data from the study subject the investigator introduced herself to them, explained the aim of the study, and informed them that their information will be treated confidential and will be used only for the purpose of the research: additionally, each participant was notified about the right to accept or refuse to participate in the study and obtaining a verbal consent to participate in this study.

The investigator presented 2hours/ day, 3days/ week to collect data. Data was collected in the morning, afternoon shifts and subjects full filling the questionnaire in the presence of the investigator to ascertain all questions were answered. The time required for each nurse to fill the questionnaire was estimated to be 15-20 minutes. The investigator checked completed of each filled sheet after the nurse completed it to ensure the absence of any missing data

III. Administrative Design

To carry out the study, official letters issued from the Faculty of Nursing Helwan University explain the aim of the study to the director of badr University hospital either medical or nursing for obtaining the permission for data collection. Individual oral consent was also obtained from each nurse in the study

Ethical Consideration

Prior study conduction, approval was obtained from the scientific research ethical committee in faculty of nursing, Helwan University.in addition, an approval was obtained from the nursing director of badr hospital.

Before starting the study. The nurses were informed about the aim of the study to explore the relationship between nurse's innovative work behavior and their Job satisfaction. They assure that anonymity and confidentiality would be guaranteed and they informed that they allowed choosing to participate or not in the study and that they have the right to withdraw from the study at any time, Ethics, values, culture and beliefs were respected and study subjects were informed about research purposes.

IV. Statistical Analysis

Data entry and quantitative data analysis were done by the IBM. SPSS (statistical package for the Social Sciences) software (VERSION 20.2) numerical data were presented as mean and standard deviation) SD values. Qualitative data were presented as frequencies (n) and percentages (%)

The one –way ANOVA analysis (f-test) was used to determine whether statistically significant differences between two or more independent groups. Pearson correlation was used to determine significant correlations between the variables. The significance level was set at $P < 0.05$. Cronbach's alpha coefficient was used to determine the reliability of the tool. Multivariate regression analysis through Structure Equation Modeling (SEM) was performed to produce regression models. The model fit was tested by checking the Chi-square values and calculating regression coefficient were calculated to find out the relation between independent and dependent variables.

III. RESULTS

Table (1): Frequency distribution of participants' personal characteristics (n=97)

Personal data	Categories	No.	%
Age	20 year < 30 year	90	92.8
	31 year < 40year	6	6.2
	41 year < 50 year	1	1
Gender	Female	51	52.6
	Male	46	47.4
Place of birth	Rural	73	75.3
	Urban	24	24.7
Current residence	Rural	67	69.1
	Urban	30	30.9
Marital statutes	Single	71	73.2
	Married	26	26.8
Years of experience in general nursing	From 1 < 5 years	81	83.5
	From 6 < 10 years	12	12.4
	10 < years	4	4.1
How many years of experience in your current location?	From 1 < 5 years	95	97.9
	From 6 < 10 years	2	2.1
Your monthly income	< 2000 Egyptian pounds	18	18.6
	2000 < 3000 pounds	69	71.1
	300 < 4000 pounds	10	10.3
Attended a training courses	Yes	9	9.3
	No	88	90.7
Course name	BLS	4	4.2
	ACLS	1	1
	ICU course	1	1
	Infection control	3	3.1
Medical History	Yes	0	0
	No	97	100

Table (1) shows that, the great majority (92.8%) of the studied participants were 20 < 30 year old and more than half (52.6%) of them were females. In relation to place of birth three quarters (75.3%) of the studied participants were born in rural, more than two thirds (69.1%) of them live in rural areas. In addition near three quarters (73.2%) of them were single. As regarding the years of experience the above table illustrates that, the majority (83.5%) of the studied participant had general experience between 1-< 5 years and almost all (97.9%) of them had experience between 1-< 5 years in the current location. Moreover, more than two thirds (71.1%) of the studied participants had monthly income 2000< 3000 pounds. Meanwhile, only 9.3% of the studied participants attended a training courses, 4.2% of them attended BLS course, and nobody of them had any medical history.

