

Factors Influencing Staff Nurses Participation in Continuing Professional Development Programs

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Abstract

Background: The nursing career is a vital profession that requires health professionals to continuously acquire knowledge and skills. Continuing professional development (CPD) is an essential component of nursing, not least for the provision of safe and effective healthcare. **Aim of the study:** This study aimed to Assess factors influencing staff nurses participation in continuing professional development programs. **Research question:** What are the factors influencing staff nurses participation in continuing professional development programs? **Design:** a descriptive study design was utilized. **Subjects:** the study was conducted on 162 subjects of staff nurses. **Setting:** the study was carried out at Helwan Hospitals, affiliated to ministry of health. **Tools:** One tool was used to collect data: Nursing personnel perception toward factors influencing continuing professional development self-administered questionnaire. **Results:** Study revealed that: Staff nurses have a high level of agreement upon factors influencing their participation in CPD activities. The highest agreement was upon job factors while the lowest was perception and attitude. There were statistical significant relations between motivators and staff nurses' demographic characteristics regarding age, qualification level and experience years. There were statistical significant relations between barriers and staff nurses' demographic characteristics regarding age, qualification level and experience years. **Conclusion:** There were interdependent relationships between score of staff nurses agreement upon various factors that influence their participation in CPD activities. **Recommendations:** Healthcare organizations need to encourage professional development as a requirement for job promotion. Design and implement in-service educational programs to enhance staff nurses' professional development. Further research can be conducted to identify strategies that helping nursing staff to overcome barriers that hinder participation in CPD activities.

Key words: Continuing, Professional, Development, Barriers.

Introduction

Nursing is a key component of the quality of healthcare services. Nurses are the frontier of the delivery of health care as they work with patients every day. Human resources are the system of health care most important resource components, according to the World Health Organization report, the system of health care performance depends on the competencies, knowledge, and motivation of the people responsible for healthcare delivery. Training and educating health professionals, including nurses, are essential components of performance enhancement (WHO, 2016).

According to the World Health Organization nursing professionals needs to be competent in their practice thus having a scientific basis for their practice also have adequate knowledge to communicate with increasingly informed patients and parents moreover nurses must have the ability to access relevant information and have adequate technology in their area of specialization (WHO, 2016).

The performance of nurses has been a global phenomenon. In a descriptive study explored the factors that affect the performances of nurses. The study revealed that there is a lack of recognition of well-performing employees,

the lack of a formal performance assessment system and poor working conditions and not participating in professional development programs (Osei et al., 2019).

The importance of continuing education for nurses is emphasized internationally through the relevant literature. The British Association of Nurses (BAN) states that all nurses are responsible for the way they practice their profession, and therefore they should be constantly taking the steps necessary to maintain and improve their professional knowledge and skills. The ANA adopts similar views, and it is significant that both associations have designed lifelong education programs for healthcare professionals, in which, however, emphasis is placed on compulsory rather than voluntary participation (O'Loan, 2019).

The reasons that CNE became necessary result from the widespread changes which affect nursing, economic, social and political changes, the industrialization of health, globalization, the spread of technology and the accumulation of new scientific knowledge, and the perennial need to provide patients with high quality nursing care. There is ample evidence that increasing the skills and knowledge various indicators of quality of care, including reduction of the incidence of nursing errors, hospital infections and pressure ulcers, and it may improve patient safety and staff productivity and reduce occupational stress (Phillips et al., 2019).

Aim of the study

The study aimed at assessing the factors influencing staff nurses participation in continuing professional development programs.

Research question:

"What are the factors influencing staff nurses participation in continuing professional development programmes?"

Subjects and Methods

Technical design:

The technical design includes a description of research design, setting of the study, subjects, and tools for data collection.

Research design

A descriptive, design was used in carrying out this study.

Setting

This study was conducted at Helwan Hospital, affiliated to ministry of health in Helwan Cairo Egypt, this hospital consist of 10 main departments and units.

