

# Development of Nurse Manager Innovative Behavior and Its Effect on the Quality of Care for Elderly Patients

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**Abstract:** Innovative behavior plays a critical role in evolution of quality of nursing practice for elder care and organizational success. Nurse managers need further development in their commitment to innovation to meet the pressing challenges of the health care needs for hospitalized elderly patients. **Aim:** To develop nurse manager innovative behavior and evaluate its effect on the quality of care for elderly patients. **Subjects & Method:** A quasi-experimental design was used. **Setting:** The study was conducted at the inpatient units that included the elderly patients` at Shebin El-Kom university hospital in the Delta region of Egypt. A purposive sample of 100 elderly patients invited to assess posttest nurse manager's innovative behavior application. Also, they were invited to assess their own perception toward quality of care they received. De Jong and Hartog instrument were used to assess nurse manager's innovative behaviors to provide an explanation of how an individual's innovate and implement new ideas. **Results:** The mean score for all components of innovation behavior (opportunity exploration, Idea generation, Idea championing and Idea implementation) were noticed higher in posttest than pretest. The highest total mean posttest score was  $33.1 \pm 6.1$  compared to the lowest total mean pretest score that was  $26.8 \pm 10.1$ . The highest mean score for quality of elderly care  $34.73 \pm 5.8$  were noticed in discipline aspect of quality care, nearly equal mean score ( $34.45 \pm 5.16$ ,  $34.6 \pm 5.64$ ) were found in both responsiveness and assurance aspects of quality elderly care followed by mean score of communication aspect ( $29.69 \pm 3.62$ ). There was a positive correlation between the elderly patient's total score for quality of care and nurse managers mean posttest score for application of innovative behavior. **Conclusion:** The nurse managers who receive the innovative behavior training program had a higher mean posttest score as compared to pretest score. There was an elderly patient's agreement about nurse manager innovative behavior after innovative behavior training program. **Recommendations:** Healthcare organizations should focus on the development of the innovative behaviors among the nurse managers to grantee the quality of care for the hospitalized elderly patients. Education should pay more attention to sustain learned behavior, and to learn how to reflect on behavior. Further research is needed to factors which are stimulating or obstructing innovation behavior and to the way in which innovation behavior can be sustained in practice.

**Keywords:** (Elderly patients, Innovative behavior, Nurse Managers, Quality of care).

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## 1. INTRODUCTION

Innovation is the practice of new techniques in social, cultural, and administrative contexts (Ozberk & Uzunboylu, 2017). Innovate behavior plays a critical role in the evolution of nursing practice of elder care and organizational success. Nurse managers need to further develop their commitment to innovation to meet the pressing challenges of health care needs. Few persons know the meaning of innovative behavior and its influences on health care (Weberg, 2009). Janssen (2005) defines the innovative behavior as recognition of a problem, generation of ideas, mobilization of support, and realization of the ideas related to the initial problem. While, Barrientos and Reilly, (2016) explained the innovative behavior as individual innovation ideas, such as defining individual innovation with individual features and characteristics or through

behaviors. Whenever employees have ideas and care about their ideas, they want to apply them to make something new that is appropriate to their job (Tung et al., 2014).

Eight key defining attributes of innovative behavior included: opportunity exploration, idea generation, idea search, idea communication, idea promotion, championing, application, and overcoming obstacles (Asurakkody & Shin, 2018). Idea generation is considered as “a behavioral aspect of creativity in all studies of employee innovative behavior. It is frequently stimulated by obvious difficulty or challenging conditions. It refers to the stage during which employees recognize problems and generate innovative solutions to deal with the problems. Typically, all innovation processes comprise generating and selecting opportunities or ideas. The success of idea generation in innovation generally depends on the quality of the best opportunity recognized. However, several authors mentioned that it is hard to differentiate the terms finding opportunity and generation of the idea (Afsar, Cheema, & Bin Saeed, 2018; Asurakkody & Shin, 2018). There is no doubt that, hospital directors that are interested in securing innovative outputs to provide decision making and innovation autonomy to nurses regarding patient care and give nurses at all levels the opportunity and support to develop policies and procedures regarding patient care in the organization, as the necessity of providing fast, reliable and cost efficient quality service requires that innovative behavior (Sönmez & Yıldırım, 2019).

Idea search: The innovative activity can be promoted by individuals searching for new ideas based on searches of existing knowledge sources in their environment. Also, an essential aspect of employee innovative behavior is to communicate the idea to managers because employees in organizations are rarely able to implement ideas on their own and often have to receive permission from their managers (Asurakkody & Shin, 2018). The leader should provide support and encouragement during the idea generation to help the employees to generate and implement novel ideas (Li, Zhao, & Begley, 2015). Promotion of an idea: When an employee has generated an idea for overcoming challenges or further improvement, the employee has to persuade the manager that the changes are necessary and beneficial for the department of the company. Moreover,

Asurakkody & Shin, (2018) added that idea championing performed by a champion who emerges to put efforts into creative ideas. The innovation champion starts implementing activities with confidence by preparing plans for implementation in an unstructured environment. This requires anticipating problems and developing contingency plans, as well as obtaining funds and resources. The ward managers are well placed to implement appropriate changes in their practice settings, if provided with appropriate support and training (Whitby, 2018) that can help them to improve the quality of nursing care provided to the elderly patients.

