

Yfanti & Sipitanou, 2017

Volume 3 Issue 3, pp. 658-674

Date of Publication: 18<sup>th</sup> December 2017

DOI-<https://dx.doi.org/10.20319/pijss.2017.33.658674>

This paper can be cited as: Yfanti, F & Sipitanou, A. (2017). Continuing Nurse Education as a Factor of Health Care Quality. *PEOPLE: International Journal of Social Sciences*, 3(3), 658-674.

This work is licensed under the Creative Commons Attribution-Non-commercial 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.

## **CONTINUING NURSE EDUCATION AS A FACTOR OF HEALTH CARE QUALITY**

**Fani Yfanti**

*G. Papanikolaou Hospital, Thessaloniki, Greece*  
[fani.yfanti@gmail.com](mailto:fani.yfanti@gmail.com)

**Athina A. Sipitanou**

*University of Macedonia, Department of Educational and Social Policy, Thessaloniki, Greece*  
[asipi@uom.gr](mailto:asipi@uom.gr)

---

### **Abstract**

*The purpose of the research was to examine the views and attitudes of nurses regarding their educational needs in the frame of Interwork Continuing Education and also explore the improvement of patient care as a result of Continuing Education. Taking into consideration the holistic and synthetic nature of Nursing science, the continuous reassessment of knowledge and skills is completely important. The results of the research showed that the participation of nurses in continuing education programs is guided by the awareness of the needs and deficiencies in the daily exercise of their profession. The training programs help to improve their working performance and efficiency. The object of education with the highest selection index was the field of Emergency Nursing followed by prevention of nosocomial infections and treating burnout. As a contribution of the study we could mention the timely and proper planning of educational programs based on the existing and future educational and training needs. Education of employees is a sustained and substantial investment in human resources and creates conditions*

*for optimal and possible utilization of staff, based on both the needs of the service and personal knowledge and skills. Coverage of training needs through relevant training programs will lead to the improvement of health care quality, since the Continuing Education in Nursing is one of the main conditions for ensuring high level of health providers.*

**Keywords**

Continuing Nurse Education, Training Needs, Health Care Quality

---

**1. Introduction**

In the field of healthcare, Continuing Education is a process that takes place throughout the working life of a health professional and has become more important today as society, science and technology are changing faster than ever (Peters, 2000; Lin & Chen, 2007). It is a non-formal and natural procedure through which an adult is called upon to manage and cope with his own experience. Learning for the health practitioner is therefore a continuous process of adaptation to the diverse circumstances in which he is confronted in his daily social and professional life (Russell, 2006; Jantzen, 2008).

The nurse has to become synchronized with new scientific data on health and to face continuous technological, scientific and social changes, resulting in differences that are expressed in educational needs between what he knows, what he learns and what he does in the nursing practice. These needs are covered by Continuing Nursing Education (CNE). The main objective of CNE is to improve the provided care and patient safety. Particular objectives include certification of nursing skills as well as updating and improving existing knowledge, reducing work-related stress, developing critical thinking, achieving high productivity, fewer professional accidents and mistakes, better working climate and professional satisfaction of nurses (Panayiotopoulou, 2008; Collins, et al., 2012).

CNE is one of the basic prerequisites for the continuous improvement of the health services provided and the substantial satisfaction and safety of patients. In this sense, the nurse is invited to synchronize with the latest scientific achievements in health and to face continuous technological and social changes and challenges (Panayiotopoulou, 2008, Zimmerman & Pilcher, 2008; Collins, et al., 2012).

In CNE, the concept of total quality and its management refers to the pursuit of the health organization to continuously improve the quality of the training services provided by continually adapting the training programs to the specific needs and requirements of the trainees, improving the quality of educational processes in their design, implementation, methods and assessment (Rogers, 1999; Sipitanou, 2014).

The nurse needs not only to have adequate knowledge and skills in the exercise of his profession, but to maintain that competence and to be willing to expand his skills and abilities with the ultimate goal of offering quality care. Participation in training programs is more than ever a necessity to ensure and certify the capacity and effectiveness of nursing staff (Ferguson, 1994; Mulrooney, 2005; Pierrakos, et al., 2006).

