

The relationship between dementia-related knowledge and attitude in people in their 20s and 60s

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Abstract

This study is a cross-sectional survey study aimed at collecting basic data for the development of a program to cultivate a positive attitude toward dementia among people caring for dementia patients. For this study, data were collected from March 1 to March 7, 2022 as a structured questionnaire, and 232 study participants were in their 20s to 60s. The collected data were derived from chi-square test, t-test, and simple regression analysis using the spss 18.0 program. As a result of the analysis, women had higher treatment knowledge for dementia than men, men had higher attitudes toward dementia than women ($p < 0.01$), and people living with dementia patients had higher attitudes than those who gave birth ($p < 0.01$). Attitudes toward dementia were more positive in the family than those with dementia patients ($p < 0.01$). Dementia-related knowledge consists of disease knowledge, treatment knowledge, and nursing knowledge, of which only positive dementia attitude affects dementia treatment knowledge ($t = 5.29$, $p < 0.01$). Based on these results, it is suggested that the provision of accurate knowledge about dementia treatment should be planned first as a nursing program for dementia patients.

Keywords: Dementia, Positive Attitude, Treatment knowledge

1. INTRODUCTION

Recently, With the development of medical technology and the improvement of health management, people's lifespan has been extended a lot, and the world is in an aging society. Many elderly people suffer from various chronic diseases, of which dementia is the most painful disease due to cognitive impairment and deterioration of physical activity, and the prevalence of dementia in an aging society is increasing at an alarming rate[1]. In particular, the population aged 65 or older accounts for 15.9% of the total population in 2020, and it is expected to rise to 20.3% in 2025 to enter an ultra-aged society [2]. In 2018, the number of dementia patients among the elderly population aged 65 or older in Korea was estimated to be about 750,000 (10.16%), and according to the report, the number of dementia patients increased rapidly from the 70-74 age range, the highest in the 85 or older section [3]. Dementia is a disease that only worsens due to irreversible brain function damage, and in the end, it is a social problem that is difficult to guarantee not only one's own pain but also the personal physical and psychological pain of patients.

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Accordingly, in 2018, the government established dementia relief centers in 256 municipalities nationwide to provide integrated dementia management services. Since the implementation of the long-term care insurance system for the elderly in September 2008, reports of dementia patients due to aging have increased further. Therefore, the demand for improvement in the quality of nursing services has brought about changes in the policy environment, and from July 1, 2014, the special grade for dementia patients has been established, and the service has been expanded to patients with mild dementia who have difficulty in daily life [4].

Dementia is an irreversible condition in which nerve cells are damaged, impeding various cognitive functions, limiting functional activity, and making it difficult to recover [5]. Dementia is still controversial due to the heterogeneity of clinical symptoms and the complexity of neuropathology, but the common cause of the disease is cerebrovascular dysfunction, i.e., brain-flowing blood disorder [6].

Dementia is a disorder that looks at problems such as motor function, perception function, and language function as well as thinking function due to changes in the brain, and the characteristic of the initial symptoms is memory impairment. It is difficult to remember the most recent experience or event in the short-term memory, but as it gradually decreases, symptoms such as being clumsy or unable to remember the past that one used to be used to appear [7]. These cognitive impairments lead to a decrease in the ability to perform daily life, and as things progress further, external help is needed even in basic life. Moreover, as healthy elderly people age, their physical activity decreases, muscle mass decreases, and the risk of fractures increases due to posture instability, and dementia elderly show more physical dependence than normal elderly people as their overall cognitive function decreases [8]. In this way, cognitive impairment with poor memory begins to appear and progresses to mental behavior symptoms including changes in thoughts, moods, perception, and behavior. Among the symptoms of mental behavior, dementia patients who act aggressively may exhibit verbal aggression such as shouting and swearing, or physical aggression such as hitting and kicking. Patients with dementia who show anxiety and aggression are at high risk of showing sudden anger and sudden expression of emotions and behavior [3]. As such, symptoms and progress of dementia are accompanied by early memory impairment to mid-term behavior, mental impairment, and end-stage physical impairment, and the average period from onset to death is known to be 8 to 10 years [9].