Innovation behavior training is carried out in preparation for the nurse manager to help them for implementing innovative strategies to meet future workforce needs and elderly care needs (Dil et al., 2012; Moreira et al., 2017). Panel members organized the findings based on four key roles of registered nurses (RNs) in the healthcare delivery system: RN as professional, RN as an advocator, RN as an innovator, and RN as a collaborative leader. But the RN had barriers that can prevent them from working to the full extent of their education and training. They should explore the basis and developed recommendations to address these barriers (Timothy et al., 2016).

ANA strategic goals for 2020 are to stimulate and disseminate innovation that increases recognition of the value of nursing and drives improvement in health and health care (ANA, 2016). This goal includes the following objectives: Foster and disseminate nurse focused innovations and best practices to significantly impact patient and nurse outcomes and generate revenue in priority programmatic areas; Leverage data and analytics across the care continuum to drive nurse-led innovations. Many managers and business models currently define as “nonproductive” time or time away when the RN is not providing direct patient care. The availability of such time may be an important tool to foster innovation (Altman & Rosa, 2015).

Nursing managers need to devote more time to explaining how new processes and behaviors will allow nurses to better enact their values and deliver high quality care (Brett & Luciano, 2018). Quality of care is a systematic approach to health services, which assure each technical competence and the interpersonal dimension of health caregiving process (Ghiwet & kidanu, 2014). Commonly, healthcare organizations monitor patient experiences in order to evaluate and improve the quality of care. Most of the care provided to the patients performed by nurses and supervised by nurse manager. Nurses are the backbone of healthcare team, and way performance has a real impact on healthcare quality (Omran, Elmolla, & AbdElaziz, 2013). Patients’ opinions are the best source that can tell the providers of what is important, that is why this

information can be used in healthcare planning and evaluation (Alsaqri, 2016). International healthcare settings should systematically monitor the quality care provision especially for elder people (Alasad et al., 2015).

The elderly people in Egypt who are aged from 60 to 64 years old constituted about 6.7% while persons aged 65 years and more constituted about 5% (CIA, 2014) with life expectancy 72.7 years old. The elderly persons generally constituted about 6.8% of the population at Menoufia governorate (7.0% males and 6.6% females) (CAPMAS, 2019). This growing number will lead to a rapid increase in the demand for health care services (Holm et al., 2016; Eurostat, 2017). They can live longer with previously untreatable illnesses (Federspiel & Keipes, 2014) which call for increased quality and efficiency in healthcare (Shebehe & Hansson, 2018). This global aging phenomenon is projected to affect all aspects of healthcare services (Stimpfel & Gilmartin, 2019).

The elderly patients constitute a much higher proportion of overall hospital inpatients (Conroy et al., 2014). Consequently, the nurses should have competencies that can help them to work effectively during the care of elderly people (Bahrami et al., 2019). Also, a holistic view of caring, treatment of the elderly, efforts to preserve the autonomy of the elderly, encourage to actively make it possible for the older person to participate in their own care, are general expectations or wishes today (Frilund, 2018). An awareness of “the good”, which cannot react to practice are for many caregivers, nurses as well as other members of the team burdensome (Brodtkorb et al., 2015).

The main task for the leaders is arguing the balance between patients' needs and available resources (Frilund & Fagerstrom, 2016). The care of older adults is complex, and high quality services for this vulnerable population requires a holistic and innovative approach (Davis et al., 2015). Also, achieving high quality care for them requires specialized skills and training that many health care providers lack (Stimpfel & Gilmartin, 2019). The need for increased investment by hospital leaders to promote a geriatric nursing practice environment that supports the specialized needs of hospitalized older adults (Tavares et al., 2017). So, nurse manager innovative behavior can lead to continuous improvements to the quality of care provided to the hospitalized elderly people and can increase their level of satisfaction with the care provided.

### Significance of the study

There are currently no studies reported in the literature, studying the development of innovation behavior of nurse managers and quality of elder care. Innovation is a key to change and development and it is important for improving health care in general and elderly care in especial (ICN, 2017). Previous research showed that, innovation behavior of nursing professionals is a necessary for successful care. However, in elderly care, empirical studies are missing about innovation behavior of nursing professionals. Usually, the innovation in the health sector and nursing, include new approaches, technologies and ways of working is described as a process of development. Nurse managers must keep pace with the requirements of the age of patient and, integrate innovation into patient care. Also, she should be a role model for staff nurses by applying innovations effectively. For this reason, this study was conducted to develop the innovation behavior of nurse managers and determine its impact on quality of elder care.

**Aim of the study:** the current study investigate the development of nurse manager's innovative behavior and its' effect on the quality of care for elderly patients.

### Research hypothesis:

- 1- Nurse managers who receive innovative behavior training program will have a higher mean posttest score as compared to pretest score.
- 2- There is elderly patient's agreement about nurse manager's innovative behavior practice after pass in innovative behavior training program.
- 3- There is a positive correlation between the elderly patients' agreement about nurse manager's innovative behavior score and quality of care score.

## 2. SUBJECTS AND METHOD

**Research Design:** Because, quasi-experimental research design aims to determine causality between intervention and outcome (Nieswiadomy, 2012). A quantitative quasi experimental research design single group pretest posttest was used to correlate between applications of innovation competencies (innovative managers' behavior) and quality of elderly care.

## International Journal of Novel Research in Healthcare and Nursing

Vol. 7, Issue 3, pp: (277-288), Month: September - December 2020, Available at: [www.noveltyjournals.com](http://www.noveltyjournals.com)

**Setting:** The study was conducted at the inpatient units that provided nursing care to the elderly patient at shebin El-Kom university hospital. It is one of the university hospitals in the Menoufia governorate, Delta region, Egypt.