Table (2): Mean and standard deviation of innovative behavior dimensions (n=97)

Dimensions	Min	Max	Mean	SD	Mean%
Nurses support for innovation	12.00	27.00	23.2577	3.61501	86.14
Nurses encourage new scientific information diffusion	12.00	33.00	25.6186	4.76192	77.63
Nurses' vision	5.00	15.00	13.2887	2.11127	88.59
Rewarding	3.00	9.00	6.0825	1.97732	67.58
Performance evaluation	2.00	6.00	4.0515	1.19348	67.53
Monitoring	2.00	6.00	5.0515	1.02440	84.19
Work communication	6.00	9.00	8.1856	1.14864	90.95
Total innovative behavior	42	105	85.5361	15.83204	81.46

Table (2) displays that, the highest agreement (86.14%, 88.59%, 84.19% and 90.95%) of the studied participants upon the dimensions of nurses' support for innovation, nurses' vision, monitoring and work communication respectively. Regarding agreement upon innovative behavior (81.46%) the studied participants' had positive innovative behavior while (18.6%) of them had negative innovative behavior.

Table (3): Mean and standard deviation of job satisfaction factors (n=97)

Dimensions	Min	Max	Mean	SD	Mean%
Staffing plan	7.00	21.00	14.2680	4.03246	67.94
Organizational policy	14.00	39.00	21.1959	6.95767	54.35
Motivational system	8.00	24.00	14.1649	4.19742	59.02
Total job satisfaction	29	84	49.6288	15.18755	69.08

Table (3) displays that, the highest percentages (67.94%, 54.35% and 59.02%) of the studied participant’s satisfied toward work staffing plan, organizational policy and motivational system respectively. Regarding total job satisfaction (69.08%) the studied participants’ satisfied toward work, while (32.92%) of them unsatisfied toward work.

Table (4): Correlation between job satisfaction and innovative behavior dimensions (n=97)

Job satisfaction / Innovative behavior	Pearson Correlation	Staffing plan	Organizational policy	Motivational system	Total job satisfaction
Nurses support	r	.373**	.142	.186	.264**
	p	.000	.165	.068	.009
Nurses encourage	r	.325**	.111	.305**	.272**
	p	.001	.280	.002	.007
Nurses vision	r	.300**	.163	.281**	.285**
	p	.003	.110	.005	.005
Rewarding	r	.389**	.199	.365**	.362**
	p	.000	.051	.000	.000
Performance	r	.367**	.004	.227*	.199
	p	.000	.971	.025	.051
Monitoring	r	.193	.238*	.383**	.327**
	p	.058	.019	.000	.001
Work communication	r	.093	.291**	.307**	.298**
	p	.367	.004	.002	.003
Total innovative behavior	r	.430**	.201*	.380**	.382**
	p	.000	.048	.000	.000

Table (4) shows that, there were a highly significant statistical differences with weak positive correlations between nurses support , nurses encourage , nurses vision rewarding , monitoring , work communication and total job satisfaction of the studied nurses respectively (p <0.01). In addition there was a no significant statistical difference with weak positive correlations between performance and total job satisfaction of the studied nurses (p >0.05). Moreover there was a highly significant statistical difference with weak positive correlations between total innovative behavior and total job satisfaction of the studied nurses (p <0.01).

Table (5): Comparing total innovative behavior according to participants’ personal data (n=97)

Personal data with innovative behavior	Categories	Mean	SD	Test	p
Age	20 year < 30 year	85.0667	11.75193	1.082*	.343
	31 year < 40year	90.8333	11.30339		
	41 year < 50 year	96.0000	.		
Gender	Female	85.0000	12.94604	.47**	.30
	Male	86.1304	10.34646		
Place of birth	Countryside	85.4795	11.12194	.08**	.19
	Town	85.7083	13.70649		
Current residence	Countryside	85.5821	11.25483	.06**	.29
	Town	85.4333	12.95532		
Marital statutes	Single	84.2958	11.47966	1.81**	.95
	Married	89.2000	12.15525		