Subjects

The subjects of this study consisted of staff nurses who are working at pre-mentioned mentioned study setting. A sample of 162 staff nurses out of 280 staff nurses working full time and they are responsible for providing direct nursing care activities to the patients, using the sample size equation

$$S = \frac{x^2 Np(1-p)}{[(d^2(N-1)+x^2p(1-p)]}$$

Data collection tools

Collection of data of this study was achieved by using **one tool namely:** Nursing personnel perception toward factors influencing continuing professional development self-administered questionnaire.

1. Nursing personnel perception toward factors influencing continuing professional development self-administered questionnaire:

This tool aimed at assessing factors influence nurses participation in continuing professional development programs. It consisted of two parts:

Part I: demographic data: this part was intended to collect data related to the characteristics of the study subjects as (age, gender, years of experience)

Part II: Nursing personnel perception toward factors influencing continuing professional development self-administered questionnaire: it consisted of (115) items related to nursing personnel perception toward factors that influencing participation in continuing professional development programs. It consisted of four dimensions, Developed by (Elshafee, Fakhry and Kamel, 2017): Organizational related factors, Motivating factors, Hindering factors, Perceptions and Attitudes: it consisted of (12, 29, 45, 29) items respectively. **Scoring system:** The response to each item of the scale was on a numeric continuous scale ranging from “not influencing at all” to “extremely influencing.” The respondent was asked to give a score from zero to ten for each item depending on his/her perception of the influence of the item on his/her decision to engage in CPD activity. The scores of the items of each subscale and sub-sub-scale were summed-up and divided by the number of corresponding items. The scores were presented in the form of means and standard deviations, medians, and first-third quartiles. A higher score indicates more influence of the motivating and/or hindering factors.

The scores of each subscale items, as well as those of subscales were arranged in descending order, and were ranked as first, followed by the next. Moreover, the difference between the total mean score of motivating and of hindering factors was calculated so that a negative score indicates higher influence of hindering factors, whereas a positive score indicates more influence of the motivating factors.

II. Operational design

The operational design involves the preparatory phase, pilot study and field work.

Preparatory phase

The researcher reviewed current and past, local and international related literature and knowledge aspects of the study using books, articles, journals, and internet to modify tools for data collection.

Pilot study:

A pilot study was conducted on (16) participants of the study subjects. They represent 10% of the study sample in the study setting. The aim of the pilot study was to examine the applicability and clarity of the tool and to identify obstacles and problems that may be encountered during data collection. Additionally, to estimate the time needed to fill it out. The time subjects took to fill in the questionnaire sheet was 15-20 minutes. These participants were included in the main study sample.

Reliability of tools: The reliability of the data collection tool scales was assessed using internal consistency method. The two scales showed good reliability as shown by their Cronbach's alpha coefficient Organizational related factors (0.87), Motivating factors (0.94), Hindering factors (0.95) & Perceptions and Attitudes (0.94).

Field work:

Before starting data collection, a written official permission was obtained from the responsible authorities in the study hospital. This was based on a letter sent from the Dean of the Faculty of Nursing, Ain-Shams University, explaining the aim and process of the study.

The investigator met with each staff nurse, explained to her/him the aim of the study and invited her/him to participate. Those who gave their consent were given the self-administered questionnaires to fill it. They were instructed in how to complete the form. Data were collected from the subjects in their work-areas and the investigator was present all the time to respond to any queries then the tools were collected and checked for completeness. The investigator was present in the subjects work setting two times per week, one day at the beginning of the week at 09:00am and one day at the end of the week at 09:00 pm to meet the different study subjects in the different shifts. The fieldwork was done over three months during the period from 15/6/2019 to 15/9/2019.

Ethical consideration:

Prior to the study conduction, ethical approval was obtained from scientific research and ethical committee of faculty of nursing - Ain Shams University. In addition, an oral informed consent obtained from every participant before collecting any data. The investigator explained the aim of the study to participants eligible to be included in the study and invited them to participate. They assured that confidentiality would be guaranteed, and informed that they can withdraw from the study at any time without penalty.