Always focusing on the patient, Continuing Education aims to improve existing knowledge, to provide feedback on general and specialist knowledge, to cultivate skills for care based on documented practice, and to change attitudes and behaviors of the nurse (Ferguson, 1994; Iley, 2004; Raftopoulos, 2009). In addition, Continuing Nursing Education, in addition to updating and improving existing knowledge, directly contributes to a better working climate, empowering teamwork, building relationships with slaves, in professional satisfaction. Moreover, it seems to be related to the prevention of professional burnout, as through the educational process, organizational skills, self-management capacity, and the use and use of support systems can be promoted (Ferguson, 1994; Arcand & Neumann, 2005; Ribelin, 2006).

The professional certification provided by Continuing Vocational Education and Training ensures the efficiency and quality of care provided by the health professional as it goes beyond the minimum quality criterion established by the academic certification (Raftopoulos, 2009; Chiarella, et al., 2008; Levine & Johnson, 2014). In other words, the continuing education and training of nurses provides them with additional knowledge and skills beyond those they already possess from their studies.

Furthermore, the importance of CNE for nurses and their impact on the safety and quality of patient care has been repeatedly highlighted internationally through relevant bibliography (Pierrakos, et al., 2006; Torstad & Bjork, 2007; Ribelin, 2006; Castro, et al., 2012; Edwards, et al., 2001; Fowler, et al., 2013; Simpson & Courtney, 2008; Smith & Topping, 2001; Cervero, 2001).

In our country, Greece, while pointing to the necessity of participation in continuing education activities in articles and bibliographical references, however, indigence has been found in the field of research, with the exception of some studies concerning the design and implementation of training programs (Theofanidis & Fountouki, 2006; Pierrakos, et al., 2006).

Considering all the above it could be stated that CNE is a challenge and a necessity for the modern nurse as it is directly related to the improvement of the quality of the care provided and the safety of the patients. In this context, participation in training programs is more than ever required to ensure and certify the capacity and effectiveness of nursing staff (Covell & Sidani, 2013).

Finally, CNE offers nurses the opportunity to develop and become innovative in clinical practice, capable of responding to the increased demands of their work, reacting to changes in situations, and applying the right clinical practice and knowledge every time, being adaptable in changing needs of medical care, creative in clinical practice, self-sufficient and responsible in their work. As a conclusion, it is clear that the prospect of improving the quality of provided nursing care and ensuring patient safety requires that all nurses are actively involved in the development of knowledge and nursing practice by framing CNE programs either in volunteer or in mandatory basis. CNE needs to be a priority for the nurse to provide safe and high-quality care.

## **2. Research**

### **2.1 Purpose of the Survey**

The purpose of this research is to investigate the training needs of nurses and the ability to transform these needs into training programs within their Continuing In-service Nursing Training.

The specific objectives of the survey are:

- To explore the relationship between socio-demographic and work characteristics and the participation of nurses in Continuing Education
- To record the views of nurses concerning their satisfaction of their educational needs in terms of Continuing In-service Training and the intended improvement of effective patient care and, finally,

- To identify the training needs of nurses and to capture all the inhibiting factors that make it difficult to participate in the CNE.

## 2.2 Methodology

For the purposes of the survey, a questionnaire designed and organized on the basis of existing literature and previous relevant surveys and was used in trial in 25 nurses.

The questionnaire initially includes a primary, introductory section with demographic, educational, scientific and occupational data related to the participation of nurses in Continuing Education, such as age, gender, studies and years of service, position, working hours and participation in conferences (Tables 1, 2, 3).

Subsequently, the questionnaire refers to the necessity of CNE to ensure a high level of health services and is divided into three sub-sections:

- The first section includes the opinions and attitudes of nurses on the ability to meet their educational needs for improving provided care in the context of Continuing In-Service Training (Tables 4, 5, 6).
- Questions on the methods and forms of education as well as questions on training motivations and obstacles are asked in the second section (Tables 6, 7, 9, 10).
- The third section concerns the nature of participation in in-service training programs and an open question with the possibility to express specific educational needs (Tables 8, 11).

The final sample of the survey, which lasted from February until April 2014, consisted of 339 nurses from the 445 who initially received the questionnaire and who served at all General Hospitals and Health Centers in the Prefecture of Thessaloniki with the aim of maximum representativeness.

## 2.3 Results

Here is the descriptive statistical analysis of the results.

### 2.3.1 The demographic characteristics of the participants are shown in Table 1.

**Table 1:** *Demographic Characteristics of the Participants*

	<b>Participants</b>	<b>Percentage %</b>
<b>Age</b>		
20-30 years	13	3,8
31-40 years	115	<b>33,9</b>

41-50 years	<b>174</b>	<b>51,3</b>
>50 years	37	10,9
<b>Sex</b>		
Men	25	7,4
Women	<b>314</b>	<b>92,6</b>
<b>Marital status</b>		
Unmarried	54	15,9
Married	<b>243</b>	<b>71,7</b>
Widowed	6	1,8
Divorced	36	10,6

The majority of the sample was female (92.6%), married (71.7%), aged 41-50 years (51.3%).

