

Applying Nursing Professionalism Evaluation Model on Nurses' Competency Outcomes

Elham Youssef Elhanafy¹, Ghada Moh Samir El Hessewi²

¹(Nursing Administration Department, Faculty of Nursing, Damanhour University, Egypt)

(Mental Health Nursing Department, Medina, Taibah University, KSA)

²(Nursing Administration Department, Faculty of Nursing, Damanhour University, Egypt (Department Of Health Sciences, Princess Nourah Bint Abdulrahman University, Riyadh, KSA)

Abstract: Introduction: nursing professionalism is an essential ideal of professional works, which enhances nursing competency. Professionalism in nursing plays a paramount role to attain the goals of health care system and nursing care provided to patients that enhance patient satisfaction and improve patients' outcome. Aims: study aims to apply the nursing professionalism evaluation model to nurses' competency outcomes. Method: a quasi-experimental design was used. The study was conducted at Damanhour National Medical Institute. 210 nurses took part in this study. Three questionnaires were used for data collection; the first questionnaire related to demographic characteristics, the second questionnaire is nursing professionalism tool which includes 28 items divided into three domains; and the third questionnaire is nursing competency outcome which includes 32 items divided into eight domains. Results: the mean age of studied nurses was 36.54±8.91year and the mean of nursing experience was 14.6±8.31 years. The results shows a marked improvement in clinical competency, face to face interview and peer review post educational program of nurses with a statistically significant difference at (P= < 0.01) between pre / post-application models of nurses. Also, there is a marked improvement in assessment, intervention, management, and leadership skills post educational program of nurses with a statistically significant difference at (P= < 0.01) among pre / post-application models of nurses. Conclusions: There is a highly significant positive correlation between total nursing professionalism among the studied nurses' competency. There is also a marked improvement in nursing competency and nursing professionalism post educational program.

Keywords: Nursing Professionalism, Nursing competency, Outcome, health care.

I. INTRODUCTION

“Professionalization” stands an essential distinguishing ideal of in-service professions. The professionalization concept is expressed in the terminology of many job groups and has a long history, especially in social context. Dynamic features and numerous interpretations of professionalization result in several definitions with different functions and nature. Over the years, many people talked about professionalization in nursing and its features. Therefore, there are multiple definitions and characteristics of professionalization in nursing. Similarly, researchers used different approaches and tools for their assessment and evaluation of nurses' professionalism (Carpenter, 2018).

The nursing profession status is an inter-profession and intra-profession challenge. For many years, scientists reflected on nursing as a semi-professional career. Until 1970, nursing profession was considered a female kind of work and it was considered a barrier to professionalization in nursing due to high workload and part-time work (Bussard & Lawrence, 2019). At that time, some factors served as barriers for nursing as a profession such as the slow formation of scientific fundamentals of nursing, the differences in educational requirements for nurses, the lack of academic education at the entry-level of nursing progressions, and the lack of theory and theory-based research (Choi & Lee, 2018). Professionalism

in nursing is more than just wearing a uniform besides talking graciously. It includes a set of standards that are designed to enrich the quality of patient care through improving approaches as well as the decisions that guide nurses performs every day. Work in professional surroundings can support nurses to develop skills that are valued at all phases of their career, from junior practical roles to major leadership roles. Accruing work experience and following advanced education can create more opportunities to reinforce core professional values (Ko et al., 2018).

There are three significant categories of nursing professionalism components. The first category of professionalism is cognitive which focuses on the ability to frequently learn about professional conduct and apply this rising base of knowledge in work settings. Eventually, nurses who practice this skill should develop the key tools they need to prefer and make decisions effectively. The second category is attitudinal which incorporates the attitudes and ideas that guide nurses as they perform their job responsibilities and advance through their careers. Ideally, the attitudes of nurses should bring into the line with practice standards and the wider goals of their organizations. The third category is psychomotor which promote the awareness as professionals gain experience. They can do more than structure their clinical skills; they can improve their management skills and improve understanding of the inherent responsibilities and obligations involved in the practice of nursing (Gunn et al., 2019).

The essence of nursing competency is “the ability to practice nursing that encounters the requirements of customers cared for employ, logical thinking, and accurate nursing skills”. The nursing competency structure involves four abilities that are closely related and utilized in all types of nursing practice settings like the ability to understand requirements, the ability to deliver care, collaborate and support decision-making. These four capabilities are closely related and utilized in all types of nursing practice settings (Thomas, 2019).