III. Administrative design:

Official approval to conduct the study was obtained from the hospital director. This was done through an official letter from the dean of the Faculty of Nursing - Ain Shams University explaining the purpose and procedure of the study.

IV. Statistical design

Data entry and statistical analysis were done using SPSS 20.0 statistical software package. Quality control was done at the stages of coding and data entry. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations and medians and interquartile ranges for quantitative variables. Cronbach alpha coefficient was calculated to assess the reliability of the developed tools through their internal consistency. Quantitative continuous data were compared using Mann-Whitney in case of comparisons between two independent groups and Kruskal-Wallis in multiple group comparisons. Spearman rank correlation was used for assessment of the inter-relationships among quantitative variables and ranked ones. In order to identify the independent predictors of the motivating/hindering scores, multiple linear regression analysis was used and analysis of variance for the full regression models was done. Statistical significance was considered at p -value <0.05

Results

Table (1): The study included a sample of nurses whose age ranged between 20 and 59 years, with median 30 years, with majority of females (77.2%), married (77.8%), and have diploma (71%), as illustrated in table 1. (53%) of them have attended a previous training course. The median of their experience was (8).

Table (2): Concerning total scores of factors influencing nurses participation in continuing education (job factors, motivators and barriers) table 2 indicates that the highest agreements of nurses was upon dimension job related factors with mean score of (8.46) followed by barriers with mean score of (7.92) and the least dimension was motivators with total mean score of (7.76).

Table (3): Concerning relations between nurses' agreements upon motivators and their characteristics table 3 shows the presence of statistically significant relations between nurses' agreements upon motivators and their characteristics regarding their age ($p=0.04$), qualifications ($p=0.01$), experience ($p=0.009$) and registration for master degree ($p=0.001$). It is evident that nurses who were older and more experienced have higher agreement upon motivators.

Table (4): indicates the presence of statistically significant relations between nurses opinions regarding continuing education barriers and their characteristics regarding their age ($p=0.008$), qualifications ($p=0.002$), experience ($p=0.002$), got a specialty diploma ($p=0.03$) and registration for master degree ($p<0.001$). As illustrated in table nurses who were older, with experience 5-10 years and got diploma have higher agreement upon barriers.

Table (5): shows that nurses' agreement upon motivators had weak statistically significant positive correlations with their age (.166) and experience (.197). In the other hand, nurses' agreement upon barriers had statistically significant weak positive correlations with their

age (.196) and experience (.238). Finally, nurses' qualifications had weak negative correlations with their agreement upon motivators ($r=-.229$), barriers ($r=-.247$) and perception ($r=-.212$). There were no other statistically significant correlations.

Table (6): illustrates the presence of statistically significant moderate positive correlations among the scores of various motivators scale dimensions. The strongest correlation was between professional and personal ($r=0.528$).meanwhile, the weakest correlation was between professional and role model ($r=0.485$).

Table (7): demonstrates statistically significant moderate to strong positive correlations among the score of various barriers dimensions. The strongest correlation was between organizational and study ($r=0.624$).

Conversely, the weakest correlation was between situational and personal behavior ($r=0.453$). They are nursing staff i.e., graduated not students!!

Table (8): indicates the presence of statistically significant weak to strong positive correlations among the scores of various factors influencing nurses continuing education dimensions. The strongest correlation was between motivators and perception ($r=0.663$).on contrary, the weakest correlation was between job factors and perception ($r=0.376$).

Table (9): As for agreement upon barriers score, displays that their age, perception score and job factors score were the statistically significant independent positive predictors of their agreement upon barriers score. The model explains only 49% of variation in barriers score.

Table (1): Demographic and job characteristics of nurses in the study sample (n=162).