### **2.3.2 The Educational and Working Characteristics are shown in Table 2.**

**Table 2:** *Educational and Working Characteristics*

	<b>Participants</b>	<b>Percentage %</b>
<b>Education</b>		
University UE	18	5,5
Technological TE	<b>221</b>	<b>67,4</b>
Secondary (assistants) SE	86	26,2
Internship	2	0,6
Postgraduate	0	0,0
PhD	1	0,3
<b>Agency you are working for</b>		
Hospital	<b>289</b>	<b>85,3</b>
Health center	50	14,8
<b>Domain you belong to</b>		
Surgery	<b>118</b>	<b>34,8</b>
Pathologic	87	<b>25,7</b>
Laboratory	47	13,9

Other	87	25,7
<b>Years of service</b>		
0-5	20	5,9
5-10	30	8,8
10-20	<b>160</b>	<b>47,2</b>
20-30	109	<b>32,2</b>
30-40	20	<b>5,9</b>
<b>Work position</b>		
Nurse	<b>309</b>	<b>91,2</b>
Head of Unit	30	8,8

The majority of respondents were clinical and laboratory nurses (91.2%), hospital workers (85.3%), aged 31-50 (85.2%), women (92.6%), married (71, 7%), graduates of Technological Education (67.4%), with more than 10 years of service (85.3%), belonging to the surgical and pathological sector (60.5%).

### 2.3.3 Their Recent Scientific Activity is depicted in Table 3 below

**Table 3: Recent Scientific Activity**

	<b>Participants</b>	<b>Percentage %</b>
<b>You are informed about developments in your science</b>		
Yes	<b>266</b>	<b>78,5</b>
No	73	21,5
<b>Number of participants in conferences over the last five years</b>		
1-5	<b>199</b>	<b>58,7</b>
6-10	73	<b>21,5</b>
More	45	<b>13,3</b>
None	22	6,5
<b>Number of contributions to conferences over the last five years</b>		
1-5	<b>198</b>	<b>58,4</b>
6-10	16	<b>4,7</b>

More	15	4,4
None	110	32,4

The majority of nurses (78.5%) stated that they were informed on their science and had at least one to over 10 conferences (93.6%), in which a very large percentage (67.5%) participated with suggestions.

**2.3.4 The views of nurses on the characteristics of continuing In-Service Training so that they are able to meet their educational needs for improved care are presented in Table 4.**

**Table 4: Characteristics of Continuing In-Service Training**

	I completely disagree	I disagree	I do not even agree Nor do I disagree	I agree	I totally agree
<b>The CNE should</b>					
Be systematic, follow-up and periodic	1,5	0,3	0,9	49,8	47,4
Be carried out whenever scientific data changes are introduced	0,3	2,7	3,6	<b>58,0</b>	<b>35,4</b>
Be made on the basis of the training needs of the nurses	5,2	3,0	<b>55,9</b>	<b>35,6</b>	0,3
Be performed at certain times of the caregiver's careers with discharge from his / her work duties	0,6	10,5	<b>19,6</b>	47,6	21,7
Be taken out of work hours	6,0	<b>30,5</b>	<b>26,0</b>	<b>29,3</b>	8,1
Be carried out under training programs	<b>17,5</b>	<b>8,7</b>	<b>69,0</b>	2,4	2,4
Have an Education Office in each organization to register	0,6	2,7	9,0	<b>51,5</b>	<b>36,2</b>



training needs and develop training programs					
<b>The CNE contributes</b>					
To improving the effectiveness of the care provided	0,6	1,2	7,1	<b>56,4</b>	<b>34,7</b>
To improving the appropriateness of care	0,6	2,1	14,9	<b>58,9</b>	<b>23,5</b>
To improving the efficiency of care, with the help of modern scientific knowledge	1,5	2,7	6,6	<b>66,3</b>	<b>23,0</b>
To improving the safety of the environment where care is provided	3,3	3,6	12,6	<b>60,5</b>	<b>20,1</b>

The majority of nurses (97.2%) agree that EMU needs to be systematic and continuous, and that there should be an Education Office in the service for recording training needs and developing education and training programs (87.5%). Furthermore, a percentage (93.4%) considers it preferable for training programs to take place at all times when scientific changes are introduced.

