

A Study on Effects of Education Program for Cognitive Rehabilitation

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Abstract

This study was a one-group pretest-posttest study to examine the effects of cognitive rehabilitation program education on dementia attitudes and geriatric nursing self-efficacy. The results showed that the dementia attitude knowledge, dementia attitude stability, and total score of dementia attitude were not statistically significant. However, the average score showed a slight improvement. There was no statistically significant difference in geriatric nursing self-efficacy, but it slightly improved the average score. Based on the research results, the cognitive rehabilitation program education is effective and beneficial for caring for the elderly with dementia. However, it is difficult to generalize because the number of participants is small. Therefore, the number of participants should be increased, and the study should be conducted repeatedly.

Keywords: *Dementia, Dementia attitude, Self-efficacy for nursing elderly, Educational program for cognitive rehabilitation*

1. Introduction

1.1. The need for research

The proportion of the population aged 65 or older in Korea has been increasing annually since 2013, when the value was 12.2%. It is expected to be more than 20% in 2026, making Korean society a super-aged society [1]. Dementia is a geriatric disease that causes the most significant social and economic costs in this aging society. Dementia, a brain disease, is a complex clinical syndrome that causes continuous damage to the entire brain function, including problems related to language, comprehension, judgment, and behavior, as well as memory, and widely affects personality, thinking, and judgment [2]. With family nuclearization and the increased participation of women in economic activities, the situation and responsibilities for supporting the elderly in the home are gradually weakening, and the voice calling for the responsibility of the government and society for elderly support is increasing. Nursing care for the elderly with dementia, therefore, has become a problem that

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is not affordable at home, and responsibility for caring for elderly people with dementia is shifting from home to community or facility [3].

As the importance of prevention and management of dementia at the national level has been emphasized, a dementia center of each local government and a regional dementia support center have been established to build a systematic and comprehensive dementia management system [4]. These centers, which consist of experts, are responsible for the prevention of dementia and the burden of dementia families through early prevention, early screening, and early intervention for dementia patients [5].

In addition, facilities for community-living elderly and patients with dementia and a service delivery system within the community are established, and health professionals are trained and released. In addition, many facilities and communities seek to provide quality services by securing scarce manpower by utilizing volunteers [6].

Dementia knowledge and a positive attitude toward dementia, therefore, are essential for effective dementia management for health professionals and volunteers who provide care for the elderly and patients with dementia. The study of education to enable them to take care of the elderly with dementia more efficiently, however, was very limited. This study aimed to evaluate the effects of educational programs for cognitive rehabilitation provided to health professionals and volunteers on their dementia attitude and self-efficacy in the nursing elderly.

1.2. Purpose of the research

The purpose of this study is a one-group pretest-posttest study to evaluate the effects of cognitive rehabilitation program education on dementia and the effects of geriatric nursing self-efficacy on participants.

1.3. The hypothesis of the research

Hypothesis 1. Volunteers who have received cognitive rehabilitation program training will improve their knowledge of dementia attitude

Hypothesis 2. Volunteers who have received cognitive rehabilitation program training will have improved dementia attitude stability scores

Hypothesis 3. Volunteers who have received cognitive rehabilitation program education will improve their total score of dementia attitude

Hypothesis 4. Volunteers who received cognitive rehabilitation program education will improve geriatric nursing self-efficacy

2. Method

2.1. Design and subjects

The subjects of this non-synchronized study to test the effect of educational programs for cognitive rehabilitation on the participants' dementia attitude and self-efficacy for the nursing elderly were 15 volunteers who registered at a volunteer center in Gyeonggi-do and 11 health professionals working at health education institutions.

2.2. Measures

The subjects' general characteristics such as gender, age, education, economic status, and motivation for participating in the program were directly asked. The dementia attitudes

referring to their knowledge of, sense of, and behavior toward dementia were measured by the Dementia Attitudes Scale (DAS) developed by Carpenter [7] and used in a survey on dementia prevalence [8]. The self-efficacy of the nursing elderly was measured by the Inventory of Geriatric Nursing Self-Efficacy (IGNSE) [9], and senior attitude was measured by the Korean version of the Geriatric Attitude Scale: GAS) [10].

2.3. Data collection

The educational program for cognitive rehabilitation was provided for five weeks once a week at a volunteer center located in N city, Gyeonggi-do, and a daycare center located in Y city, Gyeonggi-do from July 20 to January 30, 2019; the program time per session was seven hours. Data were collected before and after the intervention program, respectively.

