Impact of training program on nurses' knowledge regarding professional values in Damanhour fever hospital

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Abstract: Nursing professional values face some changes due to obvious dynamic changes in social attitudes, advanced science, technology and universal diversity. There are many factors that can affect nurses' professional values including culture, professional experience, education, professional training and effect of nursing expertise on values. Caring, activism, trust,human dignity, professionalism and justices are considered the core of nursing professional values.

Aim of the Study: The present study aims to evaluate the impact of an educational program on nurses' knowledge about nursing professional values through implementing one day workshop.

Research Design: A quasi experimental research design was used. Pretest was done. Immediately after implementation of the educational program posttest was performed.

Setting: This study was conducted at Damanhour fever hospital.

Subjects: (n=93) Nurses who are working at fever hospital and accepted to participate in this study were selected.

Study instrument: Self-administered questionnaire was developed and was used to measure nurses' knowledge about "Nursing Professional Values" and consisted of six parts.

Results: showed significant differences in all nursing professional values dimensions namely, caring, activism, trust, professionalism, justice and over all values, between pre and post program implementation.

Conclusion: the used educational program has significant difference on some on nursing professional values.

Recommendation: continuous periodical one-day work shop about nursing professional values for all hospital nursing staff and involve all formal nursing institutions including nursing syndicate in this work shop.

Keywords: Nursing Professional Values, educational program, activism, professionalism, justice, trust, caring

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I. Introduction

Nurses' professional values are the criteriathat guide nurses' actions, it is accepted by all nursing professional groups and the community and it provides guidelines for all nursing beliefs, attitudes and behavior. These professional values guide nurses' actions, rights and responsibilities [1]. In other words, nurses' professional values enlighten nurses' social interaction within the profession and the whole community. These values are learned in the undergraduate years and being internalized along the professional career of nurse. This internalization helps the nurses in all nursing categories to be morally more competent in application of these nursing professionalvalues along their professional life [2].Nursing practice is considered challenging in maintaining ideal nurses professional values.

Today, nurses professional values faces some changes due to obvious dynamicchanges in social attitudes, advanced science and technology and universal diversity. Nurses' professional values within the framework of the healthcare workforce became stronger, more necessary and vital for the continuous upgrading and improvement of nursing profession [3].

The most important areas for application of nurses' professional values are when providing nursing services, contacting with all clients, all health care members and the whole community. Whensharing in promotion of other registered nurses as well as in profession improvements and when advocating for public health [4].

Because nurses are considered the biggest party among all health care providers, considerable and continuous effort is required to promote nursing profession competency to face the grand expectations from the profession and professional nurses[5]. These expectations mainly concern growing and updating professional knowledge, skills and attitude [4, 6, 7].

In relation to cost-effectiveness, high-quality nursing services, societal needs and the rapidly advancing health care practice, it is vital to adhere to aspects of nursing profession in order to maintain advanced and developed nursing profession. These aspects should be part of all integrated health care staff including all nursing categories [6, 7].

Caring, activism, trust, human dignity, professionalism and justices are considered the core of nursing professional values. Caring approach concerns with providing assistance with the nurse maximum capabilities for all (patients, clients and community). Furthermore, activism means efforts to promote nursing profession using all nurses' competencies. Trust is the strong believe in the profession and applying this trust correctly. Moreover, human dignity is the respect for the worth and uniqueness of individuals and populations. In addition to professionalism which refers to the set of rules that guide nurses' actions within the profession. Finally, justice means equality and fairness inall nursing rights and responsibilities [8, 9, 10].

There are many factors that can affect nurses' professional values including culture, professional experience, education and professional training and effect of nursing expertise on values. Any culture containing a unique group of values, beliefs, and norms that mark it. Nursing profession has its own cultural diversity due to its distinctive values, beliefs, and norms regarding interaction with the profession. Clients and community values are a significant part of this culture. Many studies showed that professional experience could change professional values in both positive and negative directions. Education and professional training can improve and correct many nursing professional values directly and indirectly mainly if continuous and renewed methods are used. Finally, effect of nursing expertise on nursing professional values can be detected within different clinical setting without standard change [11, 12].

