

ORIGINAL ARTICLE

Effects of a Competency-Based Education Program for Inpatient Psychiatric Nurses: A Pre-Post Intervention Study

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Purpose: This study aimed to develop a competency-based educational program for strengthening the competency of psychiatric nurses and evaluate its effects. **Methods:** The study used a quasi-experimental design. Participants included 64 psychiatric nurses in South Korea: 33 nurses (32 females, 1 male) in the experimental group and 31 nurses (26 females, 5 males) in the control group. A competency-based education program for psychiatric nurses was developed through a literature review and discussion with 12 experts. The program addressed eight topics and provided 24 hours of education over 4 days, for 6 hours each day. The collected data via questionnaires were analyzed statistically. **Results:** The education program enhanced overall clinical nursing competence and strengthened professional self-growth competence. The management and teaching competencies of both the experimental and the control groups also increased significantly. **Conclusion:** The findings of this study presented an educational program to strengthen the clinical competency of psychiatric nurses and it was proven that the education had a capacity-building effect.

Key Words: Psychiatric nurse; Nursing competence; Nursing education; Continuing education; Psychiatry

INTRODUCTION

Psychiatric nurses have the requisite expertise to care for persons with mental disorders such as schizophrenia, bipolar disorder, and dementia. In hospitals, the role of the psychiatric nurse generally includes taking care of patients' basic needs, conducting assessments, administering medication, monitoring medication side effects, ensuring patient safety, developing therapeutic relationships with patients, teaching symptom management, and collaborating with physicians and interdisciplinary teams [1]. Psychiatric nurses must engage in continuous learning to ensure they possess the professional competence to perform these roles successfully.

Competence is defined as the ability to perform a skill and is considered an attribute of the performer that re-

flects their knowledge, skills, and functioning [2]. Clinical competency is essential to psychiatric nurses [3], and psychiatric nurses' competencies include skills in assessment (i.e., risk assessment), communication, the appropriate use of restraints, recognizing the need for help or referral, dealing with safety or resource issues [4], and providing psychosocial interventions to give or cultivate hope in persons with mental illness and their family members [5]. The nurse's competency has a positive effect on job satisfaction and nursing performance [6]. In addition, psychiatric nurses' competencies such as communication skills may reduce the intention to leave [7].

At a time when competency has become an important topic in the nursing education, it is essential to identify effective programs for enhancing the competence of psychiatric nurses. However, a literature review revealed a lack

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of research on methods for improving the competence of psychiatric nurses. In particular, few studies focused on the training of newly graduated psychiatric nurses [8] and case management skills [9] of psychiatric nurses.

Competency-based education is an outcomes-based approach that essentially focuses on learner performance and learning outcomes in reaching curricular objectives and goals [10]. Although competency-based education in nursing was originally developed as a curriculum for undergraduate students or working nurses with an associate degree to participate in University's Bachelor's Program [11], it may be useful as continuing education for registered nurses.

The National Center for Mental Health in South Korea, a core facility of South Korea for the development and execution of national mental health policies, has developed a competency-based education program as continuing education for psychiatric nurses. This study aimed to introduce the competency-based education program for psychiatric nurses and evaluate its effects on their nursing competencies.

METHODS

1. Research Design

This study used a quasi-experimental design, a pre-post design with a nonequivalent control group, to evaluate the effects of the competency-based education program for psychiatric nurses. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) checklist was used to ensure the trustworthiness of this paper.

2. Participants

The Institutional Review Board of a University approved this study (No. 1041078-201807-HRSB-146-01), and all participants voluntarily participated in the study with written informed consent. Inclusion criteria were that the psychiatric nurses were currently working and could participate voluntarily. The experimental group comprised psychiatric nurses working at a national psychiatric hospital located in Seoul, and the control group comprised nurses working in six national psychiatric hospitals in regions of the country where they were unaware of the education program. According to G-power 3.1, the minimum number of participants number for each group was 26. To ensure an adequate sample size that accounted for potential dropouts, 35 participants were selected for each group.