According to reports by facility workers caring for dementia patients, the more neurological symptoms of dementia appear, the more problematic behaviors such as resistance behavior appear. These problematic behaviors require a lot of patience and appropriate coping skills from those who provide nursing, and it is structured intervention to cultivate appropriate coping skills of dementia facility workers. In other words, it has been reported that providing structured intervention is effective in reducing the frequency of delusions in dementia patients and reducing stress in caregivers [10-11]. Non-drug treatment for dementia patients requires similar environment provision and regular daily life repetition, and coping with and preventing sensory or nutritional abnormalities and mental symptoms in order to reduce complex environmental adaptation [9]. Since Korea traditionally mainly supports sick parents at home, there are still a few dementia patients living in dementia centers. In other words, support for dementia patients was mainly done by children or daughters-in-law. However, in Korea, as women's advancement into society has increased recently, support from children is weakening. Therefore, it is increasing that the support of dementia patients is done by spouses [12]. The reality is that many people are reported to make serious and dangerous choices, such as suicide or injury, because they cannot withstand the constant stress of caring for dementia patients. Depending on the relationship with dementia patients, the degree of support burden varies. The spouse of a dementia patient shows confusion due to the difficulty of normal communication with the spouse diagnosed with dementia and the appearance of the changed spouse, and depression and anger are high due to this situation [13]. When the relationship between a patient and a dependent is a child, it is reported that the perspective of society and the responsibility of families to take care of dementia patients for granted, and it is reported that they suffer from

negative mental changes due to excessive demands and dependence [14]. Looking at the economic aspects of caring for dementia patients, elderly couple households want to utilize the physical and mental burden in terms of institutional aspects as they have no or little regular household income to cover the management costs of dementia patients [15]. Therefore, society emphasizes the need to expand the support plan by closely subdividing the scope of support for dementia treatment management expenses (drug expenses) in the current dementia policy project guidelines stipulated as those with a median income of 120% [16]. As such, Korea recognizes dementia as a social problem and tries to prepare countermeasures, but it is true that dementia is viewed negatively rather than as a problem that normal people should overcome together. No matter how good a policy is proposed, it is a structure in which you can only imagine a painful situation when you encounter a disease called dementia. Until now, many cognitive rehabilitation programs and cognitive therapy programs have been developed to delay the progression of patients with mild cognitive impairment to severe dementia and early screening for appropriate treatment of dementia patients. However, if negative attitudes toward dementia patients prevail, even the best programs are unlikely to be substantial. Dementia disease has various medical predictions, but it can be seen as a disease that anyone can get. People will expect a positive attitude toward dementia above all else if they predict when others treat it negatively when they have dementia. Therefore, a program to improve attitudes toward dementia for various age groups is an urgent issue. Accordingly, this study aims to collect basic data for the development of a program to foster a positive attitude toward dementia patients. The specific purpose of this study is as follows.

First, the general characteristics of the study participants are confirmed. Second, the correlation between dementia attitude and dementia-related knowledge is analyzed. Third, the level of knowledge related to dementia and attitudes toward dementia are analyzed according to general characteristics. Fourth, it is checked whether there is a difference in attitudes toward dementia according to general characteristics. Fifth, the effect of dementia-related knowledge level on attitudes toward dementia is confirmed.

2. METHODS

The research was a cross-sectional survey study to identify factors affecting dementia attitudes in people in their 20s and 60s. Data were collected online only for those who voluntarily agreed using structured questionnaires. The structural questionnaire was as follows.

2.1 Research Tools

2.1.1 Dementia Knowledge

Dementia knowledge is a tool used by SM Jeong [17] to measure the degree of dementia knowledge of senior nursing home life assistants. This tool consists of a total of 20 questions, specifically 10 questions for dementia disease knowledge, 3 questions for dementia treatment knowledge, and 7 questions for dementia nursing knowledge. The answer to the question is 1 point for the correct answer and 0 point for the wrong answer, which means that the higher the score, the higher the knowledge. At the time of development, the reliability of the tool was 0.62, and in this study, it was 0.68.