One of the most critical issues in application of nurses' professional values is to maintain professional boundaries, which is the proper separation between professional values and a nurse's own personal values that not in harmony with the profession [13].

Healthcare professionals including nurses should be aware of their professional values and its application within the profession in order to improve their role within the profession and keep it at highest level all times [14, 15]. Hence, building an infrastructure of professional value should have the highest priority within the profession. The basic aspects that help in establishing a strong and effective professionalism infrastructure are leadership commitment, fair model, multilevel professional training. These aspects need communication skills to support its conduction successfully for both the healthcare team and clients [16].

Nurses' professional values are the milestone that guides all nurses' actions. Here, continuous training, application and evaluation of nursing professional values in all health care settings became a vital need.

Aim of the Study:
The present study aims to evaluate the impact of implementing an educational program about nursing professional values on nurses' knowledge.

Research Design:
A quasi-experimentalpre and posttest research design was used.

Research hypothesis:
1. Domains of nursing professional values differ according to nurses' demographic characteristics in the pre and post training phases.
2. There is an impact on nurses' knowledge before and after the training program.

Setting:
This study was conducted in Damanhour fever hospital. This hospital started in 1929 to serve ElBohaira governorate and the other neighborhood places, it starts with facility to control, fight and eradicate Cholera. It is now under continuous development. Today, it has 11 units namely intensive care unit, two hemodialysis units, pediatric, male, female, hepatology, emergency out patient, critical inpatient (intermediate care), isolation, outpatient clinics (dental, obstetrics and pediatrics) and rabies units. There is a training services unit in the hospital, actually it has a noticeable role in continues in-services training. It has many courses to train in its agenda; one of them is nurses' role and patients' rights as well as nursing professional ethical values.

Subjects:
The total number of hospital nursing staff (who actually in-service and accessible at the time of the study) is 280 nurses. (93) nursesaccepted to participate in the training program and in the study and registered their names and units after the announcement of the day and time of the training program. An estimation of the study's sample size was calculated using the "Epi info program version 7" and calculated the minimal sample size to be (72) nurses.

Study Instruments:

One tool was used for data collection. It was adapted by the researchers based on Weis and Schank (2009) work [8] and it was modified by the researchers according to the Egyptian society. The tool "Nursing Professional Values" was divided into two parts. The first part is the socio-demographic characteristics and the second part consisted of 26 statements measuring the five domains of Nursing Professional Values namely; caring, activism, professionalism, justice and trust. Self-administered questionnaire was developed for data collection.

Part one; (socio-demographic and professional data), it included questions regarding demographic profile and some other items regarding nurses age, qualification, years of experience , unit of working in the hospital, participation in values of nursing professionalism, training programs and sources of information values of nursing professionalism.

Part two: the five Professional values were assessed, namely Caring, Activism, Trust, Professionalism as a nursing professional and Justice. They were assessed by using a five points Likert scale as the following: 1-most important, 2-very important, 3-important, 4-somewhat Important, 5- not important. It consisted of the five domains:

1   Caring as a nursing professional value, it included nine questions regarding protecting moral and legal rights of patients, refuse to participate in care if in ethical opposition to own professional values, act as a patient advocate, provide care without prejudice to patients of varying lifestyles, safeguard patient's right to privacy, confront practitioners with questionable or inappropriate practice, protect rights of participants in research, practice guided by principles of fidelity and respect for person and maintain confidentiality of patient. This part was modified by the researchers with scientific jury consultation after reviewing literatures.

2   Activism as a nursing professional value, it included five questions regarding participation in public policy decisions affecting distribution of resources, advance the profession through active involvement in health related activities, recognize role of professional nursing associations in shaping health care policy, participate in nursing research and/or implement research findings appropriate to practice and participate in activities of professional nursing associations. This part was modified by the researchers with scientific jury consultation after reviewing literatures.

3   Trust as a nursing professional value, it included five questions regarding engage in on-going self-evaluation, request consultation/collaboration when unable to meet patient needs, seek additional education to update knowledge and skills, accept responsibility and accountability for own practice and maintain competency in area of practice. This part was modified by the researchers with scientific jury consultation after reviewing literatures.

4   Professionalism as a nursing professional value, it included four questions regarding participate in peer review, establish standards as a guide for practice, promote and maintain standards where planned learning activities for students take place and initiate actions to improve environments of practice. This part was modified by the researchers with scientific jury consultation after reviewing literatures.