In addition, the majority of nurses (89.3%) agree that EMC programs contribute to improving efficiency and safety (80.6%) and appropriate care (82.4%), efficacy and more efficient care (91.1%).

### 2.3.5 Deficiencies in the practice of day-to-day nursing practice and the need to participate in professional performance improvement programs are shown in Table 5.

**Table 5:** *Deficiencies in the practice of day-to-day nursing practice and the need to participate in professional performance improvement programs*

	Percentage %
<b>Need to participate in Continuing Education programs</b>	
Yes	<b>88,5</b>
No	11,5
<b>Training programs that help improve professional performance</b>	
Yes	<b>89,7</b>
No	10,3

Almost all nurses (90%) consider that there are deficiencies that necessitate training, which in turn improves their performance (89.7%).

### 2.3.6. Achievement of targets through the EMC is outlined in Table 6.

**Table 6:** *Achievement of targets through the EMC*

	Percentage %
<b>Through Continuing Nursing Education is mainly achieved</b>	
development of new skills	5,4
ensuring professional autonomy and self-confidence	5,7
widening of professional horizons	7,8
acquisition of modern knowledge	17,1
all the above	<b>64,0</b>

The acquisition of modern knowledge and skills, the expansion of professional horizons and professional autonomy constitute the overarching objectives of the CNE (64%).

### 2.3.7. The CNE monitoring barriers are presented in Table 7

**Table 7:** CNE monitoring barriers

	Percentage %
<b>The major obstacles to participation in training programs are</b>	
economic reasons	24,8
lack of time	16,8
staff shortage	<b>42,2</b>
family / personal reasons	2,8
incomplete incentives	7,3
other reasons	6,1

Lack of staff (42.2%) and economic reasons (24.8%) are the main obstacles to participation in CNE.

### 2.3.8. Table 8 below lists the first 10 choices of nurses to participate in programs that are most indispensable

**Table 8:** The first 10 choices of nurses to participate in programs

1st Priority	Thematic axes
<b>194</b>	Emergency nursing care
78	Prevention of in-hospital infections
69	Basic Life Support and Automatic External Defibrillation: Addressing Special Situations
67	Stress Management Ways - Professional Fatigue Syndrome
61	Work safety
56	Psychological support for nurses
47	Care for a patient suffering from a serious illness
47	Nursing care in the Emergency department
41	Quality of health services
28	Creating Protocols and Guidelines for Nursing Practice

The above answers of the nurses reveal their essential priorities, the satisfaction of which is the work of the CNE bringing the emergency nursing care (194 persons) as their first educational priority.

**2.3.9. Tables 9 and 10 below show the choices of nurses regarding the appropriate forms and methods of implementation of the training programs**

**Table 9:** *Appropriate forms of implementation of the training programs*

	<b>Percentage %</b>
Suggestion - Lecture	21,6
Print version	7,2
Round table - Discussion	21,0
Clinical tutorial	<b>46,4</b>
Distance learning	3,0
Other	0,9

Clinical tutorials are considered the most appropriate form of CNE (46.4%), followed by suggestion (21.6%) and discussion (21%).

**Table 10:** *Appropriate Methods of Implementation of the Training Programs*

	<b>Percentage %</b>
Review of Modern Bibliography	16,2
Process of conducting research work	10,9
Evidence-based nursing practice	<b>43,9</b>
Case study	15,9
Presentation of articles of particular interest	13,2

The majority of nurses (43.9%) believe that CNE should rely on clinical practice based on evidence of Nursing, choosing modern applied learning methods.

**2.3.10. The choices of nurses regarding the nature of participation in CNE programs are shown in Table 11.**

**Table 11:** *Nature of Participation in CNE Programs*

	<b>Percentage %</b>
Mandatory	<b>28,5</b>
Optional	16,4
Obligatory on a case by case basis	<b>55,1</b>

Nurses choose either the mandatory case-by-case participation in CNE programs (55%) or in any case the programs are mandatory (28.5%).

### **3. Conclusion**

In terms of demographic, educational and work characteristics, nurses involved in the survey are in the overwhelming majority (92.6%) women, aged 31-50 (85.2%) and married (71.7%), with (67.4%) and Secondary Education (26.2%), while only one person is a PhD. Most of them have 10-30 years of service (79.4%) and work in a hospital (85.3%) in the surgical and pathological field, mainly (60.5%), while all of them have an impressive attendance at conferences over the past five years (93.5%), with a considerable number of contributions (63.1%).