Nursing competency is an essential capability that is obligatory for satisfying nursing responsibilities. Consequently, it is significant to obviously define nursing competency in order to establish a basis for nursing educational programs. It is likewise significant to classify the developing processes of nursing competency for professional growth after obtaining the nursing license (Tan et al., 2018). Although, the competencies are significant in refining the quality of nursing, the concept of nursing competency has not been totally developed and therefore challenges continue in determining the meaning and structure of nursing competency. A competency level is vital for nursing professionals, training approaches and so on. So, additional investigation is required to investigate the concept of nursing competency (Liu & Aunguroch, 2018).

II. SUBJECTS AND METHODS

Research design:

A quasi experimental design was utilized.

Setting:

The study was conducted at Damanhour National Medical Institute's at medical unit, surgical unit and critical care units (N=210). Specifically, medical units (N=55) (general medical A & B; hepatology; renal; hematemesis; and neurology); surgical units (N=48) (general surgical A, B, C, & D; neurosurgery; and E.N.T surgery); and critical care units (N=107) (intensive care units; and emergency recovery). The Damanhour National Medical Institute is affiliated with the General Organization for Teaching Hospital and Institutes and is considered the main teaching hospital in El-Beheira.

Subjects

The study involved all the available nurses who were working at the previously mentioned settings (210, nurses regardless of their age, gender, qualification, and experience).

Study tool:

The data was collected through three questionnaires: The first questionnaire is self-administered questionnaire which includes questions related to socio-demographic characteristics of the subjects such as: age, gender, working place, marital status, qualification, and years of experiences. The second questionnaire is nursing professionalism which aims to assess nurses' professionalism. It was adapted by the researcher based on Kim et al. (2017). The questionnaire includes 28 items divided into three domains “clinical competency, face to face review and peer review”. Each item was rated at the

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3-point Likert scale "rarely, sometimes and always". The third questionnaire is nursing competency outcome which is adapted from Sastre-Fullana et al., (2017) for assessing nursing competency outcome. This questionnaire includes 32 items divided on eight domains: "Assessment and Intervention Skills, communication skills, Critical thinking, Human Caring, and Relationship Skills, Management Skills, leadership skills, teaching skills and knowledge integrating skills". Each item was rated at the 3-point Likert scale "rarely, sometimes and always".

Preparatory Phase

In this phase the literature related to nursing professionalism and nursing competency outcome has been reviewed to prepare the tools for data collection. Modifications to the tools were made based on the experts' opinions.

Ethical Considerations

The research consent was obtained before starting data collection from the Faculty Ethical Committee. Official permission to conduct the study obtained from the medical director of Damanhour National Medical Institute. The researcher met the hospital director and explained the study aims and the methods of the data collection.

Before starting, the researcher has clarified the study's aim to the subjects of the study.

Verbal consent was obtained from the nurses before starting the study; the aims of study were clarified to the participants and it was made clear that all data including personal details is confidential and will be only used for research purposes. Also, the participants were made aware that their participation is voluntarily and they have the right to withdraw from the study at any time.

Pilot Study

The pilot study was carried out on 21 nurses who represent 10% of the participants to test the applicability and the clarity of questionnaires, as well as to estimate the time required to fill in the questionnaire.

Content validity and reliability:

The tools were reviewed by six experts (professors) in nursing administration. Their opinions regarding the format, layout, consistency, accuracy, and relevancy of the tools were taken into account. Reliability of the pretest was carried out to measure the reliability. Cronbach's Alpha for professionalism tool = .845 and Cronbach's Alpha for competency outcome = .813.

Fieldwork

- An official letter was issued from the Faculty of Nursing at Damanhour University, and Damanhour National Medical Institute to carry out the study. Data were collected during three months, specifically, March 2019 to May 2019.
- All the participants in this study have been informed about the purpose and the nature of the study.
- The pre-test was distributed by the researchers and filled in by the nurses to assess nurses' professionalism and competency.
- The educational sessions were developed based on the results of the pre-test results. Educational sessions were carried out through five sessions (30- 40) minutes for each session, and they were delivered in a friendly, interactive, small learning environment with participant resources provided.
- Educational sessions include information about definition, importance, categories of nursing professionalism and nurses' competency.
- Educational sessions provide an overview about the definition, concepts, importance, categories of nursing professionalism and nurses' competency. The key issues were nursing professionalism to maintain high quality. Professionalism in nursing is an essential element of exceptional health organization and patient care, besides, nursing competency includes core abilities that are required for fulfilling professionalism in nursing.