3. Data Collection

The data collection period for this study was from September 3th to 7th, 2018. Participants in the experimental group were recruited from the psychiatric nurses working in the psychiatry department of the National Center for Mental Health. The recruitment announcement was posted on the board of the hospital's website, and interested psychiatric nurses participated voluntarily. Before starting the first session of the education program, participants received an explanation of the research in the class, and they responded with a written consent form as online documents. Once they agreed to participate, they completed the online questionnaire, which they also completed right after the final session of the program. Each participant was assigned a unique number to match the pre-post questionnaire.

Participants in the control group were recruited from six national psychiatric hospitals located in different regions of South Korea in the same manner as participants in the experimental group. Once they completed the online questionnaire, participants in the control group were informed that they could receive the education program used in the experimental group free of charge at the completion of the study.

4. Development of Education Program

The nursing department of the National Center for Mental Health invited 12 experts (6 professors of psychiatric nursing and 6 psychiatric nurses with more than 10 years of experience) six times to develop a competency-based education program for psychiatric nurses. As a result of the expert consultation and literature review, the following eight educational topics were selected: the latest mental health policy and law; psychiatric emergency; the latest psychopharmacology (theory and practice); psychiatric nursing ethics; psychiatric nursing diagnosis; the meaning of work and a profession; interview skills; and managing psychiatric patients' metabolic syndromes (diabetes and hypertension). The program consisted of 24 hours of education, with 6 hours of education per day for 4 days (Table 1). Eight psychiatric nursing professors with expertise in each field taught each topic.

1) The latest mental health policy and law

The lecture on current trends in mental health policy and law in South Korea included the history of mental health policy, the current situation in mental health institutions and facilities, changes in social demand for men-

Table 1. Competency-based Education Program for Psychiatric Nurses

Session	Title	Content	Method	Duration (hours)
1	Latest mental health policy and law	· The history of mental health policy, the situation of mental health institutions and facilities, changes in social demand for mental health, and the basic direction and tasks of mental health projects	Lecture	2
2	Psychiatric emergency	· The definition, characteristics, types and stages of crisis, principles of crisis intervention, and coping strategies for crisis and the management of suicide and violence	Lecture	2
3	Latest psychopharmacology (theory and practice)	· The importance of medication compliance, actions and pathways of neurotransmitters (dopamine, norepinephrine, serotonin, acetylcholine, gamma-Aminobutyric acid), pharmacokinetics (differences between low and high titer antipsychotics), and the indications of medications (lecture) · Caring experiences with patients' side effects of antipsychotics and other medications and medication-related nursing diagnoses. (workshop)	Lecture Workshop	4
4	Psychiatric nursing ethics	· The definition of moral thinking and ethical decision making. · Reflection on cases presenting ethical difficulties and nine moral problems in nursing practice	Lecture	2
5	Psychiatric nursing diagnosis	· Basic concept of nursing process, nursing charting, recent changes in nursing diagnosis (lecture) · Application of nursing diagnosis in psychiatry (workshop)	Lecture Workshop	3
6	Meaning of work and profession	· MBTI, Life Curve Drawing · Sharing the meaning of work and the nursing profession (workshop)	Workshop	3
7	Interview skills	· Therapeutic communication and non-therapeutic communication, interview skills, taking a psychiatric history and mental status examination (MSE) (lecture) · Practice interviewing (workshop)	Lecture Workshop	4
8	Managing psychiatric patients' metabolic syndromes (diabetes and hypertension)	· Managing psychiatric patients' metabolic syndrome such as diabetes and hypertension · Simulation with a standardized patient	Lecture Simulation	4

tal health, and the goals and activities of national mental health initiatives. Specifically, the lecture covered South Korea's 4th Health Plan 2020 (2016~2020), Comprehensive Mental Health Plan I for a Happy Life and Healthy Society (2016. 02. 25 announcement), Comprehensive Mental Health Plan for a Happy Life and Healthy Society II (2016. 02. 25), and the Suicide Prevention National Action Plan (2018. 01. 23). In South Korea, the Mental Health Welfare Act was completely revised in 2016 and the revised law was implemented in 2017. The lecture dealt with the change before and after 2017 and the national mental health policy solution proposal (2017. 12).

