

The Effect the Training Program on Dementia Has on the Knowledge and Attitude of Nursing College Students towards Dementia and Attitude towards the Caring of the Elderly

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ABSTRACT

Background/Objectives: This study aims to investigate the effects of dementia education program on the knowledge and attitude to the dementia, and caring attitude to the elderly people in the nursing university students.

Method/Statistical Analysis: 122 nursing students in Seniors of Nursing University located in M City were selected as the subjects and 12-hours dementia education program for 5 times were performed in the education group. They were analyzed by frequency, percentage, and T-test for independent sample using SPSS/WIN 22.0 program.

Findings: Upon the results, the education group showed higher knowledge on dementia with 13.25 points, but not statistically significant ($p=.621$). With respect to the attitude to dementia, mean score in the education group was 4.01 points which was more positive attitude to the dementia to the elderly with statistically significant difference ($p=.027$). Regarding caring attitude to the elderly, the education group showed 3.78 points as a mean score to be more positive with statistical significance ($p=.003$).

Improvements/Applications: From these results, dementia education program demonstrated the effects to change the attitude to dementia and caring the elderly positively. Therefore, it is required to seek the improvement plans of nursing quality by enhancing the knowledge and understanding on dementia in the nursing students upon development of dementia education program together with theory and practices.

Keywords: Knowledge, Attitude, Elderly, Dementia, Nursing student.

Introduction

Rapid increase of dementia patient due to aging is a global phenomenon. There are over 40 million dementia patients in the world, and it is expected to grow 3 times in next 35 years. Especially, Korea's aging tendency is one of the fastest in the world, and it is expected to reach super-aged society in 2026 as of 2000^[1]. There are 702,436 dementia patients among 7,066,201 elderlies over age 65 as of 2017, and the prevalence rate of dementia is 9.94%^[2].

Dementia is a chronic mental disease that cause loss of memory, thinking ability, orientation, understanding, mathematical ability, learning ability, language and judgement which cause various social problems due to the burden and pain of patients' family^[3]. Thus, the Ministry of Health and Welfare has announced the war against dementia, and has put dementia management act into force on February 2012 aiming to reduce the individual pain, damage and social burden from dementia and contribute to improvement of public health by implementing comprehensive dementia prevention and management policy.

However, the interest, understanding and knowledge about dementia of nurses who should play main role in implementing preventive and management policy of dementia is very insufficient^[4], and even though the

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negative attitude toward dementia increase burden in nursing^[5], the cultivation of dementia knowledge and attitude of nursing students, the future dementia nursing manpower is insufficient^[6]. Thus, there is a need to improve dementia knowledge and positive dementia attitude of nursing students through nursing curriculum, and to develop various dementia education program and confirmation on its effectiveness^[7].

When examining the influence of education on knowledge and attitude toward dementia, it was confirmed that the level of student's dementia knowledge was correlated to the duration of education^[8], and those who experienced dementia elderly had more positive attitude on dementia patients than those without experience^[9]. Also, it was confirmed that dementia education was a significant step for doctor's dementia treatment and is helpful to patient management^[10]. Thus, there is a need for nursing education to cultivate professional nursing manpower with professional dementia knowledge and positive dementia attitude required for the nursing service.

However, Alshi suggested that there is a limitation in improving dementia knowledge and attitude only with teaching-oriented theoretic education ^[11], and there is a need to apply various education program, volunteer work, revision on curriculum to let students obtain dementia knowledge and positive dementia attitude in school^[7, 12, 13, 14].

Previous researches has reported the importance of dementia education and the improved knowledge and attitude after education^[7, 14]. Thus, this study developed a dementia theory education program to cultivate build up dementia knowledge and positive dementia attitude of nursing students and applied the program. Also, the study used qualitative measuring tool to confirm the effectiveness, examined changes of dementia knowledge and attitude, confirmed the effectiveness which would be able to provide significant basic data providing ground regarding necessity of reinforcing dementia education for nursing students.

The purpose of this study is to examine the effectiveness of dementia education program on dementia knowledge and attitude and elderly care attitude of students through quantitative method.

Hypothesis 1: Knowledge score on dementia of nursing students will be higher after participating in dementia education program.

Hypothesis 2: Attitude score on dementia of nursing students will be higher after participating in dementia education program.

Hypothesis 3: Elderly care attitude score of nursing students will be higher after participating in dementia education program.

Study Method

Study Design: This study adapted one-group pretest-posttest design, a quantitative study method to examine the influence of dementia education on dementia knowledge and attitude of nursing students.

Study Subject: This study selected freshmen in nursing college located in M city. They were explained with the purpose of the study, and the study targeted 137 subjects who agreed to receive the dementia education. The final subjects were 122 excluding those with insincere responses.