2.1.2 Dementia Attitude

The dementia attitude measurement tool is a measurement tool used in the research of HM SH [18]. This tool ranges from at least 15 to at most 60 points from 'not at all' and from 1 to 'very much' 4 points on a 4-point Likert scale, and the higher the score, the more positive the attitude toward dementia. Specifically, there are 9

positive questions (1,2,3,4,5,6,7,10,11) about dementia attitudes, and 6 negative questions (8,9,12,13,14,15), consisting of a total of 15 questions. Negative questions calculate scores in reverse. In HM SH study (2014), the reliability of the tool was .745, and the reliability in this study was 0.73.

3. RESULTS

3.1 General Characteristics

Frequency analysis was conducted to confirm the general characteristics of the study participants (Table 1). As a result of the analysis, 131 males (56.5%) and 101 females (43.5%) were more males. The age was 28.4% in their 20s, 25.4% in their 30s, 19.0% in their 40s, 19.1% in their 50s, and 9.1% in their 60s. Among the study participants, 55.2% of them had religion and 44.8% of them did not. Currently, 41.8% of people stay with their children or spouses, and 58.2% of people stay alone. When asked if there were dementia patients in the family, 31.9% answered that there were dementia patients, and 68.1% said there were none. When asked if they currently have a physical disease, 28.4% said they had high blood pressure, 14.7% said they had hyperlipidemia, 1.3% said they had arthritis, and 55.6% said they were healthy people. When asked how interested they were in dementia, the participants of this study, the most people answered that it was moderate, with 37.9%, and then 29.3% answered that the sound was low. 15.1% said they were highly interested, 13.4% said they were very low, and only 4.3% said they were very high.

Table 1. General characteristics

N=232					
Variable					
Gender	Type	N(%)	Variable	Type	N(%)
	Male	Variable	Family with dementia	Yes	Variable
	Female	Variable		No	Variable
	20s	Variable	Physical disease	Hypertension	Variable
	30s	Variable		Hyperlipidemia	Variable
	40s	Variable		Arthritis	Variable
	50s	Variable		None	Variable
	60s	Variable		Interested in dementia	Vary high
	Yes	Variable	High		Variable
	No	Variable	Middle		Variable
	Yes	Variable	Low		Variable
	No	Variable	Vary low		Variable

3.2 Correlation between Dementia Attitude and Dementia Knowledge

Pearson's correlation analysis was conducted to analyze the correlation between dementia attitude and dementia-related knowledge (Table 2). As a result of the analysis, it was found that the significant correlation with dementia attitude under the statistical significance level was found to be treatment knowledge about dementia ($r=.316, p=0.01$).

Table 2. Correlation between Dementia Attitude and Dementia Knowledge

Variable	Mean(SD)	1	2	3	4
1.Attitude	3.99(0.41)	1	-.091	.316**	-.120
2.Disease knowledge	7.25(1.53)		1	.000**	.038
3.Treatment knowledge	2.85(0.43)			1	.002
4.Nursing knowledge	5.89(1.00)				1

** , The correlation coefficient is significant at the 0.01 level(both)

3.3 Difference in Knowledge and Attitude of Dementia according to general characteristics

An independent sample t-test was conducted to analyze dementia-related knowledge levels and attitudes toward dementia according to general characteristics (Table 3). As a result of the analysis, women (M=7.35, SD=1.35) showed higher treatment knowledge for dementia diseases than men (M=7.18 and SD=1.73) ($t=4.08$, $p<0.01$). Women (M=6.11, SD=0.95) showed higher nursing knowledge of dementia than men (M=5.72, SD=1.02) ($t=-3.00$, $p<0.01$). Attitudes toward dementia were higher in men (M=4.07, SD=0.41) than in women (M=3.90, SD=0.39) ($t=3.03$, $p<0.01$). The difference in religion was higher in disease knowledge for those without religion (M=8.13, SD=1.21) than those with religion (M=6.54, SD=1.40) ($t=-9.12$, $p<0.01$). And people without religion (M=2.92, SD=0.27) were higher than those with religion (M=2.80, SD=0.52) ($t=-2.37$, $p<0.05$). People who are not currently living with their families (M=7.78, SD=1.36) had higher knowledge of dementia diseases than those who are living with their families (M=6.40, SD=1.36) ($t=-8.07$, $p<0.01$). Knowledge of dementia treatment was higher than those living with their families (M=2.95, SD=0.22) and those not living with their families (M=2.79, SD=0.52) ($t=3.24$, $p<0.01$). People with dementia (M=8.41, SD=1.05) in their families had higher knowledge of dementia diseases than those who did not (M=6.71, SD=1.42) ($t=10.21$, $p<0.01$). Knowledge of dementia treatment was higher in people with dementia (M=3.00, SD=0.11) in the family than in those with dementia (M=2.78, SD=0.51) and nursing knowledge in the family (M=6.05, SD=0.55) in the family (M=5.81, SD=1.15). Attitudes toward dementia were found to be more positive than those with dementia patients (M=4.07, SD=0.17) in the family (M=3.96, SD=0.48) ($t=2.55$, $p<0.01$).