### Sample: included two different groups:

**Group one:** All available first line nurse managers (46) recruited from hospital units who manage the work in units where the elderly patient found.

**Group two:** A purposive sample of 100 elderly patients selected from the same units where the first line manager manage the working in it. Inclusion criteria included all subjects who aged 60 years and more, both sexes, alert and agree to participate in the study. While the exclusion criteria included the patients who were unable to participate due to mental illness and other causes such patients on ventilator, patients with disorientation or had a disturbance in level of consciousness.

**Instruments for data collection:** The researchers used two instruments.

**Instrument 1: Nurse Manager's innovative behavior scale:** The instrument divided into two parts:

**First part:** Socio-demographic characteristics: It was designed by the researchers based on the review of the related literature to investigate first line managers characteristics that included questions related such as age, sex, years of experiences, and the type of unit.

**Second part :** De Jong and Hartog (2008) proposed four components model of innovative behavior to provide an explanation on how individual's innovate and implement new ideas. This scale provided to both nurses and patients to assess nurse manager innovative behavior before and after training program and to assess elderly patient point of view in posttest only regard to nurse manager innovative behavior. The scale components distributed under eleven questions as following: the opportunity exploration 3 items, idea generation 3 items, championing or supporting the idea 3 items and implementation 2 items. It was a 5-point Likert scale format (0= never done, 1= rarely done, 2=sometimes, 3= usually, and 4= always done).

**Instrument 2: The quality of care scale:** The instrument divided into two parts:

**First part:** Socio-demographic characteristics: It was designed by the researchers based on the review of the related literature. It was also included questions such as age, sex, marital status, educational level, occupation, residence, and income.

**Second part:** It included 25 questions to assess patient's perception toward their quality of care. The scale questions distributed under five aspects including responsiveness (6 items), assurance (6 items), communication (5 items), discipline (6 items), and baksheesh (2 items). Each item was rated on a seven-point Likert scale anchored at the numeral 1 with the verbal statement "Strongly Disagree" and at the numeral 7 with the verbal statement "Strongly Agree (Elbeck, 1987; Andaleeb, 2001).

### Procedure for data collection:

#### Interviewing and assessment phase:

The approved letter from Faculty of Nursing in Shebin Elkom, Menoufia University was prepared and delivered to undersecretary of the Shebin El-Kom university hospital director for the approval for data collection. Before conducting the study, permission was obtained. Then, the study purpose and schedule of data were clarified. The researchers were constructed and prepared the different data collection tools, designed the plan and seeking the managerial arrangements. Data collection for this study was carried out from the first of April 2019 to the mid of July 2019. After obtaining approval and informed consent to conduct the study, data was collected from the nurse managers (pretest). It took about 30 -45 minutes.

#### Implementation phase:

The obtained information used as the baseline assessment (pretest), then the researchers gave training program for the nurse managers. The main objective of training program is to mastering innovation competencies through the following:

1. Mobilize the nurse managers to be creative and apply innovative process through: idea exploration ,idea generation, idea championing ,and idea implementation.

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Vol. 7, Issue 3, pp: (277-288), Month: September - December 2020, Available at: [www.noveltyjournals.com](http://www.noveltyjournals.com)

2. Develop proactive attitude toward novel technology to enhance geriatric quality of care.
3. Encourage nurse manager to developing new policy in geriatric nursing and health field as apart from innovation.

The program has done on three sessions weekly extended for three weeks where each group of nurse managers ranges from 15 to 16 weekly. Participants received the training which consisting of three 90 minutes sessions, with no interval between sessions. Assessments were conducted at pre training, post training, and follow up replaced by elderly patient response after training throughout measuring their points of view regard to what extent the nurse manager apply innovation behavior (using nurse manager innovation scale) and their point of view regard their quality of care that they received as outcome to application of nurse manager to innovation behavior (via quality of care survey questionnaire). This is real follow up for application rather than to repeat posttest after six month on nurse manager group. The training program conducted through lectures and role playing in small groups of three. The training was given by one leader (one of two authors) with experience in providing innovation training on more than two occasions, as well as over 15 years' experience using management and transformational leadership and two facilitators. Facilitators were two of the assistant lecturer with the same specialty of the leaders, all of whom had received basic training in innovation competences, role play techniques and facilitation skills. The researchers first introduced themselves to the nurse manager and explained the need and purpose of the program. It took about 30 -45 minutes for each participant to answer the questions and learn the knowledge regard how to practice the innovative behavior.

**Evaluation phase:** All nurse managers were evaluated by posttest after finishing the training program about application of the innovative behavior. The researchers performed posttest by using the same pretest questionnaires to evaluate the progress of nurse managers' innovative behavior commitment and to evaluate elderly patient agreement regard nurse manager innovation behaviors practice. Finally evaluate elderly patient perspective regard their quality of health care that they received throughout quality health care scale.

**Ethical Considerations:**

An ethical approval was obtained from the Faculty of Nursing Institutional Research Board (IRB) committee. Written approval was also obtained from the study participants. Confidentiality was assured to all participants and their information was used for research purpose only. The purpose of the study and the methods of completing questionnaires were clearly explained for all participants prior to complete the questionnaire. Confidentiality and anonymity of them were assured through coding the data.

**Validity and reliability:**

The tools were tested for its content validity. Validity indicated the degree to which the tool measures what it is expected to measure. Accordingly in this study, questionnaires content validity was determined by three experts in nursing administration and geriatric nursing. The necessary modifications were done according to the experts instructions. Changes were carried out according to their judgment on the clarity of the sentences and relevance of the content. Reliability of the tool was measured for testing the internal consistency of the tools by administrating the same tools to the same subject under the similar condition on one or more occasion (test-retest reliability).