	Frequency	Percent
Age:		
<30	69	42.6
30-	58	35.8
40+	35	21.6
Range	20.0-59.0	
Mean±SD	32.8±9.3	
Median	30.0	
Gender:		
Male	37	22.8
Female	125	77.2
Experience years:		
<5	44	27.2
5-	41	25.3
10+	77	47.5
Range	<1.0-42.0	
Mean±SD	12.0±9.9	
Median	8.0	
Marital status:		
Unmarried	36	22.2
Married	126	77.8
Had previously:		
Registered for specialty diploma	6	3.7
Got a specialty diploma	21	13.0
Registered for Master degree	30	18.5
Attended training courses	86	53.1

Table (2): Total scores and ranks of job factors, motivators, and barriers influencing continuing education as reported by the nurses in the study sample (n=162).

	Score (max=10)					Rank
	Mean	SD	Median	Quartiles		
				1 st	3 rd	
Job factors	8.46	1.33	8.67	7.75	9.50	
Motivators:						
Professional	7.75	1.53	8.00	7.00	8.80	2
Personal	8.10	1.72	8.41	7.18	9.25	1
Role model	7.29	1.91	7.88	6.25	8.50	3
Total motivators	7.76	1.41	8.02	6.97	8.76	
Barriers:						
Situational:						
Work-life balance	8.05	1.52	8.00	7.00	9.17	3
Financial	8.09	1.72	8.39	7.44	9.19	2
Personal/family	8.30	1.65	8.50	7.43	9.71	1
Total situational	8.15	1.34	8.35	7.47	9.26	1
Organizational	7.85	1.44	8.08	6.94	8.85	2
Personal behavior	7.37	2.33	8.00	6.17	9.00	4
Study	7.57	1.82	8.00	6.71	8.71	3
Total barriers	7.92	1.23	8.09	7.27	8.79	
Score difference (motivators – barriers)	-0.16	1.04	-0.20	-0.63	0.32	

Table (3): Relations between nurses' opinions about the motivators influencing continuing education and their demographic and job characteristics.

	Motivators (max=10)		Mann-Whitney test	p-value
	Mean±SD	Median		
Age:				
<30	7.5±1.3	7.70	H=6.44	0.04*
30-	7.9±1.4	8.25		
40+	8.1±1.5	8.20		
Gender:				
Male	7.5±1.4	7.70	1.29	0.26
Female	7.8±1.4	8.10		
Nursing qualification:				
Diploma	7.9±1.4	8.20	8.13	0.004*
Bachelor or higher	7.3±1.5	7.40		
Experience years:				
<5	7.4±1.4	7.50	H=9.47	0.009*
5-	7.6±1.3	7.80		
10+	8.0±1.4	8.30		
Marital status:				
Unmarried	7.6±1.5	7.85	0.27	0.60
Married	7.8±1.4	8.05		
Registered for specialty diploma:				
No	7.8±1.4	8.00	0.02*	0.88
Yes	7.4±2.1	8.50		
Got a specialty diploma:				
No	7.7±1.4	7.90	3.58	0.06
Yes	8.2±1.4	8.50		
Registered for Master degree:				
No	7.9±1.4	8.15	6.38	0.01*
Yes	7.3±1.4	7.20		
Attended training courses:				
No	7.5±1.6	7.85	2.20	0.14
Yes	8.0±1.2	8.10		

Table (4): Relations between nurses' opinions about the barriers influencing continuing education and their demographic and job characteristics.

	Barriers (max=10)		Mann-Whitney test	p-value
	Mean±SD	Median		
Age:				
<30	7.7±1.1	7.70	H=9.72	0.008*
30-	7.8±1.4	8.05		
40+	8.4±1.0	8.50		
Gender:			1.29	0.26
Male	7.6±1.5	8.00		
Female	8.0±1.1	8.10		
Nursing qualification:			9.77	0.002*
Diploma	8.1±1.2	8.20		
Bachelor or higher	7.5±1.3	7.50		
Experience years:			H=12.26	0.002*
<5	7.5±1.1	7.60		
5-	8.5±1.3	8.00		
10+	8.2±1.2	8.30		
Marital status:			0.48	0.49
Unmarried	7.8±1.4	7.80		
Married	8.0±1.2	8.10		
Registered for specialty diploma:			0.02	0.88
No	7.9±1.2	8.10		
Yes	7.7±1.9	8.65		
Got a specialty diploma:			4.73	0.03*
No	7.8±1.2	8.00		
Yes	8.5±1.2	8.60		
Registered for Master degree:			12.70	<0.001*
No	8.1±1.2	8.20		
Yes	7.3±1.3	7.25		
Attended training courses:			1.62	0.20
No	7.8±1.3	8.05		
Yes	8.1±1.1	8.10		