2) Psychiatric emergency

The contents of the lecture on psychiatric emergency were as follows: 1) the definition, characteristics, types and stages of crisis, principles of crisis intervention, and coping strategies for crisis; and 2) the psychiatric emergency focused on suicide and violence, the definition of suicide and violence, related theories, psychodynamics, risk factors of suicide and violence, and the role of nurses in suicide and violence.

3) The latest psychopharmacology (theory and practice)

The first part of this session was a lecture and covered

the following content: the importance of medication compliance for the patient, actions and pathways of neurotransmitters (dopamine, norepinephrine, serotonin, acetylcholine, gamma-Aminobutyric acid), pharmacokinetics (differences between low and high titer antipsychotics), and the indications for antipsychotic drugs, antidepressants, mood stabilizers, and anti-anxiety drugs. In the second part of the session, participants shared their caring experiences with patients' side effects of antipsychotics and other medications, and medication-related nursing diagnoses.

4) Psychiatric nursing ethics

This session introduced the concept of moral thinking, which was defined as the difference between factual and value judgment, and ethical reasoning. It covered the ethical difficulties and moral problems of psychiatric nurses in clinical practice. Nine moral problems were presented: moral blindness, moral unpreparedness, moral indifference, immoralism, amoralism, moral complacency, moral disagreement, moral dilemmas, and moral distress.

5) Psychiatric nursing diagnosis

The content of this session was as follows: the basic concept of nursing process, nursing charting such as focused charting, problem-oriented medical record, and PIE (Problem, Intervention, Evaluation). In particular, it introduced nursing diagnoses that were recently added or deleted to the North American Nursing Diagnosis Association (NANDA) nursing diagnosis list. The instructor provided some patient cases, and participants practiced applying a nursing diagnosis to the case and received feedback from the instructor.

6) The meaning of work and a profession

The meaning of work and a profession was conducted through a lecture and workshop. After taking the Myers-Briggs Type Indicator (MBTI), people of the same type were grouped. Participants expressed self-disclosure by drawing a life curve, looking back on their entire life, and finding the meaning of "my job" in life. Group work was conducted to share the meaning of work and a profession, which allowed the participants time to not only understand themselves but also their colleagues.

7) Interview skills

The session on interview skills covered therapeutic communication (e.g., listening, empathy, and reflection) and non-therapeutic communication, the stages of interviewing persons with mental health problems, and taking a

psychiatric history and mental status examination (MSE). Participants practiced psychiatric interviews with each other and received feedback from the instructor.

8) Managing psychiatric patients' metabolic syndromes (diabetes and hypertension)

The last session covered managing metabolic syndrome such as diabetes and hypertension, which are common in psychiatric patients. The instructor lectured on the diagnostic criteria, treatment, and management for metabolic syndrome, after which the participants practiced with a standardized patient in two simulated scenarios. In the simulation of hypertension, participants measured blood pressure and provided interventions to the standardized patient who played the role of a chronic psychiatric patient with hypertension; the instructor then gave feedback. In the simulation of diabetes, a standardized patient played the role of a chronic psychiatric patient with diabetes, and the participants practiced interventions such as checking blood sugar, injecting insulin, and providing education for the patient.

5. Instrument

The questionnaire comprised two parts. The first asked participants for demographic information including their sex, age, educational degree, position, overall work experience, and experience as psychiatric nurses. The second part included the Clinical Nursing Competence Questionnaire (CNCQ-22).