5   Justice as a nursing professional value, it included three questionsregarding Protect health and safety of the public, promote equitable access to nursing and health care and assume responsibility for meeting health needs of the culturally diverse population. This part was modified by the researchers with scientific jury consultation after reviewing literatures.

II. Method

The study was conducted as follows:

1. Permission to conduct the study was obtained from the Dean of the Faculty of Nursing, Damanhour University and from the director and the nursing director of Damanhour Fever Hospital.

2. Tool was adopted and translated. Content validity for study Tool was established by jury of five experts' professors from medical-surgical nursing, nursing education and nursing administration. Accordingly necessary modifications were done.

3. Tool was tested for their reliability using Cronbach's alpha = 0.929.

4. A pilot study was carried out on approximately 10% of the sample (N=9 nurses) to test facility, clarity and applicability of the tool. Accordingly, the necessary modifications were done.

5. Tool was distributed for initial data collection to nursing in all hospital units after explaining the purpose of the study.

6. The researchers explained to the participating nurses any misconceptions and the expected time for completing the tool was about 30 minutes.

7. After completion of data collection, the necessary statistical analysis was done.

8. Depending on the results of statistical analysis, educational program for improving nursing professional values was developed.

9. Immediately after implementation of the educational program, data collection was done to evaluate the s effectiveness of   the educational program on nursing professional values.

♦ **Process of the educational program:**

I. Preparation:

1. Permission to conduct the health education program was obtained from the director, the nursing director and director of training services unit in Damanhour Fever Hospital.
2. The health education program was developed by the researchers after extensive review of the related literature.[13-16]after analysis of the results of initial data collection.

II. Implementation:

   a.Developing Intended Learning Outcomes for the workshop based on the participants' needs and aim of the study.
   b.Choosing the relevant active teaching strategies according to the information presented.
   c.The workshop day was decided and the announcement was done prior to the workshop day by at least one week by hanging advertisement on the hospital 's building walls to notify about the date, time and place of workshop.
   d.Each day consisted of 10 or 15 participants.
   e.The teaching strategies carried out during the workshop were: brainstorming, small group discussion, case studies, video presentation, and role play about the five domains of nursing professionalism. Each domain was presented by an activity or more.
   f. The one day workshop was provided by the researchers twice weekly for four weeks
   g.Time and place for the training program was announced by the training services unit to all hospital units.

3. The presentation contained what is nursing, nursing values regarding herself/himself, patient, clients, community, institution and the profession.
4. The educational program consisted of:
   a.Brainstorming and case studies were used for the five domains to stimulate active interaction and proper application.
   b.Small group discussion was used to understand activism and professionalism for 5 minutes.
   c.Video presentation for life situation of positive and negative caring, justice and professionalism and their and discussion in 10 minutes.
   d. Role-play about professionalism and caring for 5 minutes about unprofessional nursing values was done followed by open discussion for 7 minutes.
   e.PowerPoint presentation for the introduction and conclusion about the five domains in 10 minutes and its discussion for 10 minutes.
   f. White board was used to explain some values as caring and activism.
   g.Oral feedback in 10 minutes.
5. The same planned training program was conducted on eight different days. Due to the unavailability of participants in the same day and their busy schedules, the program was implemented fromSeptember 2018 – October 2018.

III. Evaluation:

1. Immediately after finishing the educational program, first data collection tool was used to evaluate learners' feedback about the content and the training program itself.
2. All data was collected, recorded and analyzed.

Ethical considerations:

o An informed consent was obtained from all nurses in all units after explanation of the aims of the study before starting the questioner.
o Confidentiality, anonymity and privacy were assured.
o Participation was on voluntary basis.
o All the nurses had the right to withdraw from the study at any time without any drawbacks.

Statistical analysis:

Data were fed to the computer and analyzed using IBM SPSS software package version 20.0. (Armonk, NY: IBM Corp). Quantitative data were described using range (minimum and maximum), mean and standard deviation. Significance of the obtained results was judged at the 5% level.

