

## **Innovative Work Behavior and Clinical Decision Making among Nursing Interns**

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### **Abstract**

**Background:** In the healthcare field, the innovative work behavior isn't traditionally a mandatory part of the daily practice but rather a behavior beyond the scope of the prescribed work behavior of the healthcare. Nursing clinical decision-making also is the basis of the nursing daily practice where the nurses' focus is on patients. Decision-making is critically intertwined with innovation at any point within an organization. **The aim** was to identify the relation between innovative work behavior and clinical-decision making of nursing interns at Suez Canal University. **Descriptive correlational design** was utilized to carry out this study. **The sample of the study** was all the internship students in the academic year 2018/2019 who affiliated to Faculty of Nursing at Suez Canal University and spent their internship period in Suez Canal University Hospitals during the data collection period. They were 68 students. **The setting of the study** was Suez Canal University Hospitals. **Tools:** Two tools were used. **Tool (1)** an innovative work behavior scale. **Tool (2)** the clinical Decision Making in Nursing Scale. **Results:** There was a statistically significant strong correlation between innovative work behavior and clinical decision-making ( $P < 0.001$ ) **Conclusion:** There was a relationship between innovative work behavior and clinical decision making of nursing interns at Suez Canal University. **Recommendations:** innovative work behavior and clinical decision-making should be included in the orientation-training program of the nursing interns.

**Key words:** Clinical decision making– Decision-making - Innovative work behavior

### **1. Introduction**

The concept of innovative work behavior was launched in 1994 then the literatures have developed frequently (**De Spiegelaere et al, 2014**). Nowadays, the phenomenon of innovative work behavior is widely addressed in the fields of technology, business management, engineering, education and health care (**Yuan & Woodman, 2010**). Importantly, employees'

innovative work behavior is a vital resource for improving the organizational performance (**Asurakkody & Shin, 2018**). The employees' innovative abilities and behaviors are a primary source to operate successfully in a highly dynamic and competitive environment (**Cangialosi et al, 2019**). In the nursing context, the innovative work behavior is defined as generating the novel ideas and putting the efforts to implement them with a confidence,

overcoming the possible challenges to produce treatment strategies, new procedures, or policies for restoring the health promotion of patients (**Kim, & Shin, 2015**).

The clinical decision-making is a unique process that involves the interplay between the knowledge of the pre-existing pathological conditions, the explicit patient information, the patient care and the experiential learning (**Rainford, 2016**). A clinical decision making is a very critical element of the nursing profession. Nurses need to make the accurate clinical decisions that are congruent with the patients' diagnoses. The quality of care that is provided to the patients is mainly affected by the nurses' ability to make an efficient clinical decision. Decision-making is critically intertwined with innovation at any point within an organization (**Silvia, 2011**).

Nurse intern is a nurse who enters the professional workplace for the first time. Nurse interns using their skills and knowledge of different nursing specialties to actively assist or participate in all aspects of patient care (**Ramadan et al, 2019**). They also have an urgent need to be trained on the innovation and to develop the innovative

behaviors to meet the healthcare needs of the 21st century (**Joseph et al, 2016**).

### **1.2. Significance of the study:**

The innovative work behavior became a very important behavior for newly graduated nurses, especially in the very changeable health care environment of the 21th century. It is very important for nursing students to acquire the ability of behaving innovatively to be able to make high quality clinical decisions so it was very important to identify the relation between innovative work behavior and clinical decision making of the nursing interns.

## **2. Subject and Methods**

**1.1. The aim of this study:** was to identify the relation between innovative work behavior and clinical-decision making of nursing interns at Suez Canal University.

**2.2. Study design:** was descriptive correlational design.

**2.3. The sample of the study:** was all the internship students in the academic year 2018/2019 who affiliated to Faculty of Nursing at Suez Canal University and spent their internship period in Suez Canal University Hospitals during the data collection period. They were 68 students.

**2.4. Study setting:** Suez Canal University Hospitals, which consist of three buildings (educational building, special surgery building and oncology building)

**2.5. Research question:** is there a relation between innovative work behavior and clinical decision making of nursing interns at Suez Canal University?

**2.6. Tools of data collection:**

**2.6.1. Tool (1): innovative work behavior questionnaire (IWBQ)**

It is a questionnaire developed to measure innovative work behavior of the employees and modified by to be self-rated. It consists of 10 items, which are grouped under four dimensions (**De Jong & Den Hartog, 2010; Watley, 2016**).

- Idea exploration (2items)
- Idea generation (3 items)
- Idea championing (2 items)
- Idea implementation (3 items).

Responses were given on five points likert scale ranging from never (1) to always (5) (**Watley, 2016**).

**Scoring system:**

An average score from 4-5 considered high level of innovative work behavior.

Average score from more than 2 to less than 4 considered a medium level of innovative work behavior. The average score at or below 2 considered a low level of innovative work behavior (**Roberts, 2016**).