Table (5): Correlation matrix nurses' scores of job factors, motivators, barriers, and perception scales and their personal characteristics.

Characteristics	Spearman's rank correlation coefficient			
	Job factors	Motivators	Barriers	Perception
Age	-.085	.166*	.196*	.128
Qualification level	-.138	-.229**	-.247**	-.212**
Experience years	-.010	.197*	.238**	.147

Table (6): Correlation matrix of motivators scale domains scores.

Motivators	Spearman's rank correlation coefficient		
	Motivators		
	Professional	Personal	Role model
Professional			
Personal	.528**		
Role model	.485**	.495**	

Table (7): Correlation matrix of barriers scale domains scores.

Barriers	Spearman's rank correlation coefficient			
	Situational	Organizational	Personal behavior	study
Situational				
Organizational	.587**			
Personal behavior	.492**	.559**		
Study	.528**	.624**	.605**	

Table (8): Correlation matrix of scores of job factors, motivators, barriers, and perception scales.

Scores of	Spearman's rank correlation coefficient			
	Job factors	Motivators	Barriers	Perception
Job factors				
Motivators	.479**			
Barriers	.508**	.656**		
Perception	.376**	.663**	.607**	

(*) Statistically significant at $p < 0.01$

Table (9): Best fitting multiple linear regression model for the barriers score.

	Unstandardized Coefficients		Standardized Coefficients	t-test	p-value	95% Confidence Interval for B	
	B	Std. Error				Lower	Upper
Constant	1.41	0.57		2.469	0.015	0.28	2.54
Age	0.03	0.01	0.19	3.343	0.001	0.01	0.04
Perception score	0.48	0.05	0.54	8.676	<0.001	0.37	0.59
Job factors score	0.24	0.06	0.26	4.188	<0.001	0.13	0.36

r-square=0.49

Model ANOVA: $F=52.74$, $p < 0.001$

Discussion

Continuing professional development (CPD) is an essential component of nursing, at least for the provision of safe and effective healthcare. CPD: "...a range of learning activities through which health care professionals maintain and develop throughout their career to ensure that they retain their capacity to practice safely, effectively and legally within their evolving scope of practice" (Berdondini & Elton, 2020).

The result of the present study indicated that the majority of the study sample were female and had nursing diploma degree. This result is an expected finding since all nurses in Egypt in the old generation few decades ago were females as this profession was exclusively

feminine in our country as in many other countries in the region and in the third world. Moreover, the bachelor degree in nursing wasn't very popular until recently. Hence, the study sample is a true reflection of the nurses working in our community. This result is in the same vein with Kamariannaki et al., (2017) who found that Majority of the respondents were female and had nursing diploma degree.

The results of the current study assessed the staff nurses agreement upon motivators influencing continuing education. The highest agreed dimension of motivators was upon personal motivators. In contrast, of this finding Sajjadnia et al., (2015) study reflected that professional motivators had the highest mean score of motivating factors among the studied registered nurses. This result is in the same line

with study conducted by **KalaBarathi, Jagadeeswari & et al., (2018)** who conducted among staff nurses to explore the factors influencing their participation in professional development activities.

This result could be explained as intrinsic motivators are much beneficial and sustainable than extrinsic motivators. the highest intrinsic motivating factors were related to progress in the career, enhance quality of nursing care, improve performance, have chance for travelling to work abroad, increase the self-esteem and satisfy the educational needs.'