The used tests were

1 - Paired t-test

For normally distributed quantitative variables, to compare between two periods
2 - Student t-test
For normally distributed quantitative variables, to compare between two studied groups
3 - F-test (ANOVA)
For normally distributed quantitative variables, to compare between more than two groups

III. Results

Table (1) shows the distribution of the nurses according to their demographic data. It could be seen that about two thirds (65.6%) of the studied group were in the youngest age group (20 – 29). The majority of the study sample (96.8%) was females. As regards to their qualification, nearly three-fifths (59.1%) were qualified from technical institute while more than one quarter of them (28.0%) had Baccalaureate Degree. Concerning years of experience about (40.9%) had from five to less than ten years of experience. As for nurses' work experience, it could be observed that about three fifths, (62.4 %) had previous private work experience. Concerning receiving training program it was (71%) of nurses did not receive any in-service training program related to professional values, while from the (29 %) who received in-service training program (29 %) of them received in- service training since less than 2 years. Moreover, the majority of them, (87.1%), admitted that they need more training regarding professionalism. As regards to the main source of information about values of nursing professionalism, the participants selected more than one source with (81.7%) reported that they received their information from nursing schools while only (3.2%) of them received their information from physicians.

Table (1): Distribution of the studied cases according to demographic data
(n = 93)

Q		No.	%
1	Age (years)		
	20 – 29	61	65.6
	30 – 39	20	21.5
	40+	12	12.9
	Min. – Max.	20.0 – 52.0	
	Mean ± SD.	27.57 ± 8.74	
2	Gender		
	Male	3	3.2
	Female	90	96.8
3	How many years do you study nursing?		
	≤5	79	84.9
	>5	14	15.1
	Min. – Max.	2.0 – 20.0	
	Mean ± SD.	5.22 ± 2.43	
4	Qualification		
	School	3	3.2
	Diploma	11	11.8
	Technical	55	59.1
	BSC	26	28.0
5	Years of experience		
	<5	29	31.2
	5 –<10	38	40.9
	10 –<15	9	9.7
	15+	17	18.3
	Min. – Max.	0.08 – 32.0	
	Mean ± SD.	8.01 ± 7.60	

6	Unit of working		
	Medical wards	14	15.1
	Surgical wards	13	14.0
	Neonates	4	4.3
	ICU	27	29.0
	Pediatrics	11	11.8
	Obstetrics	5	5.4
	Emergency	6	6.5
	Urology and dialysis ward	8	8.6
	Hepatology	8	8.6
	Sterilization	9	9.7
	Scan	11	11.8
7	Previous private work in nursing		
	Yes	58	62.4
	No	35	37.6
8	Did you participate in in-service training program related to professional values		
	Yes	27	29.0
	No	66	71.0
	If yes since (years)		
	0.5	5	18.5
	1	8	29.6
	2	8	29.6
	3	3	11.1
	4	1	3.7
	5	2	7.4
	Min. – Max.	0.50 – 5.0	
	Mean ± SD.	1.83 ± 1.29	

Table (1): Distribution of the studied cases according to demographic data
(n = 93) 'continued'

Q		No.	%
9	Do you think you need more training about professional values		
	Yes	81	87.1
	No	12	12.9
10	Source of nurses information about professional values		
	Physicians	3	3.2
	Peers	13	14.0
	In the class at school	76	81.7
	Hospital policy	7	7.5
	Bulletin of hospital	9	9.7
	Media (TV, radio, internet, magazine, newspaper)	11	11.8
	Others / in-service training program	12	12.9
	training courses/	2	16.7
	nursing syndicate	3	25.0
	In work place by the internet	1	8.3
	all of them	3	25.0

Table (2) illustrates nurses' mean percent scores of the professional values pre and post training program phases. It could be seen from the table that nurses scored caring domain the highest in both phases (75.72 ± 15.17) in the pre phase and (80.76 ± 14.37) in the post phase, while activism domain was the lowest in both phases with (62.26 ± 17.87) in the pre phase and with (71.83 ± 14.96) in the post phase. Regarding nurses' mean percent scores after training, it could be observed that scores differed significantly than before training in all domains (caring, activism, trust, professionalism, justice and the overall professional values) where P= 0.016, <0.001, 0.010, <0.001, 0.014, 0.003 respectively.