3.4 Differences in Dementia Attitude according to general characteristics

Chi-squared test was performed to check whether there was a difference in attitudes toward dementia according to general characteristics (Table 4). As a result of the analysis, statistically significant differences were found in gender, age, presence or absence of family members, dementia in the family, and education level. In terms of gender, 48 (36.6%) showed the lowest positive attitude toward dementia, while 44 (43.6%) showed the most positive attitude toward dementia. By age, 28 (42.4%) people in their 20s thought positively about dementia. In their 30s, 52(88.1%) were positive at the middle level, 51 (52.6%) were low in terms of living with their families, and 75(55.6%) were positive at the middle level. Depending on the presence or absence of dementia patients in the family, 58(78.4%) had a moderate level of positive attitude, while 55 (34.8%) had a low attitude. People with religion had the most positive attitude at a low level with 61 (47.7%), and those without religion had the most positive attitude at a middle level with 68 (65.4%). At the educational level, high school graduates had the highest positive attitude of 5 (39.7%), and university graduates had the highest attitude of 73 (43.2%).

Table 3. Differences in Knowledge and Attitude of Dementia according to general characteristics

Variable	Type	Disease		Treatment		Nursing		Dementia	
		Mean (SD)	t (p)	Mean (SD)	t (p)	Mean (SD)	t (p)	Mean (SD)	t (p)
Gender	Male	7.18 (1.73)	-0.878 (0.38)	7.18 (1.73)	4.08 (0.00)**	5.72 (1.02)	-3.00 (0.00)**	4.07 (0.41)	3.03 (0.00)**
	Female	7.34 (1.23)		7.35 (1.23)		6.11 (0.95)		3.90 (0.39)	
Religion	Yes	6.54 (1.40)	-9.12 (0.00)**	2.80 (0.52)	-2.37 (0.02)**	5.98 (0.73)	1.55 (0.12)	3.95 (0.43)	-1.69 (0.09)
	No	8.13 (1.21)		2.92 (0.27)		5.77 (1.26)		4.04 (0.38)	
Resident with family	Yes	6.40 (1.36)	-8.07 (0.00)**	2.95 (0.22)	3.24 (0.00)**	5.97 (1.16)	1.04 (0.30)	3.98 (0.35)	-0.67 (0.50)
	No	7.86 (1.36)		2.79 (0.52)		5.83 (0.88)		7.86 (1.36)	
Family with dementia	Yes	8.41 (1.05)	-10.21 (0.00)**	3.00 (0.00)	5.31 (0.00)**	6.05 (0.55)	2.18 (0.03)*	4.07 (0.17)	2.55 (0.01)*
	No	6.71 (1.42)		2.78 (0.51)		5.81 (1.15)		3.96 (0.48)	