Study Tool

Dementia Knowledge: The study used a dementia knowledge level survey tool developed by Seoul Metropolitan Dementia Management Center^[15] and revised by Kim^[16] to measure the dementia knowledge. Each questions are answered by 'yes' or 'no'. Correct and incorrect answers are each given 1 and 0 point to calculate the final score. For 18 questions, the range of score is from 0 to 18, and the higher score refers to higher dementia knowledge. The credibility of the tool in this study was Cronbach's $\alpha=.70$.

Dementia Attitude: The tool Cho^[17] developed is composed of 10 questions. Each question is answered by 5 point Likert scale, the higher score refers to the negative dementia attitude. The credibility of the original tool was Cronbach's $\alpha=.66$ and it was Cronbach's $\alpha=.78$ in this study.

Elderly Care Attitude: The study used tool developed by Kim^[18] and revised by Jung^[19]. 17 questions are answered by 5 point Likert scale, the higher score refers to positive attitude toward elderly. The credibility of the original tool was Cronbach's $\alpha=.66$ and it was Cronbach's $\alpha=.95$ in this study.

Study Procedure: The procedure of data collection and study is as follows.

Pretest: Before the main research, the study measured general characteristics, dementia knowledge, dementia attitude of study subjects before the dementia education. This study distributed written consent on research explaining the purpose and data collection of this study, and those who agreed on the form responded to the survey. The written consent introduces purpose

and details of study, and explains that subjects can reject the participation at any time, the collected data is anonymous, and only subjected to the research.

Experiment: As for the dementia education program, it was conducted from October 9 to November 17, 2017 targeting 122 students. The details of experiment are as follows.

Table 1: Dementia Education Program

Session	Duration (hr)	Title	Contents
1	2	What is dementia? (1)	Lecture on the theory, using multi-media (on campus)
2	2	What is dementia? (2)	Presentation of cases on dementia (on campus)
3	2	What is dementia? (3)	A tablet-based dementia test conducted at the 'Dementia Experience Center' located in city S
4	4	Diagnosis and prevention of dementia using the cognitive rehabilitation program	Each team to visit recreational centers for the elderly in city M to conduct diagnosis of dementia, foot massages of the elderly, and art programs using paper or fallen leaves
5	2	Presentation of dementia experience	

Post Test: The post test measured dementia knowledge and attitude based on the survey responded by each of the individual subjects right after the dementia education program.

Ethical Consideration: The study subjects were explained with the purpose of study before data collection, and the researchers received written consent from subjects that the data is only subjected for the study purpose, and they could withdraw from the study any time.

Data Analysis: The study used SPSS/WIN 22.0 program for data analysis. The general characteristics of subjects were analyzed in frequency and percentage. The effectiveness of dementia education program was analyzed by independent sample T test.

Result

General Characteristics of Study Subject: General characteristics of study subjects are suggested in Table 2. 79.5% of subjects(97) are women, 32.8% of subjects(40) had religion, while 67.2% of subjects(82) didn't have religion.

Table 2: Characteristics of study participants (n = 122)

Characteristics	Categories	n (%)
Gender	Male	25(20.5)
	Female	97(79.5)
Religion	Yes	40(32.8)
	No	82(67.2)

Hypothesis Verification: The result of hypothesis verification is as Table 3.

Hypothesis 1: As the result of verifying 'Knowledge score on dementia of nursing students will be higher after participating in dementia education program', before the education, the average dementia knowledge score was 12.83(71.3%) which rose to 13.25(73.6) after education, but there was no statistically significant difference($t=.49$, $p=.621$). Thus, hypothesis 1 is not supported.

Hypothesis 2: As the result of verifying 'Attitude score on dementia of nursing students will be higher after participating in dementia education program', before the experience, the dementia attitude was average 3.86 which rose to 4.01 after education, and there was statistically significant difference($t=-2.23$, $p=.027$). Thus, as the educated group had higher score of dementia attitude, hypothesis 2 is supported.

Hypothesis 3: As the result of verifying 'Elderly care attitude score of nursing students will be higher after participating in dementia education program', before the education, the elderly care attitude was average 3.56 which rose to 3.78 after education, and there was statistically significant difference($t=-3.02$, $p=.003$). Thus, as the educated group had higher score of elderly care attitude, hypothesis 3 is supported.

Table 3: Dementia Education Program Result (n = 122)

Variables	Pre-test	Post-test	t	p
	M ± SD	M ± SD		
Knowledge about dementia	12.83 ± 2.79	13.00 ± 2.63	.495	.621
Attitudes toward dementia	3.86 ± .47	4.01 ± .59	-2.23	.027
Elderly care Attitudes	3.56 ± .51	3.78 ± .60	-3.02	.003

Discussion

Considering the increase of elderly population due to rapid aging, and hence the rapid increase of dementia elderly, nurses will have to deal with growing number of dementia elderly. Among socioeconomic costs of elderly disease, dementia(25.4%) occupies the largest portion, and the significance of nursing and management on dementia elderly has become a social issue^[20]. Thus, there is a need to develop a dementia education program for nursing students to conduct high quality nursing by obtaining proper knowledge and attitude.