- After four weeks of the last session, and after three months the researchers provided the post-test to detect the improvement in nurses' professionalism and nurses' competency by using the same post-test used at the assessment phase for measuring the improvement of nurses' professionalism and nurses' competency.

Statistical Analysis

All data were reviewed, coded and recorded on SPSS version 22. Data were presented using descriptive statistics in the form of mean and S.D. Spearman correlation measures the strength and direction of the association between two ranked variables. The T-test is a nonparametric test that compares means pre and post-education programs. Linear regression attempts to model the relationship between two variables by fitting a linear equation.

III. RESULTS

Table (1): Shows the distribution of Nurses regarding their characteristics. (N= 210).

Items	No	%
Age		
20 - <25	55	26.2
25 - <30	60	28.6
30 - < 35	47	22.3
35 or more	48	22.9
\bar{x} S.D	36.54±8.91	
Gender		
Male	67	31.9
Female	143	68.1
Marital Status		
Married	161	76.7
Not Married	49	23.3
Qualification		
Secondary nursing degree	73	34.8
Technical nursing degree	94	44.8
Bachelor nursing degree	31	14.7
Higher education	12	5.7
Working place		
Intensive and critical care units	107	50.9
Medical units	55	26.2
Surgical unit	48	22.9
Years of Experience		
5<15 years	119	56.7
15 - <25 years	49	23.3
>25 years	42	20
\bar{x} S.D	14.6±8.31	

Table (1) displays that 28.6% of the studied nurses' age range between 25 - <30 years, the mean of age is 36.54±8.91year. In term of gender and marital status, 68.1% and 76.7% of the intentional nurses are female and married, correspondingly. In relation to the educational level of nurses, it was found that 44.8% of them had technical nursing degree. Regarding the working place, 50.9% of the studied nurses are working at Intensive and critical care units. Also, 56.7% of the nurses understudy their years of experience ranged between 5<15 years, with mean14.6±8.31 years.

Table (2): Comparison between mean scores pre and post-application model of nurses regarding nursing professionalism (N= 210).

Items	Mean scores Pre	Mean scores Post	T. paired test	P. value
Clinical competency	31.08±7.66	45.26±8.19	13.26	.000**
Scientific	8.19±2.48	13.54±1.26	8.35	.002**
Technical	6.54±2.03	9.56±1.99	6.16	.009**
Ethical	5.76±1.46	10.08±1.17	9.22	.001**
Aesthetic	4.79±1.31	7.28±0.97	4.08	.011*
Existential	4.11±1.26	7.81±1.00	3.99	.012*
Face to face interview	6.08±2.34	10.04±0.91	8.55	.002**
Peer review	7.65±2.65	11.05±3.11	9.37	.001**
Total nursing professionalism	44.28±8.14	68.15±11.26	17.08	.000**

Table (2) shows that there is a marked improvement in clinical competency, face to face interview and peer review post educational program of nurses with a statistically significant difference at (P= < 0.01) between pre / post-application of model to nurses. Finally: there is a marked improvement in total nursing professionalism in post educational program of nurses with a statistically significant difference at (P= < 0.01) among the pre/post-application model to nurses.

Figure (1): Mean scores of nurses regarding total nursing professionalism

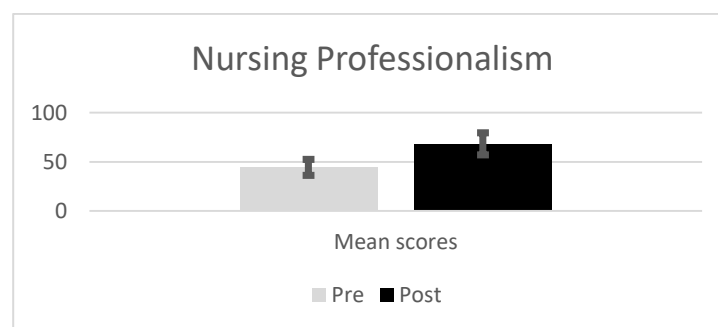


Figure (1) shows that there is a difference in nursing professionalism between pre and post educational program to nurses which is evident in the mean score of total nursing professionalism at a pre-application model of nurses which represents 44.28±8.14. While the mean score at the post educational program of nurses was 68.15±11.26.

