

# Registered Nurses perception on Continuing Nursing Education

Carlo Bryan C. Borrico

Angeles University Foundation, Angeles City, Philippines

---

## ARTICLE INFORMATION

---

### Article History:

Received: July 10, 2020

Received in revised form: December 21, 2020

Accepted: December 22, 2020

---

### Keywords:

Continuing professional development,  
Nurses

---

\*Corresponding author: Carlo Bryan C. Borrico  
(borrico.carlo@auf.edu.ph)

---

## ABSTRACT

---

*This study aimed to investigate the registered nurses' perception towards Continuing Nursing Education (CNE). A cross sectional descriptive survey design and stratified sampling was utilized to select 77 participants who have at least 1-year hospital experience, currently employed in both public and private hospitals within Pampanga, and must be Registered Nurse. Frequency distribution was used to present the distribution of the participant's socio-demographic profile, previous involvement on CNE, motivating factors and hindering factors in pursuing CNE. For the result, it is heartening to see that most participants were voluntarily participating in CNE even though it was self-financed. Most of them reported increasing qualifications for promotion as their major motivating factors while high course fees, limited time, and unavailability of preferred courses as hindering factor. As education and training are important pedagogy in providing quality care, World Health Organization placed importance on the need for strategic planning with regard to continuing nursing education for nurses.*

---

## Introduction

Whether CNE should be mandatory, has been debated hotly in many countries for the past few decades. In China, they mandated the healthcare professionals to actively participate in CNE. This was based on the assumptions that their nurses will not participate in CNE without pressure or external influence from the government. The government believed that the obsolete or outdated nursing knowledge and skills has

an impact on health care delivery to patient and could lead to poor health outcome (Agyepong & Okyere, 2018; Houston, 2013). World Health Organization stated that the performance of health care system will ultimately depend on the knowledge and skills of the individuals behind the health care delivery. Every nurse should update their knowledge and skills, and must not confine themselves to a restricted body of information. Failure to do so, may lead to medication error, poor patient outcomes,

patient's longer hospital stay, and increase in patient morbidity and mortality (Mayes & Schott-Baer, 2010).

In addition, it was argued that nursing knowledge acquired through Continuing Nursing Education (CNE) was valid only for about two to five years. By end of that period, the knowledge and skills acquired if not updated, will become obsolete, outdated, and not relevant to meet the current health needs of the society (Agyepong & Okyere, 2018; Houston, 2013). Because of this, country such as, Australia and United States, have enacted legislation requiring the healthcare professionals to obtain specific CNE units in order to renew their license. For them, obtaining specific CNE units prior to license renewal is a justifiable means of assurance certifying their health care worker's professional competence is maintained (Eustace, 2011). The Philippines, on the other hand, also recently enacted the Republic Act 10912 (Continuing Professional Development [CPD] Act of 2016), requiring all professionals, including nurses, to comply with CPD unit requirements to renew their Professional Identification Cards (PIC). Nurses must obtain 45 CPD units (15 units of CPD a year) in the 3-years renewal period.

According to WHO, healthcare workers are one of the most indispensable components in health care system. Nurses, as a healthcare worker, are required to be competent, knowledgeable, skilled, and able to communicate with patients and family members. As education and training are important pedagogy in providing quality care, WHO placed importance on the need for strategic planning with regard to continuing nursing education for nurses (WHO, 2015).

#### *Nurse's Accountability and Responsibility*

Globally, it is estimated that, 1 out of 300 patients may be at risk or harm. The number of patients harmed during their

hospitalization is also estimated to be 10% (1 out of 10). There is a range of medical errors that cause patients' risk and harm. If this medical error occurs, it can lead to longer hospitalization, severe conditions such as disability and health-related infection, additional healthcare costs and legal action. Errors in medical fields are the leading cause of death. Nevertheless, medical errors can be canceled and can be achieved by improving patient safety in all aspects (Ammouri, Tailakh, Muliira, Geethakrishnan, & Kindi, 2015).