This study has developed a dementia education program targeting nursing students and aimed to verify the effectiveness of dementia knowledge, attitude and elderly care attitude, and to discuss the results.

This study has examined the dementia knowledge after conducting dementia education program. As the result of verifying ‘Knowledge score on dementia of nursing students will be higher after participating in dementia education program’, before the education, the average dementia knowledge score was 12.83(71.3%) which rose to 13.25(73.6) after education. As there is no research that evaluated dementia knowledge after conducting education targeting nursing students in Korea, it is hard to conduct direct comparison, but according to the study of Park et al.^[14], Kang et al.^[5] which examined the knowledge about dementia elderly after conducting elderly nursing education program the dementia knowledge increased. Students dealt with difficulty when dementia elderly’s behavior was unexpected and they felt lack of knowledge^[17]. Lack of knowledge and stereotype about dementia is the cause of delayed treatment which ultimately leads to low quality of life of the patient and family and increase of medical expense^[22]. Improving dementia knowledge is a significant measure^[23] of leading positive attitude toward dementia. inKo^[21]’s study targeting nurses, the higher the knowledge was, the less the nursing burden was. Considering consistently increasing nursing demand, education that can improve professional dementia knowledge is crucial.

As the result of verifying ‘Attitude score on dementia of nursing students will be higher after participating in dementia education program’, before the experience, the dementia attitude was average 3.86 which rose to 4.01 after education. In another study comparing the nursing student before and after the education, it confirmed positive changes after education which is corresponds to the study result^[5, 14]. The more negative dementia attitude is, the higher the nursing burden is in a study targeting dementia support center nurses^[21]. Positive dementia attitude provides patient-oriented nursing focusing on dementia patient, and not the symptom which enables high quality nursing^[24] while negative attitude affects diagnosis, treatment, support and decision making to deter the various service quality given to dementia elderly^[25]. Gathering up the results, it is clear that attitude of nursing students affect nursing quality in the field of medicine. Thus, nursing education is crucial to cultivate professional manpower with essential professional knowledge and positive attitude for dementia elderly nursing service^[14].

As the result of verifying ‘Elderly care attitude score of nursing students will be higher after participating in dementia education program’, before the education, the elderly care attitude was average 3.56 which rose to 3.78 after education. This confirms that the program not only affects the dementia knowledge and attitude positively but also the elderly care attitude, which indicates the program will influence the better understanding toward elderly and lead to positive attitude toward elderly.

In 2015, the prevalence rate of dementia for those over age 65 was 9.8% which is expected to be as high as 15.1% in 2050(NSO), and dementia patients who are under medical service is growing 20% annually(NHIC, 2015). Thus, as a medical professionals, nursing students must work hard to improve dementia knowledge and establish positive attitude. There are elderly nursing education targeting nursing students, but it requires improvement in professional contents, Dementia

education program affects not only the dementia knowledge but also the attitude and elderly care attitude, which could contribute to preparing the service provision measures for individual characteristics due to increase of dementia patients. Furthermore, once the program is expanded to the public, it would contribute to the responsive capability of society regarding the prevention and management of dementia.

Conclusion

This study has conducted 12 hour dementia education in 5 sessions targeting freshmen in nursing college to examine the education's effectiveness to dementia knowledge, attitude and elderly care attitude. As the result, those who received education had better dementia knowledge, more positive dementia attitude and elderly care attitude.

Based on the result, the study suggests as below.

First, to improve professional knowledge and positive attitude toward dementia elderly, there is a need to apply curriculum that conducts both theoretic education and practices.

Second, this study suggests a phased and consistent dementia education program for professional nursing manpower and caretakers who conduct direct nursing on dementia elderly.