**A pilot study:** It was conducted on 10% of the nurse managers and the elderly participants. This sample was excluded from the total sample. The pilot study was carried out to test the applicability and clarity of the constructed questionnaire and detect any problems that might arise during the actual collection of data. Then the necessary modifications and clarifications of some questions were done according to the results of the pilot study and final form was developed and used in data collection

**Statistical Analysis:**

The collected data were scored, tabulated and analyzed using Statistical Package for the Social Science (SPSS) program version 20. Descriptive as well as parametric inferential statistics were utilized to analyze data pertinent to the study. Paired sample t- test and Chi-square test were used to analyze the data. The level of significance was set at  $p < 0.05$ .



### 3. RESULTS

Table 1 presents the socio-demographic characteristics of nurse managers at different units. As shown in the table, the mean age of nurse managers was  $40.3 \pm 5.9$  years old. As well, the table revealed that the majority of nurse managers (93.5%) were females and the mean of their years of experience was  $19.6 \pm 5.7$  years.

Table 2 shows the socio-demographic characteristics of elderly patients at different units. The mean age of the elderly patients sample was  $67.13 \pm 4.2$  years old. As revealed from the table, the majority of elderly patients (63.0%) were females and the highest percentage of them (61.0 %, 70.0 %) live in a rural area and married. About one-third of the elderly patients (31.0%) have a secondary educational level and the majority of them (78.0%) have a moderate income.

Table 3 presents the pre and posttest scores for the nurse managers innovative behavior components. As shown in the table, the highest mean score for all components of innovation behavior (opportunity exploration, Idea generation, Idea championing and Idea implementation) were noticed higher in posttest than pretest. The highest total mean posttest score was  $33.1 \pm 6.1$  compared to the lowest total mean pretest score that was  $26.8 \pm 10.1$ .

Table 4 illustrates the mean and standard deviation regarding aspects of quality of care for elderly patients. As shown in the table, the highest mean score for quality of elderly care ( $34.73 \pm 5.8$ ) was noticed in the discipline aspect of quality care. Also, nearly equal mean score ( $34.45 \pm 5.16$ ,  $34.6 \pm 5.64$ ) were found in both responsiveness and assurance aspects of quality elderly care. It was followed by mean score of communication aspect for the quality of care was  $29.69 \pm 3.62$ . The lowest mean score were present in Baksheesh aspect of quality of care ( $11.89 \pm 2.3$ ).

Table 5 clarifies the total mean posttest score for the elderly patient's agreement about the application of nurse managers innovative behavior. The total posttest score for the elderly patient's agreement about application of nurse manager innovative behavior was  $27.93 \pm 3.9$ .

Table 6 reveals the correlation between the nurse managers' innovative behavior application and the quality of elderly care. As shown in the table there was a positive correlation between the elderly patients' total score for quality of care and nurse managers mean posttest score for application of innovative behavior ( $r=0.3$ ) ( $p < 0.05^*$ ).

**Table (1): Distribution of demographic characteristics for the nurse managers (N=46)**

Demographic characteristics	Studied sample N=46	
	No.	%
Age (In years): Mean $\pm$ SD	$40.3 \pm 5.9$	
Years of experience: Mean $\pm$ SD	$19.6 \pm 5.7$	
Sex:		
Female	43	93.5%
Male	3	6.5%

**Table (2): Distribution of socio-demographic characteristics for elderly patients (N=100)**

Socio-demographic characteristics	Studied sample N=100	
	No.	%
Age (In years): Mean $\pm$ SD	$67.13 \pm 4.2$	
Sex:		
Male	37	37.0
Female	63	63.0
Residence:		
Rural	61	61.0
Urban	39	39.0
Education:		
Illiterate	25	25.0
Primary	30	30.0
Secondary	31	31.0
University	14	14.0
Working condition:		
Still Work	10	10.0
Not work:	90	90.0

<b>Marital status:</b> Single	0	0.0
Married	70	70.0
Divorced	29	29.0
Widowed	1	1.0
<b>Income :</b> Low	19	19.0
Moderate	78	78.0
High	3	3.0

**Table (3): The pre and posttest score for nurse managers innovative behavior components.**

Innovative behavior components	Pretest	Posttest	P value	
Opportunity exploration	7.02 ± 3.7 <sup>a</sup>	9.1 ± 2.3 <sup>a</sup>	t=5.1	p< 0.001**
Idea generation	7.2 ± 3.2 <sup>a</sup>	8.7 ± 2.6 <sup>a</sup>	t=3.4	p< 0.001**
Idea championing	7.1 ± 3.1 <sup>a</sup>	8.8 ± 2.3 <sup>a</sup>	t=3.2	p< 0.05*
Idea implementation	5.5 ± 2.1 <sup>a</sup>	6.5 ± 1.5 <sup>a</sup>	t= 2.5	p< 0.05*
Nurses total mean score for innovative behavior	26.8 ± 10.1 <sup>a</sup>	33.1 ± 6.1 <sup>a</sup>	t=4.7	p< 0.001**

<sup>a</sup> = mean and SD \* = significant

**Table (4): mean and standard deviation of quality of care aspects to elderly patient (N=100).**

Aspects for quality of care	Mean ± SD
Responsiveness	34.45 ± 5.16 <sup>a</sup>
Assurance	34.6 ± 5.64 <sup>a</sup>
Communication	29.69 ± 3.62 <sup>a</sup>
Discipline	34.73 ± 5.8 <sup>a</sup>
Baksheesh	11.89 ± 2.3 <sup>a</sup>
Total score for the quality of care	145.36 ± 19.14 <sup>a</sup>