The CNCQ-22 was developed by Lee-Hsieh et al. (2003) [12] to evaluate four components of clinical nursing competence. With the author's permission, these authors translated the scale into Korean and a bilingual translator translated it back into English. The tool consists of 22 items rated on a 5-point Likert scale (1=never to 5=all the time), with a total score of 22 to 110 points. For the first three components (Caring competence, 3 items; Communication and Coordination competence, 7 items; Management and Teaching competence, 3 items), a score of 5 represented the ability to act independently, safely, and accurately without advice from instructors; handle problems in minimal time; apply accurately; focus on the client while performing activities; and appear confident. The rating of the remaining 4 items for Professional Self-growth competence referred to the frequency with which the nurses performed nursing tasks. In this study, Cronbach's α was .97, and the sub-component Cronbach's α was .93 for Caring competence, .93 for Communication and Coordination competence, .93 for Management and Teaching competence, and .88 for Professional Self-growth competence.

6. Data Analysis

Data were analyzed using SPSS version 25.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics were calculated for the participants' demographic characteristics. As a result of the Kolmogorov-Smirnov and Shapiro-Wilk test, the normality of the clinical competency was confirmed, but the normality of three subscales (caring competence, management and teaching competence, and professional self-growth competence) was not confirmed. Thus, we used both the t-test and the Mann-Whitney test. We used the independent sample t-test, χ^2 test, and Fisher's exact test to assess the homogeneity of the experimental and control groups. Paired t-test, independent sample t-test, and Wilcoxon signed-rank test were used to compare the scores before and after the intervention to test its effects on competency. We did not include missing data in the analysis. All statistical tests were set at the 0.05 significance level, with a 95% confidence interval. Internal consistency reliability was assessed using Cronbach's α .

RESULTS

1. Demographic Characteristics

A total of 64 psychiatric nurses participated in the study: 33 nurses (32 females, 1 male) participated in the experimental group and 31 nurses (26 females, 5 males) participated in the control group (Table 2). The largest group of participants had worked as psychiatric nurses for more than 10 years (57.8%), whereas others had 5 to 9 years of work experience (26.6%), and less than 5 years of work

experience (15.6%).

2. Comparison of Competence between the Groups after the Education Program

The mean of nursing competence was 93.78 ± 10.70 , and means for the subscales of competence were as follows: caring competence, 35.17 ± 4.03 , communication/coordination competence, 30.39 ± 3.86 , management/teaching competence, 11.47 ± 1.94 , and professional self-growth competence, 16.75 ± 2.21 . There were no statistically significant differences in the demographic characteristics between the groups (Table 2).

At the end of the education program, clinical nursing competency increased significantly ($t = -2.94, p = .006$) in the experimental group compared to the control group (Table 3). The communication and coordination competence of the experimental group did not differ before and after the educational program; however, management and teaching competence ($Z = -3.34, p = .001$), and professional self-growth competence ($Z = -3.14, p = .002$) showed a statistically significant increase after the education program. There was no significant difference in the clinical nursing competence of the control group. In the control group, management and teaching competence showed a statistically significant increase ($Z = -2.96, p = .003$), but none of the other sub-competencies increased significantly.

DISCUSSION

In this study, the effects of a competency-based education program for psychiatric nurses were evaluated. Most

Table 2. Baseline Characteristics between the Groups

(N=64)