Table (2): Nurses' mean percent scores of the professional values scale domains pre and post training (n = 93)

% score	Pre	Post	t	p
Caring				
Min. – Max.	25.0 – 100.0	38.89 – 100.0	2.458*	0.016*
Mean ± SD.	75.72 ± 15.17	80.76 ± 14.37		
Activism				
Min. – Max.	25.0 – 100.0	35.0 – 100.0	4.080*	<0.001*
Mean ± SD.	62.26 ± 17.87	71.83 ± 14.96		
Trust				
Min. – Max.	45.0 – 95.0	40.0 – 100.0	2.628*	0.010*

Mean ± SD.	70.97 ± 13.54	76.72 ± 14.75		
Professionalism Min. – Max. Mean ± SD.	25.0 – 100.0 64.11 ± 17.26	31.25 – 100.0 73.59 ± 16.54	3.760*	<0.001*
Justice Min. – Max. Mean ± SD.	41.67 – 100.0 71.90 ± 15.82	33.33 – 100.0 77.42 ± 16.65	2.513*	0.014*
Overall Min. – Max. Mean ± SD.	34.62 – 98.08 70.84 ± 13.38	39.42 – 100.0 76.78 ± 13.36	3.042*	0.003*

t: Paired t-test

p: p value for comparing between pre and post

*: Statistically significant at $p \leq 0.05$

Table (3) shows the relation between nurse's professional values domains and their demographic data in pre training phase. (n =93). It is noticed from the table that nurses who did not receive a training program about professional values scored (73.11±12.94) higher in the trust domain than those who received a training program (65.74 ± 13.78) and there was a significant difference between both groups where p= 0.016. Moreover, nurses who admit that they need more training about professional values scored higher in activism (63.77 ± 17.96) and professionalism (65.59 ± 17.65) than those who do not need training program with significant differences between the two groups in the two domains namely; activism and professionalism, where p= 0.034, 0.004 respectively.

Table (3): The relationship between nurse's professional values scale domains and demographic data in pre training phase (n =93)

	Caring	Activism	Trust	Professionalism	Justice	Overall
	Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.
Age (years) 20 – 29 30 – 39 40+	76.46 ± 14.04 73.06 ± 16.35 76.39 ± 19.26	61.15 ± 18.01 62.0 ± 18.67 68.33 ± 15.86	71.72 ± 13.32 71.75 ± 14.89 65.83 ± 12.22	64.55 ± 17.85 63.75 ± 17.51 62.50 ± 14.84	73.83 ± 16.21 68.75 ± 15.26 67.36 ± 13.97	71.26 ± 12.85 69.81 ± 14.53 70.43 ± 15.10
F(p)	0.387(0.680)	0.810 (0.448)	0.991(0.375)	0.075 (0.928)	1.353 (0.264)	0.094 (0.911)
Qualification School Diploma Technical BSC	75.0 ± 16.90 66.67 ± 13.10 79.04 ± 12.20 71.90 ± 19.46	68.33 ± 7.64 55.56 ± 9.82 63.36 ± 19.13 61.54 ± 18.04	66.67 ± 10.41 69.44 ± 9.82 72.45 ± 12.69 68.85 ± 16.57	64.58 ± 7.22 56.94 ± 15.13 65.45 ± 17.59 63.70 ± 18.12	61.11 ± 4.81 62.04 ± 7.35 74.91 ± 15.56 70.19 ± 17.51	68.91 ± 8.29 63.03±8.97 73.08 ± 12.21 69.05 ± 16.40
F(p)	2.631 (0.055)	0.614 (0.608)	0.565 (0.640)	0.626 (0.600)	2.514 (0.063)	1.752(0.162)
Years of experience <5 5 –<10 10 –<15 15+	76.63 ± 13.82 77.41 ± 13.63 62.65 ± 21.30 77.29 ± 15.03	59.66 ± 18.99 63.68 ± 17.27 53.33 ± 22.91 68.24 ± 12.37	69.48 ± 14.41 73.29 ± 12.59 63.89 ± 17.10 72.06 ± 11.46	64.87 ± 17.55 65.63 ± 16.81 58.33 ± 24.21 62.50 ± 14.15	75.0 ± 14.26 73.55 ± 17.82 59.26 ± 12.11 69.61 ± 12.48	70.23 ± 12.89 73.23 ± 12.29 60.68 ± 19.09 71.95 ± 11.54
F(p)	2.608 (0.057)	1.707 (0.171)	1.362 (0.260)	0.493 (0.688)	2.684 (0.051)	2.283(0.084)
Did you participate in in-service training program related to professional values Yes No	72.12 ± 19.81 77.19 ± 12.69	63.89 ± 16.83 61.59 ± 18.36	65.74 ± 13.78 73.11 ± 12.94	64.81 ± 17.77 63.83 ± 17.18	70.06 ± 15.72 72.65 ± 15.92	68.30 ± 15.63 71.88 ± 12.32
t(p)	1.230 (0.227)	0.561 (0.576)	2.445*(0.016*)	0.250 (0.804)	0.715 (0.477)	1.173(0.244)
Do you think you need more training about professional values Yes No	76.10 ± 15.56 73.15 ± 12.50	63.77 ± 17.56 52.08 ± 17.25	71.36 ± 13.96 68.33 ± 10.30	65.59 ± 17.65 54.17 ± 10.09	72.26 ± 16.18 69.44 ± 13.45	71.74 ± 13.70 64.82 ± 9.33
t(p)	0.626 (0.533)	2.155*(0.034*)	0.720 (0.473)	3.252*(0.004*)	0.574 (0.567)	1.687(0.095)