Qualification	Post graduate studies	92.2000	13.77316	1.375*	.255
	Bachelor of Nursing	86.7500	13.19503		
	Technical Institute of Nursing	83.6038	11.78875		
	Diploma of Nursing	88.2000	6.95085		
Job title	Director of Nursing	77.5000	4.94975	4.430*	.006
	Supervisor of Nursing	96.1250	9.68707		
	Head nurse	91.1667	8.78877		
	Staff nurse	83.7200	11.64980		
Department of work	Operating theater	91.1538	9.70263	2.853*	.019
	Critical Care Unite	86.8125	9.40368		
	Emergency Department	80.7647	13.19334		
	Dialysis	89.8750	7.95718		
	Inpatient Department	83.7333	12.19758		
	Outpatient clinics	94.3333	10.06645		
Years of experience in general nursing	From 1 < 5 years	84.5556	11.92686	2.451*	.068
	From 6 < 10 years	92.9167	8.74340		
	10 < years	79.0000	4.35890		
Years of experience in current location	From 1 < 5 years	85.2211	11.63741	3.402**	.068
	From 6 < 10 years	100.5000	6.36396		
Monthly income	< 2000 Egyptian pounds	77.9444	14.48111	5.674*	.005
	2000 < 3000 pounds	86.7391	9.99213		
	300 < 4000 pounds	90.9000	12.68814		
Attended training courses	Yes	86.7778	10.69787	.33**	.93
	No	85.4091	11.88898		

*means one way ANOVA test, **means independent t test.

Table (5) reveals that, there were a statistical significant differences between job title, department of work and monthly income of the studied nurses and their total innovative behavior respectively ($p < 0.05$). Meanwhile there were no statistical significant differences between age, gender, place of birth, current residence, marital statutes, qualification, years of experience in general nursing, years of experience in current location and attended training courses of the studied nurses and their total innovative behavior respectively ($p > 0.05$).

Table (6): Comparing total job satisfaction according to participants' personal data (n=97)

Personal data with job satisfaction	Categories	Mean	SD	Test	p
Age	20 year < 30 year	49.6556	12.30069	2.194	.117
	31 year < 40year	45.3333	11.02119		
	41 year < 50 year	73.0000	.		
Gender	Female	46.5882	11.56750	2.62	.24
	Male	53.0000	12.51310		
Place of birth	Countryside	50.1370	12.44356	.70	.78
	Town	48.0833	12.34615		
Current residence	Countryside	49.8806	12.21713	.30	.69
	Town	49.0667	12.95332		
Marital statutes	Single	50.4085	12.96212	1.01	.31
	Married	47.4800	10.81712		
Qualification	Post graduate studies	49.6000	14.72413	.240	.868
	Bachelor of Nursing	48.4583	10.09080		
	Technical Institute of Nursing	49.5094	13.40009		
	Diploma of Nursing	51.9333	12.16239		
Job title	Director of Nursing	43.0000	.00000	.317	.813
	Supervisor of Nursing	52.3750	16.07071		
	Head nurse	49.5000	4.07877		
	Staff nurse	49.5333	13.04393		

Department of work	Operating theater	55.1538	11.71784	1.124	.354
	Critical Care Unite	48.0000	5.62139		
	Emergency Department	46.6176	13.12415		
	Dialysis	51.8750	14.09905		
	Inpatient Department	51.0000	14.63362		
	Outpatient clinics	49.6667	6.65833		
Years of experience in general nursing	From 1 < 5 years	49.4321	12.38743	2.235	.089
	From 6 < 10 years	51.8333	11.01101		
	10 < years	38.3333	8.08290		
Years of experience in current location	From 1 < 5 years	49.4842	12.24299	.626	.431
	From 6 < 10 years	56.5000	23.33452		
Monthly income	< 2000 Egyptian pounds	41.7222	10.06920	5.151	.008
	2000 < 3000 pounds	51.7971	12.52595		
	300 < 4000 pounds	48.9000	9.90454		
Attended training courses	Yes	50.8889	13.12864	.32	.84
	No	49.5000	12.38093		

*means one way ANOVA test, **means independent t test.

Table (6) reveals that, there was a statistical significant difference between monthly income of the studied nurses and their total job satisfaction ($P < 0.05$). Meanwhile there were no statistical significant differences between age, gender, place of birth, current residence, marital statuses, qualification, job title, department of work, years of experience in general nursing, years of experience in current location and attended training courses of the studied nurses and their total job satisfaction respectively ($P > 0.05$).