Variables	Categories	Total (n=64)	Exp. (n=33)	Cont. (n=31)	χ^2 or t or Z	p
		n (%) or M \pm SD	n (%) or M \pm SD	n (%) or M \pm SD		
Gender	Female	58 (90.6)	32 (97.0)	26 (83.9)		.099 [†]
	Male	6 (9.4)	1 (3.0)	5 (16.1)		
Age (year)	25~39	28 (43.8)	12 (36.4)	16 (51.6)	2.23	.329 [†]
	40~49	15 (23.4)	10 (30.3)	5 (16.1)		
	50~59	21 (32.8)	11 (33.3)	10 (32.3)		
Work experience as a psychiatric nurse (year)	< 5	10 (15.6)	3 (9.1)	7 (22.6)	4.45	.108 [†]
	5~9	17 (26.6)	12 (36.4)	5 (16.1)		
	≥ 10	37 (57.8)	18 (54.5)	19 (61.3)		
Nursing competence	Caring	35.17 \pm 4.03	35.33 \pm 4.11	35.00 \pm 4.00	-0.42	.673 [§]
	Communication/Coordination	30.39 \pm 3.86	30.67 \pm 3.73	30.10 \pm 3.73	-0.61	.542 [§]
	Management/Teaching	11.47 \pm 1.94	11.63 \pm 2.01	11.29 \pm 1.88	-0.88	.377 [§]
	Professional self-growth	16.75 \pm 2.21	16.70 \pm 2.11	16.81 \pm 2.34	-0.05	.957 [§]
	Total	93.78 \pm 10.70	94.33 \pm 10.77	93.19 \pm 10.78	0.42	.674

[†]Fisher's exact test; [‡]Chi-square test; [§]Mann-Whitney U test; Exp.=experimental group; Cont.=control group.

Table 3. Comparison of Competence between the Groups

(N=64)

Variables	Group	Pretest	Posttest	t or Z	p
		M±SD	M±SD		
Caring competence	Exp.	35.33±4.11	36.39±3.49	-1.33	.184 [†]
	Cont.	35.00±4.00	35.29±4.79	-0.38	.703 [†]
Communication and coordination competence	Exp.	30.67±3.73	31.76±3.30	-1.92	.064
	Cont.	30.10±3.73	31.25±3.96	-1.67	.106
Management and teaching competence	Exp.	11.63±2.01	12.82±2.08	-3.34	.001 [†]
	Cont.	11.29±1.88	12.45±2.16	-2.96	.003 [†]
Professional self-growth competence	Exp.	16.70±2.11	17.94±2.03	-3.14	.002 [†]
	Cont.	16.81±2.34	17.10±2.94	-0.49	.626 [†]
Clinical nursing competence (total score)	Exp.	94.33±10.77	98.91±9.81	-2.94	.006
	Cont.	93.19±10.78	96.10±12.97	-1.56	.128

Exp.=experimental group; Cont.=control group; [†] Wilcoxon signed ranks test.

of all, as one of the most fruitful of this study, the eight education contents required for psychiatric nurses' competencies emerged via the development of the education program. Eight competencies-related education contents were: the latest mental health policy and law; psychiatric emergency; the latest psychopharmacology (theory and practice); psychiatric nursing ethics; psychiatric nursing diagnosis; the meaning of work and a profession; interview skills; and managing psychiatric patients' metabolic syndromes (diabetes and hypertension). The eight educational contents in this study can be utilized when planning continuing education programs for psychiatric nurses.

As a result of the program, the overall clinical nursing and professional self-growth competencies were enhanced. However, the caring competence and communication and coordination competence did not increase significantly. Additionally, the management and teaching competence of the both experimental and control groups increased significantly. The current results support those of previous studies on the effects of competency-based education programs on nursing competencies. A direct comparison of these results with those of previous studies is difficult because few studies have used similar competency-based education programs for psychiatric nurses. We found a few studies [13,14] regarding the competency of psychiatric nurses. One study [13] provided a stress management program to increase nursing competency, and the other [14] reviewed the literature to consider psychiatric nurses' competencies for the inpatient intervention and prevention of patient suicide.

Not surprisingly, competency-based education is effective in nursing education, as the clinical nursing competence of psychiatric nurses increased after they participated in the education program. Historically, competency-

based education has been mainly focused on nursing students at universities. Fan and colleagues (2015) [15] found that undergraduate nursing students improved critical thinking, recognized limitations, changed learning strategies, and monitored thinking to enhance performance as a result of competency-based education. However, we were unable to find any studies that examined competency-based education for registered nurses in hospitals.