As a general, the current study results revealed that mean score of staff nurses agreement upon barriers was higher than their main score of agreement upon motivators. This could be explained as that governmental hospitals managers ignore the necessity of CPD or CE may be due to staff shortage or inflexibility in handling personal issues of staff nurses. This result was in the same vein with **Badu-Nyarko, (2015)** whose study that was conducted at Ghana stated that Participating in continuing nursing education requires enough motivation than personal interest. This motivation arises out of the job specifications and commitment to learn than external factors like family pressure and institutional support.

The present study show that dimensions of motivators were interdependent on each other and there were positive relations with each other and changes in one dimension affect total motivators score. This result present the possibility of the improvements in one dimension of motivators will help improvement of overall motivators. In the same line, **Murphy, Cross and McGuire, (2006)** indicated that found that both job-related motivators and personal motivators were strongly related with each other and any change in one dimension affect other dimension positively.

Regarding barriers scale dimensions, current study findings indicate that barriers dimensions were interdependent on each other,

this mean that any change in one dimension can change other dimensions and total barriers. **Aboshaiqah, Qasim & Abualwafa, (2012)** who conducted a study on nurses professionals in Saudi Arabia and stated that administration needs to provide adequate time for nurses to attend programs. The planning of CPD must address these barriers to be successful in increasing the knowledge and skills, and thereby improve the quality of patient care.

Present study finding revealed that there were statistical significant positive correlations between staff nurses' demographic characteristics as age and experience and their agreement upon motivators and barriers. This mean that with advancing age and increased experience staff nurses agreement upon motivators and barriers. This may be due to with advancing age responsibilities increase over staff nurses so they need more motivation to participate on CPD activities beside this, their perception of barriers increased. In contrast of this result **Elshafee, Fakhary & Kamel, (2017)** who conduct a study at Benha University Hospital indicate absence of statistical significant correlations between demographic characteristics and staff nurses motivators toward CPD activities.

Regarding barriers positive predictor, Age, job factors and perception score were identified as positive predictors. This means that staff nurses more experienced and registered for master degree tend to have a more agreement upon motivators than less experienced staff nurses didn't registered for master degree and vice versa. Older nurses find more difficulties or barriers in participating in CPD activities related to their increasing responsibilities; in addition job responsibilities as work overload and inflexible work schedules also hindering nurses participating in CPD activities. In consistent with this result, a study conducted by **Hegney, et al., (2010)** they found that the major barriers that affect nurses participate in CPD activities were related to work commitment, and work overload (job factors).

Conclusion

- There was a statistically significant interdependent correlations between factors affecting staff nurses participation in CPD activities namely; motivators, job factors, perception and barriers. As a general, the current study results revealed that highest mean score of staff nurses agreement was upon job factors followed by barriers then motivators. In addition, Present study finding revealed that there were statistical significant positive correlations between staff nurses' demographic characteristics as age and experience and their agreement upon motivators and barriers .
- The highest agreed dimension of motivators was upon personal motivators then professional motivators came second in rank and role-model motivators influencing continuing education came last in motivators as perceived by staff nurses. Regarding dimensions of barriers, the highest dimension of CPD barriers as perceived by staff nurses was situational barriers. In the other hand, personal behavior barriers came last in ranking between barriers dimensions and organizational barriers came second in ranking according current study findings.

Recommendations

- Based on the current study findings the following recommendations are proposed:
- Nursing staff and nursing management need to work together to Create a supportive atmosphere in the clinical environment that promotes CPD activities.

Nursing profession need to:

- Provide funding for supporting nursing professional development programs.
- Encourage professional development as a requirement for job promotion.

Health care organizations need to:

- Take responsibility for providing compensated or uncompensated time for nurses to attend continuing professional development offerings.
- Establish educational programs for nurse managers to enhance their regarding importance of continuing education for the benefit of organization.

Further research can be conducted to:

- Identify strategies that helping nursing staff to overcome barriers that hinder participation in CPD activities.
- Examine the efficacy of distance and online learning activities in achieving learning objectives and save time and effort of nurses who have the intent to participate in CPD activities.

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