<sup>a</sup> = mean and SD

**Table (5): Total mean posttest score for elderly patient's agreement about nurse managers innovative behavior.**

Variables	Mean ± SD
Total posttest score for the elderly patients agreement about application of nurse manager innovative behavior	27.93 ± 3.9 <sup>a</sup>

<sup>a</sup> = mean and SD

**Table (6): Correlation between the nurse managers innovative behavior application and the quality of care for elderly patients.**

Variables	Nurse managers mean posttest score for application of innovative behavior
Total score for quality of care	r=0.3 p <0.05*

\* = significant

#### 4. DISCUSSION

The traditional skills for planning, controlling, and managing of care are no longer adequate to move us along a trajectory that leads to better patient, staff, and system outcomes. These methods may have worked in the past, predictable, stable system, but today's system is ever changing and unstable. The expectations to address issues of quality, safety, errors, and resource use are increasingly urgent which means that we need a new understanding of change along with the use of innovation as a tool to address the change (Gelinas, 2016).

Nowadays, training is an essential factor contributing to greater efficiency of the staff and organizations. In fact, it is a vital investment that will lead to internal promotion, staff development and success of organizational plans. The training is an investment in achieving productivity and employee retention through providing career development and job satisfaction in the long run (Chaghari et al., 2017). Every nurse is an innovator who works to solve difficult challenges in the workplace and for their patients. The development of innovative behavior for nurse managers can influence on the quality of care provided to patients. So, the aim of the present study was to develop nurse manager innovative behavior and evaluate its effect on the quality of care for elderly patients.

The present study focused on the development of nurse managers innovative behavior through training them. The results showed the four highest mean rating scores towards nurse manager work innovation behavior aspects. It included the opportunity exploration ( $M=9.1$ ;  $SD=2.3$ ), idea generation ( $M=8.7$ ;  $SD= 2.6$ ), idea championing ( $M=8.8$ ;  $SD=2.3$ ) and idea implementation ( $M=6.5$ ;  $SD=1.5$ ). The highest total mean posttest score was  $33.1 \pm 6.1$  compared to the lowest total mean pretest score that was  $26.8 \pm 10.1$ . In general, nurses innovate on a daily basis. She needs to endeavor to become an expert on her selected field, understanding that learning and innovation go as an inseparable unit (Brysiewicz et al., 2015). This was in agreement with Asurakkody & Shin, (2018) who mentioned that the concept of innovative behavior in nursing context should be addressed in future research because instruments that measure the concept from health care organization were rare. This concept included opportunity exploration, idea generation, idea search, idea communication, idea promotion, championing, application, and overcoming obstacles. This is congruent with Weng et al., (2015) who reported, that nursing experts have been inspiring nurses to pursue innovation in nursing to improve nursing outcomes. Innovation in nursing is about encouraging nurses to utilize their knowledge and abilities to change the old methods of thinking and practicing and to develop new approaches for working that actually enhance nursing practice. In contrast, Deborah & Joyce, (2019) stated that both nurse executives and clinical directors had significantly higher levels of innovativeness compared with nurse managers. Graduate level education and certification were not associated with higher levels of innovativeness.

Concerning to the quality of care provided to the patients, nurse leaders and health care administrators need to maintain quality of care through periodic assessment and evaluation of all aspects of nursing care (Atallah et al., 2013). The results of the current study illustrated that the highest mean score for quality of elderly care ( $34.73 \pm 5.8$ ) were noticed in discipline aspect of quality of care. Also, nearly equal mean score ( $34.45 \pm 5.16$ ,  $34.6 \pm 5.64$ ) were found in both responsiveness and assurance aspects of quality of care for elderly patients followed by mean score of communication aspect for quality of care was  $29.69 \pm 3.62$ . This result is consistent with the study done in Ghana where the overall satisfaction of patients concerning the quality of services in the hospital was good (Peprah & Atarah, 2014). Likewise, the study findings are in line with the study from Saudi Arabia where patients were more satisfied in empathy followed by tangibility and responsiveness dimension however, this study explored the satisfaction with all healthcare providers not only nurses (Alghamdi, 2014). In contrast, a study carried out in Tanzania Mwananyama hospital to determine the patient's level of satisfaction with the quality of care found that patients were dissatisfied with the quality of care especially about communication skills in showing compassion, politeness and active listening, availability of essential drugs, and improvement on clinicians' prescription skills. They concluded that having a policy to address the above issues would indirectly improve the patients satisfaction and hence quality of care (Khamis & Njau, 2014). So, the hospitals should consider mechanisms to improve the nurses' communication skills and interpersonal relationships beyond training on direct patient care (Ahmed et al., 2014) and the patients must be included continuously in the evaluation of care provided to them.