Regarding the views expressed on the characteristics of an effective Continuing In-service Training, it is noted that a common request by the nurses is the need for a systematic and regular CNE (97.2%) and in any case to take place when scientific changes are made to the current data (93.4%). In addition, improving the efficiency of care provided to patients appears to be the most urgent need for their training (91.1%), thus highlighting the need for continuous upgrading of health professionals' knowledge and skills. It therefore appears that the consciousness of nurses has been consolidated in the beliefs of the beneficial effects of CNE, both in the development of new knowledge and skills and in the broadening of their professional horizons and in securing professional self-confidence and competence, which at the same time function as a basic incentive to participate in training.

Although the philosophy of the Continuing Education process is to encourage individuals to seek new knowledge themselves, which will fit into their nursing role, research shows that

obstacles such as significant staff shortages (42.2%) And the lack of financial support by the competent bodies (24.8%), along with the lack of time (16.8%), often inhibit the participation of nurses in the respective programs.

With regard to the teaching methodology chosen by the participants, it is first of all the clinical tutorial (46.4%), while the lecture-lecture (21.6%) and the round table-discussion (21%). Thus, Evidence Based Nursing Practice, 43.9%, seems to be preferred to all forms of education as it maximizes learning through the experience gained in a clinical setting.

By trying to interpret the priority given by an overwhelming majority of participants (194 people) to urgent nursing care, it could argue that this field requires direct high-quality services and proper management of the whole situation. Within distinct distance is the prevention of in-hospital infections (78 persons), basic life support and automatic external defibrillation to deal with special situations (69 persons). In addition, the issue of management of professional anxiety and occupational exhaustion, which seems to concern many of the employees in Greek hospitals and nursing services in general (67 persons), is also affected.

Finally, it is noted that nurses propose, in a large percentage (83.6%), that CNE should have a mandatory character, if any.

#### **4. Epilogue**

The rapid development of health sciences as well as modern social requirements makes it necessary to continuously upgrade the knowledge and skills of Health Professionals.

In addition, the findings of the present study show that the necessity of Continuing Education has been established in nursing consciousness, but there are also systematic barriers, such as lack of staff, which in practice make it difficult or even invalidate its implementation. Nurses, overwhelmingly, consider that education will contribute to acquiring knowledge and skills that will improve the quality of health care provided and enable them to better meet their duties. Their self-realization goes through their training and is especially sought in areas where data and methods are changing rapidly, such as the emergency. As no substantial differences were found between the individual subgroups, all nurses are in the same spirit of the necessity of Continuing Education, with the exception of those who have more years of service and now go to the pension.

As far as the conditions for effective nursing education are concerned, they concern the design, organization, implementation and evaluation of training programs, which should be organized and voluntary in order to maximize their positive results. In addition, educational objectives need to be clearly formulated at the beginning of the educational process, realistic and linked to the expectations of the learners. In addition, nurses should be treated as adults with knowledge, experiences and skills, attitudes and attitudes, and with well-defined interests and specific expectations. Lastly, account should be taken of the obstacles encountered by trainees and how to overcome them. All of the above elements significantly determine the quality and effectiveness of nursing training programs.

In general, however, it has been established that CNE is directly related to the improvement of the quality of the services provided but also to the reduction of work-related stress. Well-trained nurses have increased productivity, reduced their professional accidents and mistakes, while creating a better working climate. Therefore, they themselves enjoy higher levels of professional satisfaction and their patients are better at care.

In the context of improving the quality of patient care and health care, the need to meet the expressed educational needs of nurses requires the design and organization of their targeted and Continuing Education and Training. Quality in health care relies heavily on the development of human resources to ensure the effectiveness of an entire health organization. In other words, investing in an experienced and skilled nursing staff can ensure the high-quality health care.

Finally, we could mention that another interesting field for further research is to examine how Continuing Nurse Education is taking place in a wider context, in Europe, and whether it contributes to improving health care provision.

## **References**

- Aiken, L.H., Cimiotti, J.P., Sloane, D.M., Smith, H.L., Flynn, L. & D.F. Neff (2012). Effects of nurse staffing and nurse education on patient deaths in hospitals with different nurse work environments. *Journal of Nursing Administration*, 42(10):10-6.
- Arcand, L.L. & J.A. Neumann (2005). Nursing competency assessment across the continuum of care. *Journal of Continuing Education in Nursing*, 6(6):247-54.