IV. DISCUSSION

Innovative work behavior refers to all worker behavior directed towards the creation, presentation, and/or application of ideas, processes, procedures, or methods to find better solutions to the newly created work-related. Innovative work behavior among nurses contributes to organizational innovation as other professions because this behavior is a result of the creativity and innovative participation of nursing staff (Fay et al., 2019).

Regarding the personal characteristics of nurses, the current the revealed that, the great majority of the studied nurses were 20 < 30 years old. These results were in agreement with the result of Mohamed and Abd Elsalam, (2020), who studied the effect of organizational support and knowledge sharing on nurses' innovative behavior and found that, the age of study subjects, the highest percentage of study subjects were in the age group less than 30 years.

Regarding the years of experience of the studied nurse, the current the revealed that, the majority of the studied participant had general experience between 1-< 5 years and almost all of them had experienced between 1-< 5 years in the current location Besides near three-quarters of them were single. Moreover, more than two-thirds of the studied nurses had a monthly income of 2000< 3000 pounds, These current results were in agreement with the result of Mohamed and Esmail, (2015), who studied the relation between quality of work-life and nurses job satisfaction at Assiut University Hospitals and found that, the less than half of them had less than 5 years of experience in nursing, nearest to half of them had less than 5 years of experience in the nursing department and the majority of them were married. Besides that, more than half of them had not enough monthly income.

Concerning the attended training course of the studied nurse, the current the revealed that, less than ten percent of the studied nurses attended a training course. These findings of the current were consistent with the study demonstrated by Mohamed and Esmail, (2015), who reported that, around half of the sample had infection control and quality courses

Concerning the qualifications of the studied nurses, the present study revealed that, more than half of the studied nurses had technical nursing institute. The current results were in the same line with Mahgoub, Shazly, El-sayed, (2019), who studied the relationship between work environment and innovative behavior among staff nurses the highest percentage of them had nursing diploma qualification.

This could be due to that, the bachelor's degree in nursing wasn't very popular until recently. Hence, the study sample is a true reflection of the nurses working in our community

Regarding mean & mean percent of staff nurses' perception regarding innovative behavior dimensions of the studied nurses, the present study revealed that, the highest agreement of the studied nurses upon the dimensions of nurses' support for innovation, nurses' vision, monitoring and work communication respectively. Regarding agreement upon innovative behavior more than three-quarters of the studied nurses' had a high level of innovative behavior while less than a fifth of them had a low level of innovative behavior. These current findings were supported by **Mohamed and Abd Elsalam, (2020)**, who revealed that less than half of the study subjects perceived a moderate level of innovative behavior. The possible explanation for this finding could be ascribed to the fact that the concept of innovation behavior is relatively new and unfamiliar.

Regarding mean & mean percent of staff nurses' perception regarding job satisfaction domains, the present study revealed that, the highest percent satisfaction with participant's satisfaction toward the work staffing plan, organizational policy and motivational system respectively. Regarding two-third satisfaction more than two thirds of the studied nurses' satisfied with work, while one-third of them unsatisfied with work.

From the researcher's point of view, this result may be due to the importance of communication to nurses' professional practice. While low mean regarding promotion domain.

These results were in agreement with the result of **Abed, Elewa and Ibrahim, (2020)**, who investigated the staff nurses perception of power and its relation to job satisfaction in hospitals of the ministry of health and found that, more than half of the sample had a moderate level of job satisfaction while the least percent had a high level of job satisfaction. In the same line, **Refaat, Abd El-Mohsen and Mosa, (2017)**, who studied the relationship between job satisfaction and professional identity among psychiatric nurses, found that more than half of the participants had a moderate level of job satisfaction

Regarding the correlation between job satisfaction and innovative behavior dimensions among the studied nurses, the present study revealed that, there were highly significant statistical differences with weak positive correlations between nurses support, nurses encourage, nurses vision rewarding, monitoring, work communication and total job satisfaction of the studied nurses. Moreover, there was a highly significant statistical difference with weak positive correlations between total innovative behavior and total job satisfaction of the studied nurses.