Many researchers agreed that evaluation of the different dimensions for quality of care is important. The research results for the study performed by Özlü & Uzun, (2015) reported that about half of the patients (45.3%) evaluated the nursing care to be good, and 0.8% of them stated that the nursing care was very poor. Majority of those patients who were satisfied with the nursing services were 65 years of age and above, and the patients' satisfactions with the nursing services according to age group were found to be statistically significant ( $p<0.01$ ). Correspondingly, Sharew et al., (2018) mentioned that about half the admitted patients were satisfied with the nursing care. Another research performed by Freitas et al., (2014) about quality of nursing care and satisfaction of patients attended at a teaching hospital revealed high level of patient satisfaction with the care they were receiving from the nurses in all the nursing domains evaluated. At the



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Vol. 7, Issue 3, pp: (277-288), Month: September - December 2020, Available at: [www.noveltyjournals.com](http://www.noveltyjournals.com)

same line Grace et al., (2018) mentioned that, majority of the patients in both study groups were satisfied with the overall quality of nursing care they received. Moreover, the level of education influenced patients' perception of individualized quality care. Therefore equipping patients with education can help them understand their health care needs and also appreciate quality when it's provided. In addition, Chalise et al., (2018) stated that the highest mean score for the dimensions of quality of care was rated in "nurses respond patients immediately upon their query. The overall patient's satisfaction with nursing care was found good. Patients were highly satisfied in responsiveness dimension followed by empathy and reliability dimension.

Regarding to the elderly patient's agreement about application of nurse managers innovative behavior, the current study revealed that the total posttest score for the elderly patient's agreement about application of nurse manager innovative behavior was  $27.93 \pm 3.9$ . This comes in agreement with Weng et al., (2015) who stated that nursing innovation help nurses to create, set up, assess, and acknowledge the innovative techniques, procedures, or ventures in their hospitals and then modify them into innovative products or services that clients can acknowledge. Besides, Montani et al., (2015) concluded that an ability to perceive future beneficial outcomes and improvements of one's work led employees to foresee opportunities and enact in innovative behavior. In addition, the perceived level of support, supervision, compensation, and training have all been proven to have an influence on innovative behavior (Veenendal & Bondarouk, 2015).

There is no doubt that the employees are the main force for the organizations, and their innovative behaviors are vital for innovation performance of an organization (Li & Zheng, 2014). The innovation positively affected employees' work performance. The positive effects included: good work efficiency and quality care, increased utilization of healthcare resources, and positive team interaction. Customers also thought that innovative nurses provided a higher quality of service (Huang et al., 2014). This comes in accordance with the results of the present study. There was a positive correlation between the elderly patients' total score for quality of care and the nurse managers mean posttest score for application of innovative behavior ( $r=0.3$ ) ( $p < 0.05^*$ ). This can explain the relationship between the practicing of the innovative behavior and the customer experiences and agreement about the quality of care provided to them. Also, this was in accordance with Schaijk, (2018) who stated that when employees receive much training, the level of affective organizational commitment seems to have hardly any impact on the amount of innovative behavior being expressed by the employees. In other words, it seems that employees receiving much extensive training give back innovative behavior. Based on the above, there is a significant positive effect of extensive training as a moderator on the relationship between affective organizational commitment and innovative behavior. At the same line, El Gendi, (2017) research paper on the employees' perception of organizational climate in Egypt, where work flexibility and polychronicity play a role in stimulating the employee innovative ability. The researcher stated that, there is a relationship between employees' perceptions of climate for innovation, organization innovativeness, and customer experience in a service setting. At the last, the development of nurse managers innovative behavior and training them to practice it was important and essential to enhance the quality of care provided to elderly patients.

## 5. CONCLUSION

The results of this study concluded that, the nurse managers who receive the innovative behavior training program had a higher mean posttest score as compared to pretest score. There was an elderly patient's agreement about nurse manager innovative behavior after innovative behavior training program. Also, there was a positive correlation between the elderly patients' agreement about nurse manager innovative behavior score and quality of care score.

## 6. RECOMMENDATIONS

Based on the study findings the following recommendations are suggested:

1. Healthcare organizations should focus on the development of the innovative behaviors among the nurse managers.
2. Practicing of innovative behaviors by the nurse managers to increase the quality of care for the hospitalized elderly patients.
3. Healthcare organizations should monitor the patients' opinions about the quality of care provided to them.