Knowledge is an important concept wherein nurses need to remain aware of and keep up to date with new trend and advancement in nursing. Nurses are liable both professionally and legally for their nursing practice, that is, being accountable for every decision they made. Responsibility and accountability are the foundation of the nursing profession, and are constituted as key components in the scope of nursing professional ethics and conduct. Accountability cannot be attained unless the nurse has independence to practice. Autonomy denotes to a nurse capability to make some judgement in their practice and to act as confirming to the shared nursing profession standard (Groen & Kwalilak, 2014).

The context of nurse being employed was strongly related to participation on CNE. Being a nurse, means that it is not just thinking about the skills they needed, but also the desire to pursue CNE through formal or informal education, with the acquisition of new knowledge and skills. Employers need to encourage their health care staff to pursue CNE to address the health needs of the society. Nurses, as a healthcare provider, are expected to assume a lifetime commitment to update their knowledge and skills to cope with the rapid influx of new trends in patient care, and changes in science and technology. Nurses has the right to anticipate the provision of CNE opportunities, while

employer must expect them to exhibit the highest possible patient care (Fitzgerald, Kantrowitz-Gordon, Katz, & Hirsch, 2012).

### *Growth and Development of the Nursing Profession*

Graduation from a school or college of nursing marks only the beginning of a lifelong process of enriching one's knowledge, skills, and attitude. CNE is frequently defined as the series and planned educational activities to help professional nurses keep abreast of their fields and remain updated with the latest knowledge, skills, new technologies, and new development required for their practice so they don't lag behind. It also aimed to strengthen nursing practice, research, education, and administration to improve quality patient care outcome (Hospital Safety Promotion & Disaster Preparedness, 2015).

CNE is defined as an important element on professional development in which the nurses keep updates in new trend in practice and helps to prevent knowledge and skills obsolescence (Groen & Kwalilak, 2014). CNE includes series of planned and ongoing learning activities wherein workshops, conferences or seminars will be utilized to help professional nurses to stay abreast with latest trends in nursing care and provide a venue for professional development and empowerment.

Participation in nursing continuing education is claimed to be directly associated with a high-quality nursing care, higher productivity, better performance, less medication errors, and increase job satisfaction (Agyepong & Okyere, 2018). In addition, CNE provides nurses an opportunity to have multiple career options, some of them may pursue nursing management or nursing research (Ellis & Hartley, 2012).

### *Motivation for Continuing Professional Development*

Pursuing requires motivation. Motivation is a concept that defines both extrinsic conditions (external factors) and intrinsic responses (the inner drives) that stimulate the person to demonstrate a certain behavior. Each person has different motivating needs. For example, a nurse who undertakes a CNE is motivated to satisfy the desire to be appreciated or to boost self-esteem. Some are motivated because achieving additional credentials will provide them an additional qualification for the desired position. Some nurse manager is motivated to pursue CNE because they want to understand their staffs' needs, stressors, motivators and job satisfiers. Because for them, a job that satisfies their staff would lead to improved patient outcomes and achieve institutional goals (Ammouri et al., 2015).

Groen and Kwalilak (2014) added that some individual's motivation to partake CNE was rooted from a desire to be challenged professionally and academically. This inner desire was associated to a personal need to learn more and an opportunity to new professional developments

### *Barriers to Continuing Formal Education*

It is argued that the intensification of professional knowledge, earning of credentials, profession advancement, enhanced social interactions and relieve from work routine are some of the impetus why nurses embraced CNE. However, barriers such as staff shortages, lack of funding or sponsorship, absence of a supportive work environment or superiors, family commitments, lack of administrative staff development plans for their staff and absence of opportunities for promotion were seen as hindering factors to pursue CNE (Eustace, 2011).