**2.6.2. Tool (2): Clinical Decision Making in Nursing Scale (CDMNS)**

The CDMNS is a questionnaire developed by Jenkins to measures the participants' self-perceptions of decision-making skills and behaviors that are utilized during working in the clinical settings with patients. The CDMNS consists of 40 items which are grouped under four subscales. 10 items for each subscale (**Jenkins, 1983**). These subscales are:

- Search for Alternatives or Options,
- Canvassing of Objectives and Values
- Evaluation and Reevaluation of Consequences
- Search for Information and Unbiased Assimilation of New Information.

**Scoring system:**

The items of CDMNS are evaluated on a five point likert scale ranging from always = 5 to never = 1. 18 items (2,3,5,8,12,16,18,20,21,22,23,25,29,31,36, 37,39,40) were written as negative. The

rest items were written as positive. 18 negative items were inversely scored.

Maximum and minimum scores to be taken are 200 and 40 for the total scale and 50 and 10 for each subscale. A score from 40- 80 was considered as a low level of decision making. Score ranged from 81-140 was considered as a middle level of decision making. A score ranged from 141-200 was considered as a high level of decision making (Kileb, 2013).

### **2.7. Field work:**

The data collection took about one week at the middle of August 2019. The researcher explained the aim of the study and the questionnaires to the nursing interns. Then, each nursing intern received a copy of the questionnaires and completed it in the presence of the researcher to provide explanation for any ambiguous or confusing items.

### **2.8. Administrative design:**

The official agreements were taken from the dean of the Faculty of Nursing, Suez Canal University, the vice dean of environmental and community affairs of the Faculty of Nursing, Suez Canal University, academic internship coordinator, the director of Suez Canal

University hospitals, the manager of the training unit in the Suez Canal University hospitals and clinical internship coordinator

### **2.9. Ethical considerations:**

Written and oral consent were obtained from the participants after a brief explanation of the study aim the study with stress on the confidentiality of the information and the importance of the study. The study proposal was approved by the Research Ethics Committee at the Faculty of Nursing in Suez Canal University.

### **2.10. Statistical design:**

Data obtained were coded and transformed into coding sheets. Then, statistical analysis was done by using SPSS system files (SPSS package version 22). Variables were checked for normality with Kolmogorov Smirnov test at 0.05 level, accordingly variables were significant ( $P < 0.001$ ) so the data were nonparametric. Descriptive statistics including frequency distribution were used to describe different characteristics of variables. Spearman correlation test applied for answering the study question. Significance level values considered at  $p < 0.05$ .

### 3. Results

**Figure (1)** reveals that about two third (60.2%) of nursing interns had a moderate level of innovative work behavior and (35.3%) have low level of innovative work behavior

**Figure (2)** reveals that about two third (61.8%) of nursing interns had a middle level of clinical decision making and about one third (35.5%) scored low level of clinical decision making

**Table (1)** shows that there is a strong positive correlation ( $r=0.809$ ) between innovative work behavior and clinical decision-making of nursing interns ( $P<0.001^*$ )

### 4. Discussion

Regarding the levels of innovative work behavior, about two-third of the participants demonstrated a moderate level of innovative work behavior in the preprogram stage. From the researcher's point of view, this result was because of that the participants previously trained to some degree on idea exploration and idea generation on the brain storming and debriefing sessions during their studying years. Idea exploration and

idea generation are the first two dimensions of innovative work behavior.

By comparing the innovative work behavior of the participants in this study with the innovative work behavior in the previous studies we found that participants in the study of Battistelli also scored a moderate level of innovative work behavior (**Battistelli et al, 2019**). The participants' results regarding total innovative work behavior were better than the results of participants included in Awangs' study and Bagheri, study (**Awangaet al, 2019; Bagheri, 2017**). The levels of innovative work behavior of the participants in this study were less than the levels of innovative work behavior of the participants in Lambriex-Schmitz study (**Lambriex-Schmitz et al, 2020**).

Regarding the clinical decision-making, about two-third of the participants showed a moderate level of clinical decision-making in the preprogram stage. From my point of view, these results were due to that the participants trained on making clinical decisions during their studying years through applying the nursing process.

The participants in AL-Dossary and Farcic studies also scored moderate level of clinical decision-making (**AL-Dossary,**

2015; Farcic, et al, 2020). The participants who were assessed by Walsh, demonstrated high level of clinical decision-making (Walsh, 2010). The participants in the study of Padden demonstrated a low level of clinical decision-making skills (Padden, 2011).

Regarding the relation between the innovative work behavior and clinical decision-making, there was a strong positive correlation between the innovative work behavior and clinical decision-making. From my point of view, this result was because of that the innovative work behavior facilitates the process of decision-making and provides the individual with a wide spectrum of alternatives. At this point, Silvia, reported that decision-making is critically intertwined with innovation and its impacts at any point within an organization (Silvia, 2011). Kock & Gemunden, reported that climate of innovation is one of the organizational components that enable better decision-making quality and agility (Kock & Gemunden, 2016).