- Castro, R.C., Knauth, D.R., Harzheim, E., Hauser, L. & B. B. Duncan (2012). Quality assessment of primary care by health professionals: a comparison of different types of services. *Cadernos de Saude Publica*, 28(9):1772-84.
- Cervero, R.M. (2001). Continuing professional education in transition, 1981-2000. *International Journal of Lifelong Education*, 20, (1-2):16-30.
- Chiarella, M., Thoms, D., Lau, C. & E. McInnes (2008). An overview of the competency movement in nursing and midwifery. *Collegian*, 15(2):45-53.
- Collins, P.A., Hardesty, I., White, J.L. & L. Zisblatt (2012). Continuing education for performance improvement: a creative approach. *Journal of Continuing Education in Nursing*, 43 (10):437-8.
- Covell, C.L. & S. Sidani (2013). Nursing intellectual capital theory: testing selected propositions. *Journal of Advanced Nursing*, 69(11):2432-45.
- Edwards, N., Hui, Z.D. & S.L. Xin (2001). Continuing education for nurses in Tianjin Municipality, the People's Republic of China. *Journal of Continuing Education in Nursing*, 32(1):31-37.
- Ferguson, A. (1994). Evaluating the purpose and benefits of continuing education in nursing and the implications for the provision of continuing education for cancer nurses. *Journal of Advanced Nursing*, 1994, 19(4):640-6.
- Fowler, L., Gottschlich, M.M. & R.J. Kagan (2013). Burn center journal club promotes clinical research, continuing education, and evidence-based practice. *Journal of Burn Care and Research*, 34(2):92-8.
- Iley, K. (2004). Occupational changes on nursing: the situation of enrolled nurses. *Journal of Advanced Nursing*, 45:360–370.
- Jantzen, D. (2008). Reframing professional development for first-line nurses. *Nursing Inquiry*, 15 (1):21-9.
- Levine, J. & J. Johnson (2014). An organizational competency validation strategy for registered nurses. *Journal for Nurses in Professional Development*, 30(2):58-65.
- Lin, Y.H. & C.H. Chen (2007). Reflections on nursing education in Taiwan and its prospects from the perspective of adult education. *Hu Li Za Zhi*, 54 (1):11-6.
- Mulrooney, A. (2005). Development of an instrument to measure the practice vocational training environment in Ireland. *Medical Teacher*, 27:338–342.



- Panayiotopoulou K. (2008). Sensitization and motivation of nurses to participate in Continuing Education. *Nursing*, 47 (3): 291-293.
- Peters, M. (2000). Does constructivist epistemology have a place in nurse education. *Nurse Education Today*, 39 (4):166-72.
- Pierrakos, G., Sarris, M., Amitsis, G., Kyriopoulos, G. & S. Soulis (2006). Educational needs and continuing training of human resources in the health sector. *Nursing*, 45 (4): 543-551.
- Raftopoulos, V. (2009). I want and I can of the quality in health care services. Nicosia: Version V. Raftopoulos
- Ribelin, P. & L. Neufelder (2006). Congestive Heart Failure Education Study. *Journal for Nurses in Staff Development*, A(3):124-128.
- Rogers, A. (1999). *Adult's Education*. Athens: Metaichmio Publications.
- Russell, S.S. (2006). An overview of adult-learning processes. *Urologic Nursing*, 26(5):349-52.
- Sarris, M., Pierrakos, G., Amitsis, G., Kyriopoulos, G. & S. Soulis (2006). Evaluation of continuing training structures in health services. *Nursing*, 45 (1): 118-128.
- Simpson, E. & M. Courtney (2008). Critical thinking in nursing education: Literature review. *International Journal of Nursing Practice*, 8(2): 89-98.
- Sipitanou, A. (2014). *European Union Policies for Lifelong Learning: the roots, the institutions, the implementations*. Thessaloniki: University of Macedonia Publications.
- Smith, J. & A. Topping (2001). Unpacking the 'value added' impact of continuing professional education: a multi-method case study approach. *Nurse Education Today*, 21(5): 341-349.
- Theofanidis, D. & A. Fountouki (2006). Lifelong learning in nursing science and practice. *Nursing*, 45 (4): 476-482.
- Torstad, S. & I.T. Bjork (2007). Nursing leaders' views and strategies in the professional development of nursing. *Journal of Nursing Management*, 15(8):817-824.
- Zimmerman, D. & J. Pilcher (2008). Implementing NICU critical thinking programs: one unit's experience. *Neonatal Network*, 27 (4):231-8.