The soaring cost of continuing education has disheartened many healthcare staff from pursuing. Kovner and colleagues (2012) identified financial capability as the major consideration when pursuing nursing continuing education. The authors argued that an individual may pursue continuing education if he/she has extra financial sources (e.g. working overtime voluntarily or look another job). In addition, Gorczyk (2013) asserted that even though most of the nurses have inclined to participate in nursing continuing education, lack of financial resources, a desire for education leave with pay may hinder their desire to pursue continuing nursing education.

### Framework of the Study

Knowles' adult learning theory was selected to guide the study. Malcolm Knowles proposed that adults and children learn

differently. Adult learner viewed learning, as not only reception of transmitted content, but to be a process of self-directed inquiry (active inquiry). In order for learning to be effective, Knowles outlines the core principles in promoting optimal learning for adults: learners need to know why they should learn something; a need for self-directed inquiry, prior experience; adult readiness to learn; a task-centered or problem-centered orientation to learning; and adults are determining to learn by both intrinsic and extrinsic motivators.

As stated earlier, motivation, a concept that define both extrinsic conditions (external factors) and intrinsic responses (the inner drives), stimulates the person pursue CNE. Each person has different motivating needs. Adult Learning Theory proposed that adult learners need to be in control of their own learning. Optimal learning for adult must be accessible,

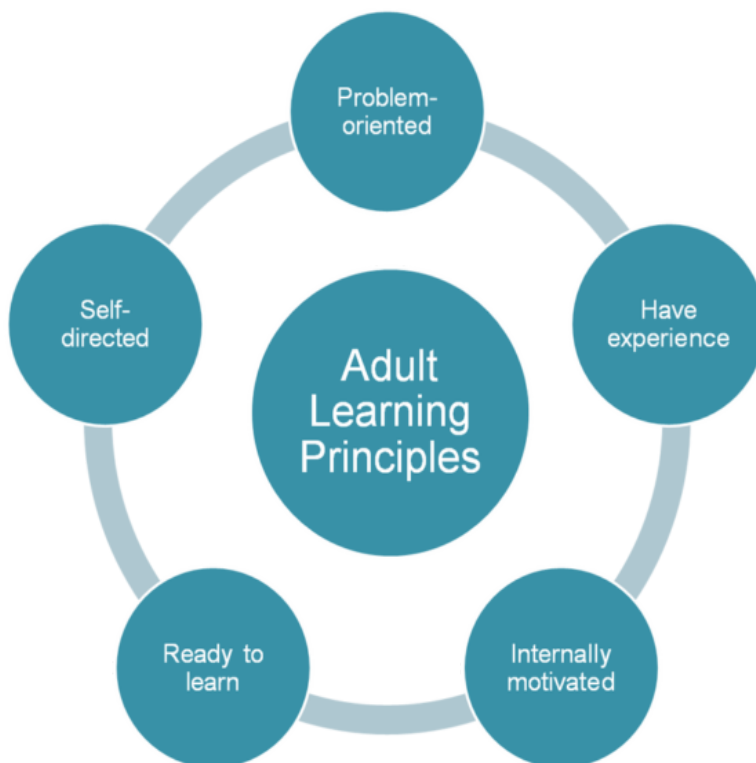


Figure 1: Knowles' adult learning theory

learner-centered, and accommodate their needs (Fitzgerald, Kantrowitz-Gordon, Katz, & Hirsch, 2012).

Maintaining staff professional development is challenging in today's busy healthcare environment. The first step to formulating CNE is to identify the learners' need, prior experience to CNE, adult readiness to learn, and some intrinsic and extrinsic motivators and challenges on the participation of CNE.

Therefore, this study aimed to investigate the perception of registered nurse with regards to Continuing Nursing Education in terms of previous involvement on CNE, plans to pursue CNE, preferred learning methods, preferred topics, motivating factors, hindering factors, and factors to be taken into account prior to enrolling in CNE (Eustace, 2011).