Table1. General characteristics of subjects (N=26)

Session	Theory	Practice
1	Dementia prevention game overview for everyone	Game introduction and the whole learning
	Elements of brain activation and prevention of dementia (1)	Health gymnastics
	Elements of brain activation and prevention of dementia (2)	Count Arabic numerals
		Singing 1,2,3
		Fistball Gymnastics
		Snail
		Thick and Thick (theory)
Rock Paper Scissors game		
2	Types of dementia and treatment	Rhythm 2, 3, 4
	Dementia care and gentleness (1)	Bean Pocket Twirl 1
	Preventing dementia in daily life	Mudfish
3	Dementia care and gentleness (2)	Collecting words
	Why do dementia prevention games work?	Bingo, Advertising puzzle
	The qualities and notes of the leader	Ribbon game
		Sheet Ball game
4	Dementia Elderly and Elderly Long-term Care Insurance System	-
	MMSE-DS Theory and Practice	
5	Field practice	
	Test	
	Closing Ceremony	

2.4. Educational program for cognitive rehabilitation

The educational program for cognitive rehabilitation used in this study is to allow volunteers to provide adequate care for the elderly and demented elderly by providing them with the dementia knowledge and coping methods necessary for the prevention of dementia and dementia care for the elderly and patients with dementia.

In this study, the educational program for cognitive rehabilitation sessions was provided five times, seven hours per session, once a week for five weeks. The theoretical contents

included dementia and coping, dementia care and gentleness, dementia elderly and elderly long-term care insurance system, cognitive function evaluation, and leader's qualities. The contents for the prevention of dementia included factors for improving brain activation and games for the prevention of dementia. In addition, the opportunity to experience the elderly with dementia was provided through on-the-job training [Table 1].

2.5. Data analysis

The collected data were analyzed using the SPSS / WIN 18.0 program. The general characteristics and educational variables were analyzed using descriptive statistics (actual number, percentage, mean, and standard deviation). Data were collected twice, or before and after the education program. SPSS/WIN 18.0 was used to analyze the data. Specifically, the subjects' demographic information was analyzed with descriptive statistics involving frequency, percentage, mean, and standard deviation. The differences in pretest-posttest effects of the education program on subjects' dementia attitudes score and geriatric nursing self-efficacy were analyzed with a paired t-test.

3. Result

3.1. General characteristics

Table 2. General characteristics of subjects (N=26)

Characteristics	Division	N (%)
Age	40-49 years old	5(19.2)
	50-59 years old	8(30.8)
	Over 60 years old	12(46.2)
	other	1(3.8)
Education	Middle school or under	2(7.7)
	High school	6(23.1)
	College	2(7.7)
	University	15(57.7)
	other	1(3.8)
Experience in Dementia care	present	8(30.8)
	absent	14(53.8)
	other	4(15.4)
Motivation participation	Acquisition of certification	6(23.1)
	To have a job	4(15.4)
	Economic assist	1(3.8)
	Leisure activity	1(3.8)
	Recommendation	2(7.7)
	Others	8(30.8)

3.2. Effects on dementia attitude and self-efficacy for nursing elderly

Table 3. Effects on dementia attitude and self-efficacy for nursing elderly (N=26)

Parameter	Division	Pre-test (M±SD)	Post-test (M±SD)	t	p
DAS	Knowledge	55.35±10.19	56.62±7.66	-.692	.495
	Stabilization	36.35±7.85	37.23±8.47	-.418	.679
	Total score	91.69±15.64	93.85±13.40	-.630	.534
IGNSE		45.46±8.16	46.15±8.25	-.437	.666

4. Discussion

This study aimed to investigate the effects of cognitive rehabilitation program education on volunteers' attitudes toward dementia and nursing self-efficacy in elderly volunteers.

In this study, the posttraumatic attitude knowledge score, dementia attitude stability score, and dementia attitude score did not show statistical significance, but the mean score improved. The results of this study are as follows. First, it is difficult to compare the dementia attitude toward volunteers directly. However, the effect of simulation education on the cognitive impairment of elderly people is more improved than that of lecture education through theoretical education, clinical practice, and simulation [11]. Therefore, we think that dementia theory, games for improving dementia cognition, and field practice have been effective teaching methods for promoting a dementia attitude.

The knowledge of dementia was similar to that of the present study. However, the knowledge of dementia knowledge after three dementia education programs was not statistically significant in posttraumatic care hospitals [12][13]. Therefore, it is suggested that the development of a program to improve the knowledge of dementia at the time of education is necessary. The elderly nursing self-efficacy score was not statistically significant, but the mean score improved. The results of this study are as follows. First, the self-efficacy of nursing students was not statistically significant. These results support the report on higher clinical career experience, position, and self-efficacy [14].

The development of a dementia education program in this study is a combined program that includes cognitive rehabilitation and dementia knowledge. Therefore, it was not only theoretical knowledge about dementia but also a practical application program.

5. Conclusion

This study analyzed the effects of cognitive rehabilitation program education on dementia attitude and self-efficacy on dementia among volunteer centers and members of the Korea Senior Care Research Association.

The analysis results showed no statistically significant difference between subjects' dementia attitude knowledge, dementia attitude stability, dementia total attitude, and elderly nursing self-efficacy. However, the average score showed improvement. Therefore, it is necessary to continuously supplement and apply the program of this study, which improved the dementia attitude and the elderly nursing self-efficacy, which is an essential factor in the care of the elderly with dementia.

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