Table (3): Comparison between mean scores pre and post-workshop of nurses regarding nursing competency (N= 210).

Items	Mean scores Pre	Mean scores Post	T. paired test	P. value
Assessment and Intervention Skills	4.16±1.17	7.59±1.55	9.101	.002**
Communication Skills	21.14±5.68	26.18±2.22	6.280	.007**
Critical Thinking Skills	4.59±1.05	5.78±2.19	3.591	.021*
Human Caring and Relationship Skills	4.41±1.88	7.90±0.76	8.223	.005**
Management Skills	6.49±2.00	9.86±1.88	8.161	.004**
Leadership Skills	6.11±1.57	10.45±0.76	11.260	.000**
Teaching Skills	2.68±1.10	3.14±1.35	3.102	.026*
Knowledge Integration Skills	2.74±0.90	4.32±1.20	4.091	.011*
Total	51.38±11.6	71.41±9.08	17.012	.000**

Table (3) shows that there is a marked improvement in assessment, intervention, management, and leadership skills post educational program of nurses with a statistically significant difference at (P= < 0.01) between pre / post-application model of nurses. Finally: there is a marked improvement in total nursing competency post educational program of nurses with a statistically significant difference at (P= < 0.01) between pre / post- workshop of nurses. .

Figure (2): Mean scores of nurses regarding total nursing competency

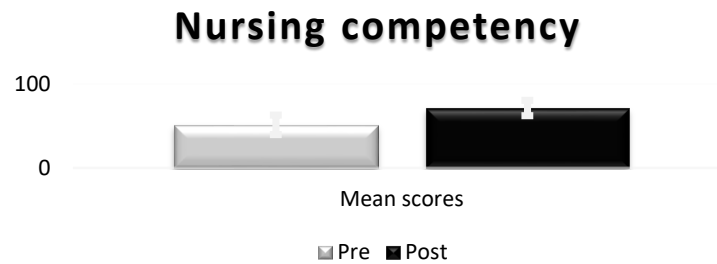


Figure (2) shows that there is a difference in whole nursing competency of the studied nurses between pre and post educational programs of nurses evidenced by the mean score of total nursing competency at pre-workshop of nurses 51.38±11.6. While the mean score of the post-workshop of nurses was 71.41±9.08.

Table (4): Correlation between studied variable

Items	Nursing professionalism
Nursing Competency	R .931 p. value .000**

Table (4) shows that there is a highly significant positive correlation between the total nursing competency of the studied nurses and nursing professionals.

Table (5): Multiple Linear regression model

	Unstandardized Coefficients		standardized Coefficients	T	P. value
	B		β		
Age	.461		.454	7.482	.014*
Educational level	.924		.717	9.407	.004**
Gender	.308		.254	2.825	.051
Marital status	.254		.126	1.351	.054
Working place	.802		.708	11.300	.005**
Years of experience	1.309		.417	14.001	.001**
Nursing competency	1.746		.811	15.251	.000**
Model summary					
Model	R	R square	Adjusted R square	Std. error of estimate	
Regression	.954	.912	.864	.524	

a. Dependent Variable: Nursing professionalism.

b. Predictors: (constant) Age, Educational level, Gender, Marital status, Working place, Experience and Nursing competency.

Table (5) shows significant higher frequencies between educational level, working place, years of experience and total nursing competency with total nursing professionalism of the studied nurses at (p = <0.01). The frequency of total nursing professionalism was not predicted by gender and marital status at (p = >0.05).

Table (6): Multiple Linear regression model

	Unstandardized Coefficients	standardized Coefficients	T	P. value
	<i>B</i>	β		
Age	.385	.374	8.133	.018*
Educational level	.993	.688	8.033	.009**
Gender	.167	.134	1.460	.063
Marital status	.254	.325	2.024	.051
Working place	.862	.810	14.260	.001**
Years of experience	1.219	.499	11.370	.007**
Nursing Professionalism	1.699	.641	15.201	.000**
Model summary				
Model	R	R square	Adjusted R square	Std. error of estimate
Regression	.894	.799	.751	.434

a. Dependent Variable: Nursing competency

b. Predictors: (constant) Age, Educational level, Gender, Marital status, Working place, Experience and Nursing professionalism.