This study aimed to investigate the registered nurses' perception towards CNE. Specifically, it seeks to answer the following questions:

1. How are their previous involvement in continuing nursing education described in terms of:
  - 1.1. types of CNE activities involved with;
  - 1.2. study mode of the courses; and
  - 1.3. tuition fee/registration fee paid for the course?
2. What are the general demands and expectations for future CNE in terms of:
  - 2.1. Plan for CNE
  - 2.2. Qualification planned to acquire

2.3. Most important motivating factor for education

2.4. Preferred location where courses conducted

2.5. Preferred Learning methods

2.6. Most preferred aspects for which courses concerned

2.7. Least preferred aspects for which courses concerned

2.8. Direction in career ladder intended for the future

3. What are the facilitating and hindering factors associated with voluntary participation in CNE?

## **Methodology**

### *Research Design*

A cross sectional descriptive survey design was utilized to investigate the registered nurses' perception towards CNE.

### *Setting and Participants*

Stratified sampling was used to select 77 participants who have at least a year's hospital experience, currently employed in both public and private hospitals within Pampanga, and must be a Registered Nurse. Their ages ranged from 21-29 years. Sixty-one participants (79.3%) were between 23 and 26 years of age. A majority of the participants were female (56 of 77; 72.7%) and most of the participants were single (70 of 77; 90.9%). More than half of the participants had two to three years nursing experience (83.2%).

**Table 1***Demographic Characteristics of Registered Nurses in Pampanga*

<b>Characteristics</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Age</b>		
21	3	3.9
22	1	1.3
23	19	24.7
24	18	23.4
25	11	14.3
26	13	16.9
27	2	2.6
28	7	9.1
29	3	3.9
<b>Gender</b>		
Male	21	27.3
Female	56	72.7
<b>Civil Status</b>		
Single	70	90.9
Married	7	9.1
<b>Educational Attainment</b>		
BSN	74	96.1
MA/MS units	3	3.9
<b>Years of Nursing Experience</b>		
1	3	3.9
2	36	46.8
3	28	36.4
4	6	7.8
5	4	5.2

### *Instruments*

The questionnaire consists of questions regarding registered nurses' perception towards CNE. The questionnaire was divided into four sections: 1) socio- demographic data of the participants; 2) detail of previous participation on CNE; 3) general expectation and demand future CNE; and 4) hindering and facilitating factors associated with voluntary participation in CNE). A pilot test of the questionnaire was executed wherein 20 participants of same demographic profile were asked to review the instruments for clarity, completeness and relevance.

Consequently, the researcher sought an expert review from three expert professionals in the field of nursing education. These panel of experts (who at least have five years on

teaching experience, one currently holds a position in a nursing school in Pampanga and one holds a managerial position in research department) to review the instruments. The instruments were distributed to expert professionals along with the directions for rating, providing comments and timeline to return the answered survey to assess each item for readability, clarity, relevance and comprehensiveness.

### *Data Collection*

An informed consent was secured from the study participants explaining the nature of the study, including the potential risks and benefits that were associated while taking part in this study, as well as their rights to refuse and/or withdraw any time in this study was given. The participants were then asked to complete demographic data, detail of previous participation on CNE, their future plan for pursuing CNE, and some hindering and facilitating factors associated with voluntary participation in CNE.

### *Data Analysis*

The Statistical Package for Social Science (SPSS) Version 21 was used. Frequency distribution was used to present the distribution of the participant's demographic profile and questions regarding on participants' involvement on CNE.

### *Ethical Considerations*

An individual informed consent has been secured from the study participants. The researcher explained in details the nature of the study, including the potential risks and benefits in taking part in this study, as well as their right to refuse and/or withdraw any time in this study. Moreover, the participants assured that no identifying information will be reported in any section of this study.

## Results and Discussions

World Health Organization stated that the performance of health care system will ultimately depend on the knowledge and skills of the individuals behind the health care delivery. Every nurse should update their knowledge and skills, and must not confine themselves to a restricted body of information. Failure to do so, may lead to medication error, poor patient outcomes, patient's longer hospital stay, and increase in patient morbidity and mortality. Therefore, this study aimed to investigate the registered nurses' perception towards Continuing Nursing Education (CNE) specifically their future plan for pursuing CNE, and some hindering and facilitating factors associated with voluntary participation in CNE.