Ethical Clearance: Not required

Source of Funding: Self

Conflict of Interest: Nil

REFERENCES

1. The third comprehensive plan of dementia management, Ministry of Health and Welfare, 2016.
2. Central Dementia Center Annual Report, 2017. https://www.nid.or.kr/notification/notice_view.aspx?board_seq=1337
3. Adult Nursing, Soomoonsa; Seoul, 8th 2016.
4. Kang Y, Moyle W, Cooke M, O'Dwyer ST. An educational programme to improve acute care nurses' knowledge, attitudes and family caregiver involvement in care of people with cognitive impairment. *Scandinavian Journal of Caring Sciences*, 2017, 31(3), 631-640. DOI: <https://doi.org/10.1111/scs.12377>
5. Kang HY, Chae MJ, Seo HS, Yang KM. The effect of dementia education program on nursing students. *Journal of Korean academic society of nursing education*, 2013, 19(1), 69-77. DOI: <https://doi.org/10.5977/jkasne.2013.19.1.69>
6. Alushi K, Hammond JA, Wood JH. Evaluation of dementia education programs for pre-registration healthcare students-A review of the literature. *Nurse Education Today*, 2015, 35(9), 992-998. DOI: <https://doi.org/10.1016/j.nedt.2015.04.006>
7. Ahn OH, Chang SJ. Effects of Dementia Care Voluntary Program among Nursing Students. *Journal of Korean Gerontol Nurs*. 2015; 17(3), 184-195.
8. Kwok T, Lam KC, Yip A, Ho F. Knowledge of Dementia Among Undergraduates in the Health and Social Care Professions in Hong Kong. *Social Work in Mental Health*. 2011; 9(4), 287-301. <http://dx.doi.org/10.1080/15332985.2011.572696>
9. Lundquist T, Ready R. Young adult attitudes about Alzheimer's disease. *American Journal of Alzheimer's Disease Other Dementias*. 2008; 23(3): 267-273. <http://dx.doi.org/10.1177/1533317508317818>
10. Subramaniam M, Ong HL, Abdin E, Chua BY, Shafie S, Siva Kumar FD, Foo S, Ng LL, Lum A, Vaingankar JA, Chong SA. General Practitioner's Attitudes and Confidence in Managing Patients with Dementia in Singapore. *Annals of the Academy of Medicine, Singapore*. 2018; 47(3), 108-118.
11. Alushi L, Hammond JA, Wood JH. valuation of dementia education programs for pre-registration healthcare students-A review of the literature. *Nurse Education Today*. 2015; 35(9). 992-998. DOI: <https://doi.org/10.1016/j.nedt.2015.04.006>
12. Scerri A, Scerri C. Nursing students' knowledge and attitudes towards dementia - A questionnaire survey. *Nurse education Today*, 2013; 33(9), 962-968. DOI: <https://doi.org/10.1016/j.nedt.2012.11.001>

13. George DR, Stuckey HL, Whitehead MM. An arts-based intervention at a nursing home to improve medical students' attitudes toward persons with dementia. *Academic Medicine*, 2013, 88(6), 837-842. DOI: <https://doi.org/10.1097/ACM.0b013e31828fa773>
14. Park SJ, Park KS, Kim YJ. The Effects of Geriatric Nursing Education for Nursing Students' Attitude, Perception toward Dementia and Dementia policy", *Journal of the Korea Academia-Industrial Cooperation Society*. 2015. 16(7), 4467-4477.
15. Seoul Dementia Center, <http://www.seouldementia.or.kr/>
16. Kim SH. Knowledge, attitude, and recognized service requirements for dementia concerning students of the department of nursing science and social welfare. Woosuk University, Deajeon, 2013.
17. Cho HO, A Study on Public's Knowledge of and Attitude towards Dementia, Unpublished master's thesis, Hanyang University, Seoul, 1999.
18. Kim YO. The Effect of Senior Simulation on Nurse's Attitude Toward the Elderly & Care of the Elderly. Gyeongsang National University, Jinju, 2009.
19. Joung HY. The Effect of Senior Simulation Program in Elderly Care Attitudes of the employees working for Elderly Care Facilities, the understanding of the aged, job satisfaction, and job performance. Hanyang University, Seoul, 2011.
20. National Health Insurance Service(2017). Health Insurance Review & Assessment Service in Korea. Statistical Data of Health Insurance in Korea(2010-2013).
21. Ko IS, Han EK, Kim DR. Relationship among Dementia Knowledge, Attitude, and Care Burden of Nurses in Center for Dementia. *Journal of the Korea Convergence Society*. 2017, 8(9), 67-75.
22. Kwon MS, Lee JH. Analysis of Knowledge, Attitude and Service Requirements about Dementia among Nursing Students. *Journal of the Korea Academia-Industrial Cooperation Society*. 2017. 18(9), 177-185, 2015.
23. Jang YJ. A Comparative Study on the Factors that Determine the Attitude Toward Dementia in Korea and Japan: Focusing on the Care Workers Who Work in Nursing Homes. *Journal of the Korean Gerontological Society*. 2014, 34(2), 333-348.
24. Norbergh KG, Helin Y, Dahl A, Hellzen O, Asplund K. Nurses attitudes towards people with dementia: the semantic differential technique. *Nursing Ethics*. 2006, 13(3), 264-274.
25. Benbow, S.M., & Reynolds, D. Challenging the stigma of Alzheimer's disease. *Hospital medicine*. 2000, 61(3), 174-177.