In this study, the professional self-growth competence of participants was also enhanced. Professional self-growth competence comprised the ability to accept constructive criticism, display caring behaviors, share professional knowledge, and follow nursing ethics. The education program included the latest comprehensive knowledge and skills regarding psychiatric mental health nursing. In particular, most of the lecture topics addressed crises that psychiatric nurses face in clinical practice; further, nurses were allowed to talk about their own crises. The results suggest that the educational content strengthened professional self-growth competence. Unexpectedly, however, caring competence and communication/coordination competence remained unchanged. The nurses' average number of working years was 20.3, and their average scores for caring competence and communication/coordination competence were relatively high at baseline. Therefore, in future research, it is necessary to confirm the educational effect on nurses with varying levels of experience.

Additionally, management and teaching competence improved in the experimental group; however, the education effect could not be confirmed because it also increased in the control group. Experience, as well as education, are effective in strengthening the management and teaching abilities of nurses [16]. The education program was con-

ducted using a variety of modalities, including lectures, workshops, and simulations. By participating in the program, participants were able to indirectly learn about each other's experiences through group sharing as well as by listening to lectures. Because the effect of education was not clearly revealed in this study, future studies are needed to confirm the effect of the education program on management and teaching competency.

Some limitations of this study are as follows. The data of this study were collected from national psychiatric hospitals in South Korea, which may limit the generalizability of this study. Most importantly, the Clinical Nursing Competence Questionnaire (CNCQ-22) used in this study was developed originally for nursing students, not for psychiatric nurses. Unfortunately, after the study began, the authors found a Mental Health Learning Needs Assessment scale [17] as a competency-based instrument for best practice. Therefore, it is necessary to standardize and apply the competency scale for psychiatric nurses to the Korean version in the future. Further, few male nurses participated in this study; therefore, it is necessary to conduct a study targeting male nurses in the future. In the process of matching the pre- and post-questionnaires using nicknames, some participants forgot their nicknames, leading to missing data in the data analysis. In the future, it is necessary to prevent missing data in the paired-sample t-test analysis by assigning numbers to participants for accurately matching the pre-post questionnaires.

CONCLUSION

This study developed an education program to strengthen the clinical nursing competency of psychiatric nurses and tested the effects of the program. As a result of their participation, the nursing competency of psychiatric nurses increased. Most of all, this study shows that competency-based education can contribute to the enhancement of nurses' competence for registered nurses. When planning a continuing education program for registered nurses, it is pivotal to provide a competency-based education program by focusing on the competencies required for their work. Therefore, it is continuously necessary to implement competencies-focused continuing education tailored to the nurse's field. We hope the competency-based education program of this study will be used as a continuing education program for psychiatric nurses in the future.

CONFLICTS OF INTEREST

Choe, Kwi Soon has been an editorial board member since

January 2018, but has no role in the decision to publish this article. Except for that, no potential conflict of interest relevant to this article was reported.