Moreover, this section offers a summary of the research findings and analysis. Table 2 showed the participant's previous involvement on continuing nursing education. Table 3 showed some most common general plan and expectation for Future CNE. Table 4 showed some facilitating and hindering reported by the participants with regard to their future CNE.

### *Previous Involvement of CNE*

Table 2 shows the participant's previous involvement on continuing nursing education. A majority of participants had taken continuing nursing education after registration. It is interesting that most of the participants participated in seminar workshops (35.8%), conferences (5.7%), in-service training (22%), certificate courses (30.9%), and degree courses (5.7%). These CNE activities were undertaken mainly on a part time basis (67.5%) and were mostly self-financed (92.2%).

**Table 2**

*Details of Previous Involvement in Continuing Nursing Education (CNE)*

Categories	Frequency	Percentage
<b>Types of CNE activities in the past 3 years</b>		
Seminar workshops	44	35.8
Conferences	7	5.7
In-service training	27	22
Certificate courses	38	30.9
Degree courses	7	5.7
<b>Study mode of the courses</b>		
Part time	52	67.5
Full time	25	32.5
<b>Tuition fee paid for the courses (Part time)</b>		
Self-financed	71	92.2
Sponsored by employers or others	6	7.8

**Table 3**

*General Demand and Expectation for Future CNE*

Categories	Frequency	Percentage
<b>Plan for CNE</b>		
No such plan	27	30
Plan to further study	50	70
<b>Qualification planned to acquire</b>		
Any CNE certificate courses	64	83.1
Master's degree	11	14.3
Doctoral degree	2	2.6
<b>Most important motivating factor for education</b>		
Personal interest	16	20.8
Increasing qualifications	30	39
Job promotion	22	28.6
Pre-requisite for license renewal	6	7.8
Cheap course fee	3	3.9



<b>Preferred location where courses conducted</b>		
On-campus (university)	28	36.4
Distance learning	18	23.4
At hospital	31	40.3
<b>Learning methods preferred</b>		
Lecture	40	51.9
Small group tutorial	13	16.9
Problem-based group learning	20	26
Online	4	5.2
<b>Most preferred aspects for which courses concerned</b>		
General knowledge	42	54.5
Nursing	14	18.2
Specialization		
General skill	6	7.8
Nursing	9	11.7
Specialization skill		
Nursing	6	7.8
administration or management		
<b>Direction in career ladder intended for the future</b>		
Nursing	20	26
administration and management		
Nursing education	10	13
Nursing research	6	7.8
Clinical nursing (general)	21	27.3
Clinical nursing (specialty)	6	7.8
Health education and promotion	14	18.2

### *General Demand and Expectation for Future CNE*

It is heartening to see that most participants are planning to pursue CNE even though it was self-financed (70%). Majority of the participants (83.1%) planned to pursue a certificate courses rather than enrolling graduate program (16.9). Most of the participants listed increasing qualifications (39%), job promotion (28.6%) and personal interest (20.8%) as the major motivating factors associated with voluntary participation on CNE (see Table 3).

Groen and Kawalilak (2014) In fact, some individual's motivation to partake CNE was rooted from a desire to be challenged professionally and academically. This inner desire was associated to personal need to learn more and an opportunity to new professional developments.

Most participants preferred their learning to take place at the hospital (40.3%) rather than on-campus or university (36.4%) or through distance learning (23.4%). This finding reflect Richards' and Potgieter's (2010) statement that nursing managers should have concreted staff development plan, funds for CNE, special consideration that pertains to the granting of study leave, and a supportive working environment with regards to CNE. CNE will help the professional nurses keep abreast on the latest trend on nursing practice. It will help to decrease the medication error, improve the patient outcomes, shorten hospital stay, and decrease patient morbidity and mortality (Mayes & Schott-Baer, 2010).