## 5. Conclusion

The following study concluded that about two third of participants scored

moderate level of innovative work behavior and middle

level of clinical decision-making. There was a strong positive correlation between innovative work behavior and clinical decision-making.

## 6. Recommendation

Regarding the result of the present study, the following recommendation can be suggested:

- Consider innovation as the main part of the internship orientation program
- Obligate nursing interns to present innovative assignments in each clinical training area.
- Obligate nursing students in the fourth year to introduce innovation project as a graduation project
- Include innovation on the nursing curricula
- Train nursing interns on the clinical decision making process during their training under the supervision of the faculty members
- Provide great frequent supervision and support to the nursing interns during their training.

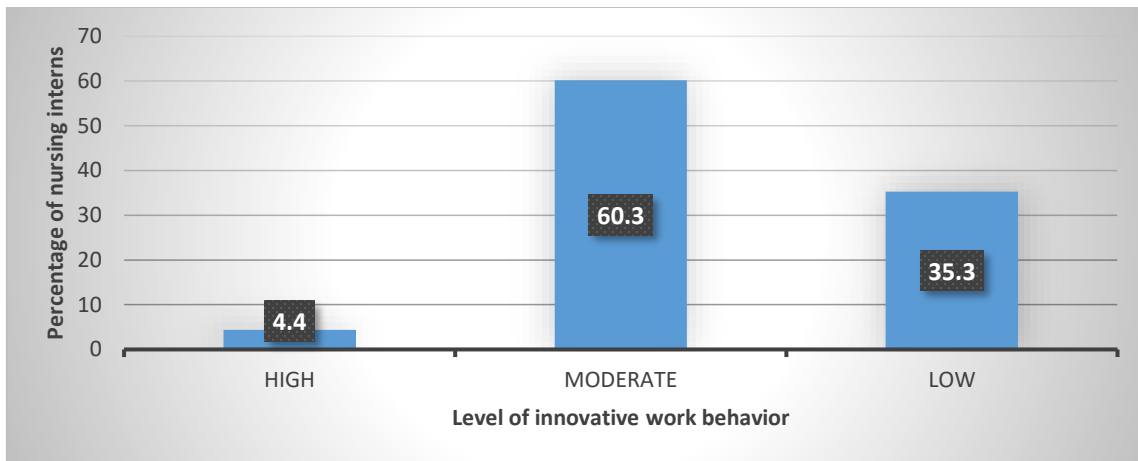


Figure (1): Levels of innovative work behavior among nursing interns in Suez Canal University (n=68).

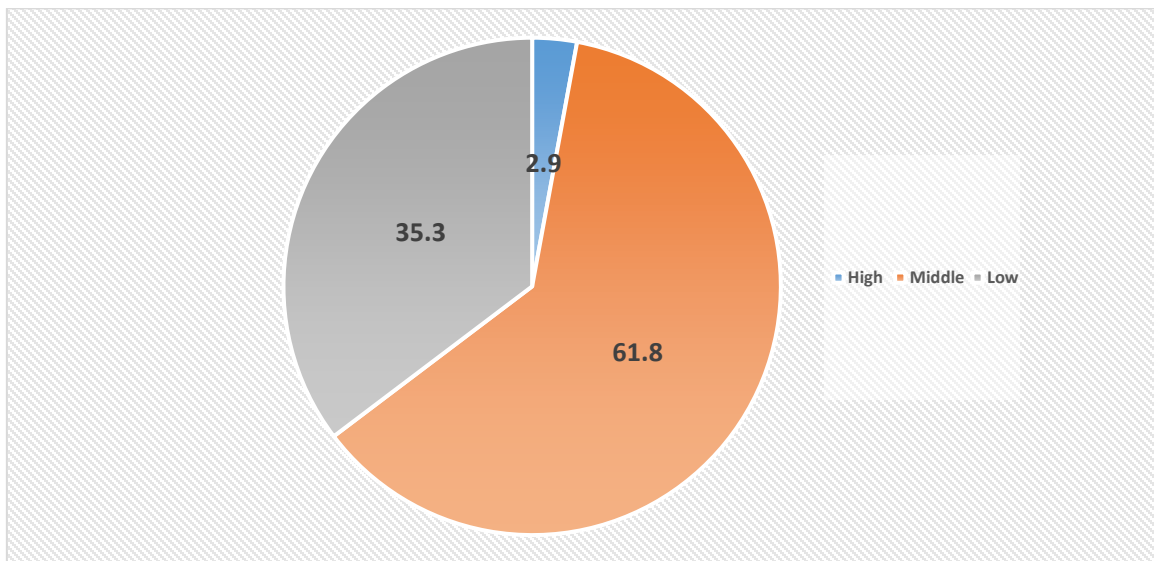


Figure (2): Levels of clinical decision making among nursing interns in Suez Canal University (n=68).

Table (1): The correlation between innovative work behavior and clinical decision-making of nursing interns.

Innovative work behavior	Clinical decision making	
	rho	P value
	0.809	<0.001*

\* Significant at  $p < 0.05$ .  $r$  = spearman correlation test

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