**REFERENCES**

- [1] Afsar B., Cheema S, & Bin SaeedB. (2018). Do nurses display innovative work behavior when their values match with hospitals' values? *European Journal of Innovation Management*. Vol. 21 No. 1, 2018. pp. 157-171.
- [2] Ahmed T., \* Nega Assefa, , Asrat Demisie, Abera Kenay.(2014). Levels of Adult Patients' Satisfaction with Nursing Care in Selected Public Hospitals in Ethiopia. *International Journal of Health Sciences*, Qassim University, Vol. 8, No. 4 .
- [3] Alasad J, Nazih Abu Tabar, & Mohannad Eid AbuRuz.2015. Patient Satisfaction with Nursing Care Measuring Outcomes in an International Setting. *JONA* Volume 45, Number 11, pp 563-568.
- [4] Alghamdi FS. The impact of service quality perception on patient satisfaction in Government Hospitals in Southern Saudi Arabia. *Saudi Med J*. 2014; 35(10): 1271– 1273. Available from <https://www.ncbi.nlm.nih.gov/pubmed/25316476>
- [5] Alsaqri, S. (2016). Patient satisfaction with quality of nursing care at governmental hospitals, Ha'il City, Saudi Arabia. *Journal of Biology, Agriculture and Healthcare*, 6(10), 128–142.
- [6] Andaleeb. S.S.2001. Service quality perceptions and patient satisfaction: A study of hospitals in a developing country. *Social Science and Medicine*, 52(9),1359-1370.
- [7] Asurakkody TA & Shin DY.2018. Innovative Behavior in Nursing Context: A Concept Analysis. *Asian Nursing Research* 12 (2018) 237-244. [www.asian-nursingresearch.com](http://www.asian-nursingresearch.com).
- [8] Atallah MA, Hamdan-Mansour AM, Al-Sayed MM, Aboshaiqah AE. 2013. Patients' satisfaction with the quality of nursing care provided: The Saudi experience. *International Journal of Nursing Practice* 2013;19: 584–590. Available at: <https://www.sciencedirect.com/science/article/pii/S1976131718302470>
- [9] Bahrami M, Purfarzad Z, Keshvari M, Rafiei M. (2019). The components of nursing competence in caring for older people in Iranian hospitals: A qualitative study. *Iranian J Nursing Midwifery Res* 2019;24:124-30.
- [10] Brodtkorb, K., Skisland, A. V., Slettebo, A. & Skaar, R. (2015). Ethical challenges in care for older patients who resist help. *Nurs Ethics*, 22, 631-41.
- [11] CAPMAS .(2019). Vital statistics for Egypt. Accessed at june 2019. Available at [http://www.capmas.gov.eg/Pages/StaticPages.aspx?page\\_id=5035](http://www.capmas.gov.eg/Pages/StaticPages.aspx?page_id=5035).
- [12] Central Intelligence Agency (CIA). The world fact book. Population age structure. (2014). Available at <https://www.cia.gov/library/publications/the-world-factbook/geos/eg.html>. Accessed on January 28, 2014.
- [13] haghari M., Saffari M., Ebadi A., & Ameryoun A. (2017). Empowering Education: A New Model for In-service Training of Nursing Staff. *jAdv Med Educ Prof*. 2017 Jan; 5(1): 26–32. ابحث عنه في التت
- [14] Chalise GD, Bharati M, Niraula GD et al. How the patient perceives about nursing care: patient satisfaction study using SERVQUAL model. *Galore International Journal of Health Sciences & Research*. 2018;3(2): 23-29.
- [15] Conroy SP, Ansari K, Williams M, et al. (2016). A controlled evaluation of comprehensive geriatric assessment in the emergency department
- [16] Davis, K., Buttorff, C., Leff, B., Samus, Q. M., Szanton, S., Wolff, J. L., &Bandeali, F. (2015). Innovative care models for high-cost Medicarebeneficiaries: Delivery system and payment reform to accelerateadoption.*American Journal of Managed Care*,21,e349–e356.
- [17] De Jong, J. P., & Hartog, D. (2008) . Innovative work behavior: Measurement and validation. Retrieved from <http://ondernemerschap.panteia.nl/pdf-ez/h200820.pdf>.
- [18] Deborah JS, & Joyce JF .(2019). Levels of Innovativeness Among Nurse Leaders in Acute Care Hospitals. *ONA: The Journal of Nursing Administration*: Volume 49 - Issue 3 - p 150–155.

- [19] El Gendi, R. (2017). The Relationship between Employees' Perceptions of Climate for Innovation, Organisation Innovativeness, and Customer Experience in a Major Telecommunications Organisation in Egypt. PhD Thesis. School of Marketing and Reputation, Henley Business School.
- [20] Elbeck, M. (1987). An approach to client satisfaction measurement as attribute of health service quality. *Health Care Management Review*, 12(3), 47–52.
- [21] Eurostat. Eurostat Statistics Explained. Population Structure and ageing.: Eurostat; 2017 [updated 31 October 2017; cited 2017 8 November 2017]. [http://ec.europa.eu/eurostat/statistics-explained/index.php/Population\\_structure\\_and\\_ageing](http://ec.europa.eu/eurostat/statistics-explained/index.php/Population_structure_and_ageing).
- [22] Freitas, J. S. D., Silva, A. E. B. D. C., Minamisava, R., Bezerra, A. L. Q., & Sousa, M. R. G.D. (2014). Quality of nursing care and satisfaction of patients attended at a teaching hospital. *Revista Latino-Americana de Enfermagem*, 22(3), 454–460.
- [23] Frilund M. (.2018). Awareness of Ethical Challenges and Nursing Intensity in Care of Older People. *International Journal of Caring Sciences* May- Volume 11| Issue 2| Page 645. [www.internationaljournalofcaringsciences.org](http://www.internationaljournalofcaringsciences.org).
- [24] Gelinas, L.(2016). Enhancing innovation skills to inspire future thinking,American nurse today ,available at : <https://www.americannursetoday.com/teamwork-unexpected-tool-innovation/>
- [25] Ghiwet, L., & Kidanu, K, (2014). Assessment of patient's perfection and expectation towards nursing care in Ayder referral hospital, Mekelle city, Northern Ethiopia, 201; A cross sectional study.
- [26] Grace G.K, et al. Evaluation of Patient Satisfaction with Nursing Care at Two Public Hospitals in Kenya: An Interventional Study. *Nurs Health Care Int J* 2018, 2(4): 000151.
- [27] Hammond, M. M., Neff, N. L., Farr, J. L., Schwall, A. R., & Zhao, X. (2011). Predictors of individual-level innovation at work: A meta-analysis. *Psychology of Aesthetics, Creativity, and the Arts*, 5(1), 90– 105. doi: 10.1037/a0018556
- [28] Huang, Ching-Yuan; Weng, Rhay-Hung; Lo, Yun-Shu. (2014). Exploring the Work Performance of Innovative Nurses in Hospitals: the Views of Nurses, Nurse Managers and Customers
- [29] Khamis K, & Njau B (2014) Patients' level of satisfaction on quality of health care at Mwananyamala hospital in Dar es Salaam, Tanzania. *BMC Health Services Research* 14: 400.
- [30] Li, C., Zhao, H. and Begley, T.M. (2015). Transformational leadership dimensions and employee creativity in China: A cross-level analysis. *Journal of Business Research*, 68(6), pp.1149-1156.
- [31] Li, X.Y. and Zheng, Y.S. (2014). The Influential Factors of Employees' Innovative Behavior and the Management Advices. *Journal of Service Science and Management*, 7, 446-450.
- [32] Montani, F., Odoardi, C. and Battistelli, A. (2014). Individual and contextual determinants of innovative work behaviour: Proactive goal generation matters. *Journal of Occupational and Organizational Psychology*, 87(4), pp.645-670.
- [33] Moreira MR, Gherman M, Sousa PS.( 2017). Does innovation influence the performance of healthcare organizations? *Innovation*. 19(3):335e52 <https://doi.org/10.1080/14479338.2017.1293489>.
- [34] Omran G., EL Molla, M. & Abd EL-Aziz, M. (2013). Quality of Nursing Care and Satisfaction for Patient Under Chemotherapy Treatment at Cairo University Hospitals, *Med. J. Cairo Univ.*, Vol. 81, No. 1, June: 465-472, 2013.
- [35] Ozberk K, Uzunboylu H. A (2017). Content analysis of the studies on school manager performance and image outcome expectations. *Rev Fac Educ Albacete*. 32(2):9e22.
- [36] Peprah AA, Atarah BA. (2014). Assessing Patient's Satisfaction Using SERVQUAL Model: A Case of Sunyani Regional Hospital, Ghana. *International Journal of Business and Social Research.*; 4(2). Available from <https://www.thejournalofbusiness.org/index.php/site/article/view/404>.