F: F for ANOVA test   t: Student t-test

p: p value for relation between nurse's professional values scale domains and demographic data in pre period

*: Statistically significant at $p \leq 0.05$

Table (4) shows the relation between nurse's professional values domains and their demographic data in post training phase. It could be observed from the table that nurses who had 40 years old and more scored caring, activism, justice and the overall professionalism the highest mean percent score with significant differences among different age groups where p= 0.015, 0.022, 0.007 and 0.010 respectively. In relation to nurses' qualifications, it could be seen that nurses who were graduated from nursing schools gave the highest

mean percent scores for trust, justice and overall professionalism with noticed significant differences from other nurses qualified from nursing institutes or faculties where p= 0.050 for trust, p= 0,010 for justice and p= 0.037 for the overall professionalism domains. It was found that nurses who had five or less years of experience scored trust the highest mean percent score (82.93 ± 12.21) with significant difference between different years of experience where p= 0.024. As regards the previous participation in in-service training program, it was observed that nurses who previously attended training program about professional values scored the highest in trust, justice and the overall professional values with significant differences among two groups where p= <0.001, 0.009, 0. 041 respectively.

Table (4): Relation between nurse's professional values scale domains and demographic data in post phase (n =93)

	Caring	Activism	Trust	Professionalism	Justice	Overall
	Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.
Age (years) 20 – 29	82.74 ± 12.55	73.85 ± 14.01	78.36 ± 14.10	75.31 ± 16.55	79.51 ± 15.03	78.67 ± 12.12
30 – 39	72.64 ± 17.87	63.75 ± 14.95	70.25 ± 16.26	66.56 ± 17.0	67.50 ± 18.32	68.94 ± 15.44
40+	84.26 ± 12.72	75.0 ± 16.24	79.17 ± 13.46	76.56 ± 13.36	83.33 ± 16.28	80.21 ± 11.59
F(p)	4.437* (0.015*)	3.987* (0.022*)	2.548 (0.084)	2.399 (0.097)	5.228* (0.007*)	4.822*(0.010*)
Qualification School	91.67 ± 7.35	85.0 ± 15.0	83.33 ± 11.55	77.08 ± 20.09	94.44 ± 4.81	86.86 ± 10.10
Diplom	73.46 ± 21.21	62.78 ± 17.52	64.44 ± 16.85	60.42 ± 9.88	62.96 ± 15.65	66.45 ± 15.24
Technical	82.12 ± 13.08	73.64 ± 14.03	78.55 ± 14.16	76.02 ± 16.26	79.55 ± 15.20	78.57 ± 12.36
BSC	79.17 ± 14.21	69.62 ± 14.83	76.35 ± 14.11	72.60 ± 17.15	75.96 ± 17.85	75.41 ± 13.57
F(p)	1.656 (0.182)	2.440 (0.070)	2.707*(0.050*)	2.491 (0.065)	4.037*(0.010*)	2.961*(0.037*)
Years of experience <5	84.58 ± 13.08	76.38 ± 13.09	82.93 ± 12.21	77.16 ± 15.60	80.46 ± 15.31	81.07 ± 11.85
5 –<10	80.85 ± 12.55	71.84 ± 14.30	75.66 ± 13.61	75.16 ± 16.85	77.63 ± 15.63	76.87 ± 12.24
10 –<15	79.32 ± 14.90	66.67 ± 14.36	73.89 ± 12.94	68.06 ± 17.24	76.85 ± 16.02	73.82 ± 13.34
15+	74.84 ± 18.65	66.76 ± 18.20	70.0 ± 18.79	66.91 ± 15.74	72.06 ± 21.03	70.81 ± 16.38
F(p)	1.715 (0.170)	1.961(0.126)	3.294*(0.024*)	1.876 (0.139)	0.913 (0.438)	2.376(0.075)
Did you participate in in-service training program related to professional values Yes	83.33 ± 10.07	74.07 ± 14.21	83.89 ± 9.84	75.93 ± 14.05	83.64 ± 12.55	80.56 ± 9.61
No	79.71 ± 15.74	70.91 ± 15.26	73.79 ± 15.47	72.63 ± 17.46	74.87 ± 17.51	75.23 ± 14.39
