

The Effect of Awareness Toward Dementia on Dementia Education Program of Adolescents

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ABSTRACT

Background/Objectives: As the elderly population increases, dementia patients are rapidly increasing as well and dementia causes various social problems such as burden and cost of care. These social problems will be affected by the present adolescents who will become responsible for dementia patients and aged generation. The purpose of this study was to survey the effect of awareness toward dementia on Dementia Education Program(DEP) of adolescents. Throughout the program, 32 subjects were educated and received tasks related to dementia.

Method/Statistical Analysis: Subjects were recruited online and DEP was processed for 2 days with 9 educational topics. By providing volunteer work hours accepted in high school when the tasks were completed, we increased the participation. To evaluate the awareness toward dementia, we used the dementia awareness questionnaire used on nationwide study on the prevalence of dementia in Korean elders by the Ministry of Health and Welfare. To analyze the subject's general characteristics, descriptive analysis was used. Conducted paired T-test to analyze the change of awareness toward dementia before and after DEP in the group.

Findings: Dementia awareness questionnaire's perfect score is 15. Higher the score is, greater the awareness toward dementia. Before DEP, the score was. After DEP, the score was. Comparing the before and after scores, the score increased. The result showed statistical significant difference.

Improvements/Applications: The study showed that the effect of awareness toward dementia on DEP of adolescents was positive. This result can be used as a background data announcing the need for early education through school health education, starting from the present adolescence that will directly support the elderly generation in future.

Keywords: *Dementia, Awareness toward dementia, Adolescents, Dementia education program, School health education, Early education*

Introduction

Our elderly population, over 65 years old, is rapidly expanding every year. It is estimated to be 7.06million people in 2017, 12.31million people in year 2024 and

22.90million in year 2041. As the elderly population rapidly expands every year, it caused number of social problems. Among them, dementia is the representative problem of the aged. As with the increasing aging population, dementia patients are rapidly increasing as well. It is estimated to be 0.7million people in year 2017, 1million in year 2024 and over 2million in year 2041^{1,2}.

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As dementia symptom progresses the ability to live by oneself decrease. Eventually the patient's quality of life decreases and caregiver's burden and stress increases³. But because ordinary people see symptoms

of dementia as a part of aging, it makes them not able to get a proper service^{4,5,6}.

In modern days, social advancement of women, nuclear family made traditional support system get weak. Increased primary caregiver's caring time made caregiver's social participation decrease and giving up their personal needs. Also increase in economic cost made conflict issues among caregivers and their family^{7,8}. The results supporting that the dementia patient makes quality of the life of their family low have been verified in many previous studies. These burdens of care make people two to three times more likely to be depressed than the normal people. About one-third of the patient's family show major symptoms of depression and more than half of them suffer from chronic depression^{9,10,11,12}.

These social problems will be affected by the present adolescents who will become working age population and become responsible for dementia patients and aged generation. Adolescence is a sensitive period in which growth is vigorous and the awareness of oneself grows and that means what they learn at this time is very important. Initiating early education on dementia since adolescence can decrease negative awareness toward dementia. Also spreading these positive side to homes and communities will be very effective on creating dementia friendly society^{7,8,13}.

Therefore, this study seeks to find out what kind of influence does DEP, which provides correct information on dementia, has on adolescents. Furthermore, it intends to be provided as a background data to inform the necessity of early education on dementia since adolescence.

Materials and Method

Subjects: The subjects that were recruited through online were total 32 people. These subjects met the selection criteria and gave voluntary knowledgeable

consent to take part in the study. The specific selection criteria were as follow: (1) person who understood the study's aim, method, period and agreed to participate (2) person who is currently attending high school (3) person who never had dementia education before (4) person who don't have any mental and physical deficits.

Materials: To evaluate the awareness toward dementia, we used the dementia awareness questionnaire used on nationwide study on the prevalence of dementia in Korean elders by the Ministry of Health and Welfare. Dementia awareness questionnaire has total 15 questions, consisted of 5 questions on the causes of dementia, 3 questions on epidemiology and institution of dementia, 4 questions on symptoms and diagnosis of dementia and 3 questions on treatment and prevention of dementia. Each question is evaluated as 'yes' if the explanation is correct and 'no' if it is incorrect. 1 point if the answer is right, 0 point if it's not. The total score can be 0 to 15 points. Higher the score is, greater the awareness toward dementia¹⁴. The data were analyzed by SPSS version 18.0 program. To analyze the subject's general characteristics, descriptive analysis was used. Conducted paired t-test to analyze the change of awareness toward dementia before and after DEP in the group. All statistical significance levels in the data were.