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REFERENCES

1. Seed MS, Torkelson DJ, Alnatour R. The role of the inpatient psychiatric nurse and its effect on job satisfaction. *Issues in Mental Health Nursing*. 2010;31(3):160-170. <https://doi.org/10.3109/01612840903168729>
2. Khan K, Ramachandran S. Conceptual framework for performance assessment: competency, competence and performance in the context of assessments in healthcare-deciphering the terminology. *Medical Teacher*. 2012;34(11):920-928. <https://doi.org/10.3109/0142159X.2012.722707>
3. Mohtashami J, Rahnama H, Farzinfard F, Talebi A, Atashzadeh-Shoorideh F, Ghalenoee M. A survey of correlation between professional identity and clinical competency of psychiatric nurses. *Open Journal of Nursing*. 2015;5(09):765. <https://doi.org/10.4236/ojn.2015.59080>
4. Rutledge DN, Wickman M, Drake D, Winokur E, Loucks J. Instrument validation: hospital nurse perceptions of their behavioral health care competency. *Journal of Advanced Nursing*. 2012;68(12):2756-2765. <https://doi.org/10.1111/j.1365-2648.2012.06025.x>
5. Cusack E, Killoury F, Nugent LE. The professional psychiatric/mental health nurse: skills, competencies and supports required to adopt recovery-orientated policy in practice. *Journal of Psychiatric and Mental Health Nursing*. 2017;24(2-3):93-104. <https://doi.org/10.1111/jpm.12347>
6. Ha N-S, Choi J. An analysis of nursing competency affecting on job satisfaction and nursing performance among clinical nurses. *Journal of Korean Academy of Nursing Administration*. 2010;16(30):286-294. <https://doi.org/10.1111/jkana.2010.16.3.286>
7. Kang H, Kim Y. Influence of the emotional intelligence, communication competence and stress coping on turnover intention in psychiatric nurses, *Journal of the Korea Academia-*

- Industrial cooperation Society. 2016;17(1):141-151.
<https://doi.org/10.5762/KAIS.2016.17.1.141>
8. Yao X, Cheng G, Shao J, Wang Y, Lin Y, Zhang C. Development and implementation of a standardized training program for newly graduated mental health nurses: process and preliminary outcomes. *Nurse Education Today*. 2021;104953.
<https://doi.org/10.1016/j.nedt.2021.104953>
 9. Liu WI, Rong JR, Liu CY. Using evidence-integrated e-learning to enhance case management continuing education for psychiatric nurses: a randomised controlled trial with follow-up. *Nurse Education Today*. 2014;34(11):1361-1367.
<https://doi.org/10.1016/j.nedt.2014.03.004>
 10. Pijl-Zieber EM, Barton S, Konkin J, Awosoga O, Caine V. Competence and competency-based nursing education: finding our way through the issues. *Nurse Education Today*. 2014;34(5):676-678. <https://doi.org/10.1016/j.nedt.2013.09.007>
 11. Gravina EW. Competency-based education and its effect on nursing education: a literature review. *Teaching and Learning in Nursing*. 2017;12(2):117-121.
<https://doi.org/10.1016/j.teln.2016.11.004>
 12. Lee-Hsieh J, Kao C, Kuo C, Tseng HF. Clinical nursing competence of RN-to-BSN students in a nursing concept-based curriculum in Taiwan. *Journal of Nursing Education*. 2003;42(12):536-545. <https://doi.org/10.3928/0148-4834-20031201-05>
 13. Sargazi O, Foroughameri G, Miri S, Farokhzadian J. Improving the professional competency of psychiatric nurses: results of a stress inoculation training program. *Psychiatry Research*. 2018;270:682-687.
<https://doi.org/10.1016/j.psychres.2018.10.057>
 14. Puntil C, York J, Limandri B, Greene P, Arauz E, Hobbs D. Competency-based training for PMH nurse generalists: inpatient intervention and prevention of suicide. *Journal of the American Psychiatric Nurses Association*. 2013;19(4):205-210.
<https://doi.org/10.1177/1078390313496275>
 15. Fan JY, Wang YH, Chao LF, Jane SW, Hsu LL. Performance evaluation of nursing students following competency-based education. *Nurse Education Today*. 2015;35(1):97-103.
<https://doi.org/10.1016/j.nedt.2014.07.002>
 16. Lau R, Cross W, Moss C, Campbell A, De Castro M, Oxley V. Leadership and management skills of general practice nurses: experience or education? *International Journal of Nursing Practice*. 2014;20(6):655-661.
<https://doi.org/10.1111/ijn.12228>
 17. McKnight SE. Mental health learning needs assessment: competency-based instrument for best practice. *Issues in Mental Health Nursing*. 2013;34(6):459-471.
<https://doi.org/10.3109/01612840.2012.758205>