Moreover, most participants preferred lecture (51.9%) as a learning mode. Most of the participants prefer a course that would update their general knowledge (54.5%), nursing specialization (18.2), and nursing specialization skill (11.7%). Most of the participants intended to pursue a career track in clinical nursing (27.3%), nursing administration and management (26%) and health education and promotion (18.2%). The findings reflect Knowles' adult learning theory that adult need to for self-directed inquiry and a task-centered or problem-centered orientation to learning. CNE provides nurses an opportunity to have multiple career options, which they may pursue such as nursing management or nursing research (Ellis & Hartley, 2012).



*Facilitating and Hindering  
Factors Associated with Voluntary  
Participation in CNE*

As reflected in Table 4, most participants listed course content (100%), course fee (93.5%), location (94.8%), teaching and learning mode (85.7%), assessment mode (88.3%), and duration (76.6%) as the most important factors to be taken into account prior to enrolling a course. Consequently, they listed high course fees (87%), limited time (80.5%), unavailability of courses (76.6%), not applicable or not-related to current work (75.3%), difficulty in requesting duty (67.5%), and family care burden (64.9%) as the major hindering factors in enrolling CNE.

The soaring cost of continuing education has disheartened many nurses from pursuing CNE. In fact, Gorczyca (2013) argued that, even nurses are inclined to participate CNE, lack of financial resources or absence of sponsorship, may hinder the nurses to pursue continuing education. In addition, Richards and Potgieter (2010) listed lack of funding, work responsibilities, absence of granting study leave, family responsibilities, lack of coherent staff development plan by the hospitals institution, lack of a supportive work environment, and lack of opportunities for promotion as identified as one of the barriers of nurses to engage in CNE.

Previous research has revealed a range of factors that have discouraged nurses from undertaking further education. These included financial status, tuition cost, work responsibility, family commitments, lack of information, time, and inappropriate for or unrelated to the current work environment or setting. This study has identified similar hindering factors associated with continuing education, including soaring tuition fees, limited time, unavailability of favorable nursing course, not applicable or unrelated to current work, difficulty in requesting duty, and family care

**Table 4**  
*Facilitating and Hindering of nurses participation  
in CNE*

Categories	Frequency	Percentage
<b>Essential factor</b>		
Course fee	72	93.5
Duration	59	76.6
Location	73	94.8
Course content	77	100
Qualification of teaching staff	54	70.1
Teaching and learning mode	66	85.7
Assessment mode	68	88.3
<b>Hindering factor</b>		
High course fees	67	87
Limited time	62	80.5
Difficulty in requesting duty	52	67.5
Family care burden	50	64.9
Unavailability of course you like	59	76.6
Not applicable or related to current work	58	75.3
No relevance to promotion	44	57.1
No interest in CNE	29	37.7

burden (Kovner, Brewer, Katigbak, Djukic, & Fatehi, 2012).

Since participation in continuing education was self-financed, it is not surprising that more than 80% of the participants recognize course fees as the major factor deterring nurses from participation in continuing education. This is consistent with findings from previous articles, concluding that financial aspects were often deemed to be the main predictor in nurse participation in continuing education. This finding is further supported in this study because most of the participants planned to enroll in certificate courses, which were expected to cost less, whereas only approximately 20% of the participants were thinking of a master's degree and doctoral degree, which is much costlier.

However, because many nurses reported that they participated in CNE to improve their qualification status and job promotion needs, it is possible that cost may not be such an influential factor. The relationship between individual participation and cost in CNE may be worth for further study. The continuing professional education of the healthcare staff is not exclusively the accountability and responsibility of both employing authority or healthcare staff (Fitzgerald, Kantrowitz-Gordon, Katz, and Hirsch, 2012).

## Conclusion

Most of the studies conducted in CNE context has been focused on nurses' approaches, perception, and attitudes toward CNE; the effect of CNE on nurses' professional competencies; need assessment on continuing education; provision of continuing education models; and barriers or challenges on the participation of CNE. This study aimed to investigate the registered nurses' perception towards CNE specifically on what are their general plans and expectation if they are planning to pursue CNE and what are the facilitating and hindering factors associated with voluntary participation in CNE?