Methods: Before DEP, subjects went through pre-evaluation on awareness of dementia using dementia awareness questionnaire. After DEP, post-evaluation was conducted using the same questionnaire. Subjects got DEP, consist of 9 kinds of education subjects for 4 hours a day, 2 days in total. After the first day, assignments related to dementia were given to be completed. We increased participation by giving certificate and approval of volunteer work hours. In this study the dementia information of the National Institute of Dementia, which was established to carry out dementia management duties from the Ministry of Health and welfare, was used to provide the right information about dementia. Education topic and contents are as shown in table 1

Table 1: Contents of Dementia Education Program

Education Topic	Contents
1. Orientation	Introducing program, schedule and assignments
2. Understanding of dementia	Definition of dementia
3. Dementia prevention exercise	Rules and exercise method for dementia prevention Assignment: submit the video after following the dementia prevention exercise
4. Service information using 'Dementia Check' application	Dementia risk test and function for prevention of disappearance etc Assignment: using the 'Dementia Check' application

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5. Dementia support service	Introducing national dementia support service contents
6. Education on improving dementia awareness	Cause, symptom and treatment of dementia
7. Cognitive training on dementia	Cognitive training method to improve attention, memory etc
8. Introducing National Dementia Helpline	Roles and function of National Dementia Helpline
9. Finishing activity	Impressions about the program, checking assignment's result, awarding certificate

Results and Discussion

General Characteristics of Subjects: Numbers of subjects were total 32 and analysis results for general characteristics are as shown in table 2. Subjects gender were male 21 people (65.6%) and female 11 people (34.4%). Age were 'age 17' 14 people (43.8%), 'age 18' 12 people (37.5%) and 'age 19' 6 people (18.8%). High school grade were first grader 11 people (34.4%), second grader 15 people (46.9%) and third grader 6 people (18.8%). Subjects who have religion were 10 people (31.3%), who don't were 22 people (68.8%). Subjects who had experience in volunteer work were 7 people (21.9%), who didn't were 25 people (78.1%). Subjects who have experience in living together with the dementia patient were 8 people (25%), who don't were 24 people (75%).

Table 2: General Characteristics of Subjects (N = 32)

Variables	Categories	n(%)
Gender	Male	21(65.6%)
	Female	11(34.4%)
Age	17	14(43.8%)
	18	12(37.5%)
	19	6(18.8%)
High School Grade	First Grader	11(34.4%)
	Second Grader	15(46.9%)
	Third Grader	6(18.8%)
Religion	Yes	10(31.3%)
	None	22(68.8%)
Experience in volunteer	Yes	7(21.9%)
	None	25(78.1%)
Experience in living together	Yes	8(25%)
	None	24(75%)

Comparison of Result Before and After DEP in the Group: Dementia awareness questionnaire's perfect score is 15. The analysis result of the change in awareness

toward dementia is as shown in Table 3. Before DEP, the score was 10.15 ± 1.52 . After DEP, the score was 12.37 ± 1.75 . Comparing before and after scores, the score increased. The result showed statistical significance ($p < 0.01$).

Table 3: Comparison of Results Before and After DEP in Group (N=32)

Variables	Pre-evaluation	Post-evaluation	p
Awareness toward dementia	10.15 ± 1.52	12.37 ± 1.75	0.00*

Mean \pm standard deviation, * $p < 0.01$ by paired t-test.

Discussion

This study showed that due to DEP, awareness toward dementia of adolescents has significantly increased. When converting the average score of each question to 100 points, before DEP, 'Early treatment can slow the progress of dementia' and 'Regular exercise helps prevent dementia' questions marked the highest by scoring 90 points. 3 questions that got the most wrong answers were 'Drinking too much alcohol is prone to dementia', scored 6 points, 'Women are more likely to have dementia than men', scored 25 points, and 'One in 100 elderly people can have dementia', scored 37 points. The questions that had the most improvements on the scores for awareness toward dementia were 'Drinking too much alcohol is prone to dementia' and 'One in 100 elderly people can have dementia' and the score of the cause and epidemiology toward dementia improved the most. The result is similar to the study on 226 Incheon people's, who were over 19 years old, awareness toward dementia. The study on old-old elderly's awareness toward dementia also had low awareness in cause and epidemiology toward dementia. These results are

considered like this, due to low awareness toward dementia and lack of education. Misunderstanding toward dementia causes delays early diagnosis and making judgement that treatment is impossible. This will have a huge influence on preventing and managing dementia. Having positive attitude toward dementia by providing correct awareness will help preventing dementia and early diagnosis^{15,16}.

For the adolescents who will become adult and support the elderly generation, consciousness of supporting and attitude toward elderly will be very important. Correct awareness toward dementia help ease the anxiety of dementia by having influence on attitude toward dementia. If the attitude is more positive, caregiver's burden of care will decrease. Also the quality of life and consciousness of supporting the elderly will increase^{17,18,19}.

In this study adolescents were given DEP and it showed positive increase in awareness toward dementia. This result will have a positive effect on adolescents' important attitude and consciousness of supporting the elderly. Therefore it can be said that adolescents' education on dementia is important. Also early education on dementia through school health education starting from adolescence should be carried out²⁰.

The limitations of this study is that it did not set the control group and because the study only went through few high school students, there is a limit in generalizing to all adolescents. But as with other previous studies' results, DEP showed that it has a positive effect on awareness toward dementia of adolescents²¹. Furthermore, the study could be used as a background data to inform the necessity of early education on dementia starting from adolescence.

Conclusion

The purpose of this study was to survey the effect of awareness toward dementia on DEP of adolescents. Comparing before and after DEP, the score increased. The result showed that due to DEP, awareness toward dementia of adolescents has significantly increased. Throughout the results, we could know that providing DEP to adolescents has a positive effect on having correct awareness toward dementia.

Ethical Clearance: Not required

Source of Funding: Self

Conflict of Interest: Nil

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