t(p)	1.320 (0.191)	0.925 (0.357)	3.762*(<0.001*)	0.870 (0.386)	2.709*(0.009*)	2.078*(0.041*)
Do you think you need more training about professional						

values						
Yes	79.90 ± 14.56	71.05 ± 13.69	75.93 ± 14.77	72.69 ± 16.22	77.16 ± 16.91	76.01 ± 13.09
No	86.57 ± 11.95	77.08 ± 21.79	82.08 ± 14.05	79.69 ± 18.10	79.17 ± 15.28	81.97 ± 14.57
t(p)	1.511 (0.134)	0.932 (0.369)	1.355 (0.179)	1.375 (0.172)	0.388 (0.699)	1.452(0.150)

F: F for ANOVA test   t: Student t-test
p: p value for relation between nurse's professional values scale domains and demographic data in post period
*: Statistically significant at $p \leq 0.05$

IV. Discussion

Enhanced patient care and better job satisfaction had been proven to be important results of applying nursing professional values and therefore increased patients' recognition and nurse retention [17,18]. In order to gain and internalize full professional development and to socialize into the profession, nurses must learn about nursing professional values[19]Hoyuelos et al (2010) reported that it is crucial to be aware of nursing professional values to ensure that nurses have the necessary knowledge to plan, conduct and evaluate specific interventions for integration in the professional practice of nursing and for better communication. This therefore will lead to a better quality of health care[20]Hence; the current study was conducted to evaluate the effect of training program on nursing professional values.

The current study findings showed that nurses' knowledge about all domains of nursing professional values changed significantly after training than before it. This finding could be attributed to the nature of the provided training program that was in form of interactive sessions and included many activities with different methods of presentation, which at the end lead to more retaining and understanding of the new updated of their values of nursing profession. Another cause could be the little number of participants (about 15 - 20) in each day, which facilitated and increased their understanding, also allowed participants to ask questions and get involved in all activities. The same was found by Coad, Jane, et al (2018)[21] who stated that the study expanded nurses' knowledge about communication strategies and that they valued using role-play and simulated scenarios to develop their skills. In the same line Bang et al. (2011) found that training had positive contributions to the professional values development [1]. Furthermore, in studies conducted on nursing students, it was found that training on nursing professional values positively affected the development of the nursing professional values of the students[22,23].

The present study results denoted that nurses scored "caring" domain as the highest in both phases, while "activism" domain was the lowest in both phases. This result is anticipated as the core values that govern nurses' work is caring and it is an essential value for providing nursing care. On the other hand, activism was scored as the lowest and this could be attributed to that activism is related to nurses' autonomy and ability to be independent in making clinical care decisions and this is not yet approved that Egyptian nurses act autonomously. This finding is consistent with those of Lin et al (2016) [23].