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 Vol. 7, Issue 3, pp: (277-288), Month: September - December 2020, Available at: [www.noveltyjournals.com](http://www.noveltyjournals.com)

- [37] Schaijk S.V. (2018). The Relationship between Affective Organizational Commitment, Organizational Citizenship Behavior and Innovative Behavior. In a Research with Extensive Training and Innovative Organizational Climate as Moderators. Master in Strategic Human Resource Management. Faculty School of Management. Pp 34-35.
- [38] Sharew NT, Bizuneh HT, Assefa HK.(2017). Investigating admitted patients 'satisfaction with nursing care at Debre Berhan Referral Hospital in Ethiopia: a cross sectional study. *BMJ Open* 2018; 8:e021107. Doi: 10.1136/bmjopen-021107.
- [39] Shebehe J & Hansson A. (2018). High hospital readmission rates for patients aged  $\geq 65$  years associated with low socioeconomic status in a Swedish region: a cross-sectional study in primary care, *Scandinavian Journal of Primary Health Care*, 36:3, 300-307, DOI:10.1080/02813432.2018.1499584.
- [40] Sönmez B, & Yıldırım A. (2019). "The mediating role of autonomy in the effect of pro-innovation climate and supervisor supportiveness on innovative behavior of nurses", *European Journal of Innovation Management*, Vol. 22 Issue: 1, pp.41-58, <https://doi.org/10.1108/EJIM-05-2018-0088> Permanent link to this document:<https://doi.org/10.1108/EJIM-05-2018-0088>
- [41] Stimpfel AW & Gilmartin MJ. (2019). Factors Predicting Adoption of the Nurses Improving Care of Health system Elders Program. *Nursing Research*. Volume 68, No. 1. Wolters Kluwer Health, Inc. [www.nursingresearchonline.com](http://www.nursingresearchonline.com).
- [42] Tavares JP, Silva AL, Sá-Couto P, Boltz M, Capezuti E. Nurse perception of care of hospitalized older adults – a comparative study between northern and central regions of Portugal. *Rev. Latino-Am. Enfermagem*. 2017;25:e2757.
- [43] Tung, Thitnut Akkadechanunt, Ratanawadee Chontawan .( 2014). Factors Related to Innovation Behavior among Nurses in Tertiary General Hospitals,the Central Region, The Socialist Republic of Vietnam *Nursing Journal* Volume 41 No.2 April-June 2014117
- [44] Veenendaal, A. and Bondarouk, T. (2015). Perceptions of HRM and their effect on dimensions of innovative work behaviour: Evidence from a manufacturing firm. *management revu*, 26(2), pp.138-160.
- [45] Weng RH, Huang CY, Chen LM, Chang LY. (2016). Exploring the impact of transformational leadership on nurse innovation behaviour: a crosssectional study. *J Nurs Manag*. 2015;23(4):427-439. doi:10.1111/jonm.12149.
- [46] Whitby P. (2018): Role of front-line nurse leadership in improving care. *Nursing Standard*. doi: 10.7748/ns.2018.e11018
- [47] Thanuja AriyasingheAsurakkodySo YoungShin.( 2018). Innovative Behavior in Nursing Context: A Concept Analysis, *Asian Nursing Research*, Volume 12, Issue 4, December 2018, Pages 237-244.Available at: <https://www.sciencedirect.com/science/article/pii/S1976131718302470>
- [48] Barrientos E, Reilly AH (2016) .Unpacking' 'Give Back Box:': A Social Enterprise at the Intersection of Leadership, Innovation, and Sustainability. *Journal of technology management & innovation*, 11(1): 48-54.
- [49] Brett JF & Luciano MM .( 2019). 3 Steps for Engaging Health Care Providers in Organizational Change. Available at <https://hbr.org/2018/10/3-steps-for-engaging-health-care-providers-in-organizational-change>