These results were in agreement with **Abd El Hamed, (2017)**, who studied the innovation behavior levels and their relation with tiger-based nursing informatics competencies among critical care nurses the results revealed that a non-significant difference between the studied sample innovation behavior levels as classified by sex, wherein more than half of the male participants rated themselves as a moderate innovator. Meanwhile, less than a quarter of female nurses' participants appraised themselves as a high innovator and none of the male nurses viewed themselves as high innovators.

However, the findings of the current study do not support the previous research of **Arif, Zubair and Manzoor, (2012)**, who studied the innovative work behavior and communication climate among employees of advertising agencies and found a significant difference across sex as female study participants reflected the more innovative work behavior as compared with male study participants.

Concerning the effect of innovative behavior on job satisfaction among the studied nurses, the present study revealed that, there was a highly significant moderate positive effect of innovative behavior on job satisfaction. This study in the same line as **Lee, MacPhee and Dahinten, (2020)**, who assessed the factors related to perioperative nurses' job satisfaction and intention to leave and found that, a strong positive correlation between job satisfaction and organizational commitment which indicate that satisfied nurses tend to have a higher degree of commitment

Concerning the relationship between the studied nurses' data and their innovative behavior, the present study revealed that, there were statistically significant differences between job title, department of work and monthly income of the studied nurses and their total innovative behavior.

These results may due to female, married nurses with higher education had high-level innovation than male, not married and had low education level.

These results agree with the study performed by **Fay et al.,(2019)**, titled in differential effects of workplace stressors on innovation, who reported that characteristics of nurses and environment had a positive effect on innovation. This study supported with the study performed by **Abdulrab et al., (2018)** titled in the role of psychological empowerment as a mediating variable between perceived organizational support and organizational citizenship behavior in Malaysian higher education institutions, who reported that there was a positive correlation between organizational support and organizational citizenship.

Concerning the relationship between the studied nurses' data and their job satisfaction, the present study revealed that, the present study revealed that, there was a statistically significant difference between the monthly income of the studied nurses and their total job satisfaction ($P < 0.05$).

This may be due to improving the image of society toward nurses' jobs and increase awareness about the importance of nurse work also, increase the requirement for male and female nurses to work in hospitals, then they became more proud in their work.

These results were in agreement with **Manju, (2012)**, who studied the work-life balance & career satisfaction of critical care nurses in private hospitals at Coimbatore indicate that, the high mean score in job satisfaction was related to the professional status of the nurses. The current results were in line with **Laschinger et al., (2012)** in Ontario, Canada among newly graduated nurses regarding job and career satisfaction and turnover intentions, The study suggested that lower career satisfaction higher the intention to leave the profession.

V. CONCLUSION

Based on the study finding it concluded that, the highest agreement of the studied nurses upon the dimensions of nurses' support for innovation, nurses' vision, monitoring and work communication. Moreover, more than three quarters the studied nurses' had positive innovative behavior while less than fifth of them had negative innovative behavior. In addition, more than two thirds of the studied nurses' satisfied toward work, while one third of them unsatisfied toward work. Furthermore, there were a statistical significant differences between job title, department of work and monthly income of the studied nurses and their total innovative behavior. Additionally there was a statistical significant difference between monthly income of the studied nurses and their total job satisfaction. Finally, there was a highly significant statistical difference with weak positive correlations between total innovative behavior and total job satisfaction of the studied nurses.

VI. RECOMMENDATIONS

Based upon the results of the current study the following recommendations suggested:

- Healthcare organizations should integrate the concepts of work innovation and knowledge sharing behaviors into the main values and improve them through strategic management.
- Nurse Managers be open to suggestions of nurses, give nurses the responsibility to solve problems by themselves, and improve the relationship between the nurses and their supervisors
- Conduct workshops on innovative thinking and design strategies to improve and facilitate innovation behavior among nurses.
- Creating an appropriate work environment and facilitating knowledge sharing among nurses will encourage a more productive and constructive innovative environment.
- React positively to the innovative efforts of nurses by providing them the time and resources to carry out innovative efforts and support innovation as a job requirement
- Hospital management should introduce reward programs that motivate nurses to continuously share knowledge to improve the quality of patient care.
- Hospitals managers and policy makers should encourage the professional growth of nurses through the provision of a systematic career ladder
- Further research to identify strategies that help nurses develop innovative work behavior.

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