Table (6) shows significant higher frequencies between educational level, working place, years of experience and total nursing professionalism with total nursing competency of the studied nurses at ($p < 0.01$). The frequency of total nursing competency was not predicted by gender and marital status at ($p > 0.05$).

IV. DISCUSSION

Conferring to the characteristics of studied nurses, this study revealed that the mean of nurses' age was 36.54 ± 8.91 years and the mean of experiences was 14.6 ± 8.31 . These results are supported by Kim & Han (2019) who reported that the mean age of nurses was 33.99 ± 7.64 . On the other hand, these results are inconsistent with the study performed by Siemon et al., (2019) which reported that the mean of nurses' years of experience was 6.35 ± 2.36 .

Regarding the qualification of the studied nurses, this study showed that less than half of them had technical education, one-third of them had secondary education and half of them worked at critical care units. These results are in disagreement with Leung et al. (2016) and Manojlovich & Ketefian (2016) who reported that the majority of the studied nurses had Bachelor nursing degree.

In relation to nursing professionalism, the present study reported that there is a marked improvement in clinical competency, face to face interview and peer review post-application model of nurses with a statistically significant difference at ($P = < 0.01$) between pre / post-application model of nurses. These results are explained in regard to the training program based on the results of the pre-test and the use of terms and language appropriate to attendance and rely on the means of explanation to facilitate access to information. These results are in the same line with Kim et al. (2017) and Gazaway et al. (2018) who stated that the training program improves nursing professionalism. Also, a consistent is found with Hidayati et al. (2019) which reported that a series of education and training programs developed the output in the form of increased knowledge and attitudes about nurse professionalism.

Regarding nursing competency, this study identified a marked improvement in communication, intervention, management, and leadership skills post-workshop of nurses with statistical significant differences at ($P = < 0.01$) between pre/ post-application model of nurses. In this regard, these results are explained by the use of terms and appropriate language to attendance and the use of illustrative aids such as PowerPoint, handout and group discussion during the lecture. These results are supported by Díaz et al. (2019) who reported that educational programs had a positive effect on communication and teamwork. Also, there is an agreement with Sami et al. (2019) who reported that there was a marked improvement at nursing competency after Simulation-Based Training.

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According to the correlation between the participants' variables, the present study stated that there is a highly significant positive correlation between the total nursing competency of the nurses and nursing professionalism. This result agrees with Nguyen et al. (2018) and Shahrudin et al. (2019) who presented that there is a significant relationship between professionalism and clinical competency.

Regarding the multiple linear regression model, this study revealed that there are higher frequencies between educational level, working place, years of experience and total nursing competency with total nursing professionalism among the studied nurses at ($p = <0.01$). The frequency of total nursing professionalism was not predicted by gender and marital status at ($p = >0.05$). These results agree with Dikmen et al. (2016) who found that qualifications and years of experience had highly effect on professionalism. Also, Kalantary et al. (2019) reported that there is a statistical significant difference between the total professionalism scores and the educational levels of the nurses and the working place of nurses.

According to the multiple linear regression model, the present study found that there are significant higher frequencies among educational level, working place, years of experience and total nursing professionalism with total nursing competency of the studied nurses at ($p = <0.01$). The frequency of total nursing competency was not predicted by gender and marital status at ($p = >0.05$). These results agree with Jin & Yi (2019) who reported that nursing professional and education have higher effect on nursing competency. In the same vein, Mirlashari et al. (2016) reported that a direct statistical significant correlation among employment status, marital status, level of interest in working in the neonatal intensive-care units and the clinical competence of nurses.

V. CONCLUSION

The present study concludes that there is a highly significant positive correlation between whole nursing professionalism and nursing competency. Also, there is a marked improvement in nursing competency and nursing professionalism post educational program

VI. RECOMMENDATIONS

- Further research for assessing the effect of professionalism on nursing competency with extra subjects and other settings are recommended.
- Developing constant awareness workshop about nursing professionalism and organize educational programs for enhancing nursing competency.

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