In the pre training phase, as regards the relation between nurses' professional values domains and their demographic data. The current study results revealed that there was a significant difference between nurses who did not receive previous training program about nursing professional values and those who received a training program with the highest score among those who did not receive a training program. This is a surprising result that could be attributed to the nature of values, which reside mainly in the person himself from his/her culture and inherited values rather than from training. Another cause could be the previous training received was not effective enough and less updated to make changes in their professional values, also nurses were younger with less experience in the profession. The same was found by Gouveia, Vione, Milfont and Fischer (2015) [24] who stated that value changes occur in relation to life stages and physical aging. Also, in other studies, researchers stated that culture is an important factor in the development of professional values [11,25].

Moreover, the findings of the present study denoted that nurses who need more training about nursing professional values scored higher in activism and professionalism than those who do not need training program with significant differences between the two groups in the two domains. This could be a cause of their eagerness to know more from the training and the activism is usually linked to active initiative persons who want to be more professional and need to learn and know more about their profession and its related values. This finding is consistent with that of Skela-Savi et al (2017) who found that activism and professionalism are two important values for nurses especially for their direct correlation with Evidence Based Practice (EBP) applications in day to day nursing practice [26].

In post training phase, the present study findings revealed that the older the nurses, the more scores given to caring, activism, justice and the overall nursing professional values and they differed significantly from the other age groups. This is an expected result as nurses when they are older they became wiser, more holistic person and gained lots of values during their work life. The same was found by Kubschet al (2008) who stated

that higher mean scores were among nurses with more than 15 years of experience, older than 60 years and hold administrative positions [27]. On the other hand, many other research findings revealed that no relation between nurses' demographic characteristics and nursing professional values where culture and personal diversity play a major role in the personal and professional; values [28,29].

A surprising result was found in the current study as nurses who were graduated from nursing schools scored the highest for trust, justice and overall professional values than their colleagues graduated from other nursing institutes or faculties with significant differences. This could be attributed to that these nurses start their career in very young age and they gain the professional values at early age than their colleagues who start working in early twentieth and with working more they have more professional values inherited in them. In addition, it could be related to the nature of school education, which stress on the clinical education in different practice settings, which expand their clinical experience and therefore increase their professional values. This finding is consistent with those of Caldwell and Miller (2016) found that nursing professional values scored differed by the classroom level with the first grade is higher than the fourth grade students [30]. This result is inconsistent with those of LeDuc and Kotzer (2009) and Lin et al (2010) who stated that no differences between demographic nurses' characteristics and nursing professional values scores [12,31].

It was found that nurses who had five or less years of experience scored trust domain as the highest mean percent score with significant difference between different years of experience. It may be related to the newly fresh graduates who have high professional values from their studies recently received and therefore they have also trust and believe in their profession. The same result was found by Kubsch et al (2016) [27] who reported that nurses who have less than two years of experience had higher scores in their professional values than more experienced nurses. This result is unlike the finding of Caldwell and Miller (2016) who stated that there is no difference in nursing values with time and experience [30].

As regards to previous participation in in-service training program, it could be observed that nurses who previously attended training program about nursing professional values scored the highest in trust, justice and the overall professional values with significant differences among two groups. This could be attributed to the provided training program in the current research with the information available from previous trainings that had been refreshed/updated with new information during the study's training, therefore leading to high scores in nursing professional value. The same was found by Parandeh et al. (2015) who stated that one of the factors that affect professional values development is continuous training and education [32].

V. Conclusions and Recommendations
The current study findings showed that nurses' knowledge about all domains of nursing professional values changed significantly after training than before it. Also, it was found that nurses scored "caring" domain the highest in both phases, while "activism" domain was the lowest in pre and post training phases. Furthermore, in the pre training phase, there was a significant difference between nurses who did not receive a previous training program about nursing professional values and those who received a training program with the highest score among those who did not receive a training program. In post training phase, it was found that there were significant differences in some of nursing professional values in relation to age, years of experience and previously received training.

Recommendations
1. Continuous periodical training program for nursing professional values for all hospital nursing staff.
2. Involve all formal nursing institutions including nursing syndicate in this training program.
3. Reward nursing staff with high professional values application from the institute.
4. Use patient questionnaire to assess nurses' application of nursing professional values.

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