Based on the findings, the following recommendations are made. Hospitals administrators should create a culture of valuing CNE and emphasized the need for nurse manager to act as role models on their staff. Nurses need to be motivated to participate CNE in a supportive environment through flexible work schedules, granted study leave with pay, sponsored CNE, concrete staff development, the availability of nurse managerial positions, and opportunities for promotion.

Nurse managers and nurse educators should be aware of the need for flexible work schedules to accommodate potential

learners. The in-service staff development program should be based on the need assessment to determine which area of nursing practice need to improve. To address the issue on CNE, both administration and staff should share responsibility for the careers of employees. The CNE will be more likely successful if nurses are involved in career planning and management. Nurse managers should seek nursing staff's recommendation on the possible program to be conduct.

Based on the findings, the researcher recommends that the hospitals, Philippine Nurses Association, Commission on Higher Education and other nursing groups or organizations should review their mandatory policy for nurses to participate in continuing professional development that are in line with the nurses' needs and expectations to further improve their job performance. Nurses should continue to explore ways to protect public interest in relation to the practice of nursing.

## Recommendations

The instrument aimed at investigating the perception of registered nurse with regards to previous involvement on CNE, plans to pursue CNE, preferred learning methods, preferred topics, motivating factors, hindering factors, and factors to be considered prior to enrolling in CNE. Given that one of the study limitation is the use of self-report measures, which may contain inherent limitation due to researcher's reliance on self-appraisal. Some factors of importance in analyzing continuing education behaviors may have been missed. Therefore, future study may also need to measure those subjective traits using qualitative methods such as focus group interview or learning need assessment survey.

• • •

## References

- Agyepong, E., & Okyere, E. (2018). Analysis of the Concept Continuing Education in Nursing Education. *Journal of Education and Educational Development, 5*(1), 96-107.
- Ammouri, A. A., Tailakh, A. K., Muliira, J. K., Geethakrishnan, R., & Al Kindi, S. N. (2015). Patient safety culture among nurses. *International nursing review, 62*(1), 102-110. <http://dx.doi.org/10.1111/inr.12159>. Epub 2014 Dec 11. PMID: 25495946.
- Ellis, J., Hartley, C. (2012). *Nursing in today's world trends, issues, and management 10th ed.* China: Lippincott Williams and Wilkins.
- Fitzgerald, C., Kantrowitz-Gordon, I., Katz, J., & Hirsch, A. (2012). Advanced practice nursing education: challenges and strategies. *Nurse Research Practice, 2012*, 854918.
- Gorczyca, C. (2013). *Factors influencing the pursuit of graduate education in registered nurses: Exploring the motivators and barriers.* (Unpublished doctoral dissertation). University of British Columbia. Retrieved from <https://open.library.ubc.ca/collections/ubctheses/24/items/1.0165658>
- Groen, J. & Kawalilak, C. (2014). Pathways of adult learning: Professional and educational narratives. Toronto: Canadian Scholars' Press.
- Eustace, L. W. (2011). Mandatory continuing education: Past, present, and future trends and issues. *The Journal of Continuing Education in Nursing, 32*(3), 133-137.
- Houston, C. (2013). The impact of emerging technology on nursing care: Warp speed ahead. *The Online Journal of Issues in Nursing, 18*(2).
- Kovner, C. T., Brewer, C., Katigbak, C., Djukic, M., & Fatehi, F. (2012). Charting the course for nurses' achievement of higher education levels. *Journal of Professional Nursing, 289*(6), 333-334. <http://dx.doi.org/10.1016/J.Prof.Nurs.2012.04.021>.
- Mayes, P., & Schott-Baer, D. (2010). Professional development for night shift nurses. *Journal of Continuing Education in Nursing, 41*(1), 17. <https://dx.doi.org/10.3928/00220124-20091222-05>