** , p<0.01, * , p<0.05

Table 4. Differences in Dementia Attitudes according to general characteristics

Variable		Very high	High	Middle	Low	Very low
	Total	10(4.3)	10(4.3)	10(4.3)	10(4.3)	10(4.3)
Gender ($\chi^2=0.04^*$)	Male	3(2.3)	10(4.3)	10(4.3)	10(4.3)	10(4.3)
	Female	7(6.9)	10(4.3)	10(4.3)	10(4.3)	10(4.3)
Age ($\chi^2=0.00^{**}$)	20s	3(4.5)	28(42.4)	15(22.7)	17(25.8)	3(4.5)
	30s	0(0)	0(0)	52(88.1)	0(0)	7(11.9)
	40s	0(0)	0(0)	7(15.9)	37(84.1)	0(0)
	50s	7(16.7)	0(0)	13(33.3)	10(4.3)	14(33.3)
	60s	0(0)	7(33.3)	0(0)	7(10.3)	7(33.3)
Live with family ($\chi^2=0.00^{**}$)	Yes	7(7.2)	12(12.4)	13(13.4)	51(52.6)	14(14.4)
	No	3(2.2)	23(17.0)	75(55.6)	17(12.6)	17(12.6)
Live with dementia ($\chi^2=0.00^{**}$)	Yes	0(0)	0(0)	58(78.4)	13(17.6)	3(4.1)
	No	10(6.3)	35(22.2)	30(19.0)	55(34.8)	28(17.7)
Religion ($\chi^2=0.00^{**}$)	Yes	7(5.5)	12(9.4)	20(15.6)	61(47.7)	28(21.9)
	No	3(2.9)	23(22.1)	68(65.4)	7(6.7)	3(2.9)
Education ($\chi^2=0.00^{**}$)	High school	3(4.8)	25(39.7)	15(23.8)	17(27.0)	3(4.8)
	College	7(4.1)	10(5.9)	73(43.2)	51(30.2)	28(16.6)

* , p<0.05, ** p<0.01

3.5 Effect of the knowledge level related to dementia on attitudes toward dementia

A simple regression analysis was conducted to confirm the effect of dementia-related knowledge level on attitudes toward dementia (Table 4). As a result of the analysis, it was found that knowledge related to dementia significantly affects dementia attitudes under the statistical significance level as knowledge of dementia treatment ($t=5.29$, $p<0.01$).

Table 5. Effect of the knowledge level related to dementia on attitudes toward dementia

Independent variable	Non-standardization coefficient		β	t	p	Statistics SD
	B	SD				
(Constant)	B3.61	SD0.25	-	14.70	0.00	$R^2=0.13$,
Disease knowledge	B-0.03	SD0.02	-0.12	-1.93	0.05	Modified
Treatment knowledge	B0.31	SD0.06	0.33	5.29	0.00**	$R^2=0.12$,
Nursing knowledge	B-0.05	SD0.03	-0.12	-1.87	0.06	F=11.230, p=0.00

*, $p<0.05$, ** $p<0.01$, Dependent variable : Dementia attitude

4. CONCLUSION

The study participants consisted of people in their 20s to 60s, 55.2% of the study participants had religion, and 44.8% of the non-religious participants had similar religions that could affect the age group and cognitive process. And those who are currently alone with their children or spouses were not biased in response to overall dementia-related questions at a similar level. Among the study participants, 31.9% of the family members had dementia patients, and 68.1% of the family members answered that there were no dementia patients, about twice as many homes without dementia patients. And as for the current physical disease, high blood pressure was the most common at 28.4%, and 14.7% of people with hyperlipidemia disease were also found. However, 55.6% were healthy people. As a result of checking the degree of interest in dementia, most of the study participants answered that interest was moderate, followed by low interest in dementia. Treatment and nursing knowledge for dementia diseases were higher in women than in men ($t=-3.00$, $p<0.01$). However, the attitude toward dementia was higher for men than for women ($t=3.03$, $p<0.01$).

This study was aimed at collecting basic data for producing programs for treating dementia patients. Therefore, the focus should be on creating customized programs by collecting information on what areas should be emphasized according to general characteristics, such as gender or age, people with dementia in the family, and education level. Therefore, it was meaningful to grasp the general characteristics and positive attitudes toward dementia patients. As a result of this study, men showed low positive attitudes toward dementia, and women showed moderate levels. Due to the traditional characteristics of Korea, women tend to care for dementia patients in their families more than men, and accordingly, it can be thought that the degree of understanding dementia patients is higher than that of men.

The reason can be inferred from the results of the Sara Balouch study that people who have been exposed to a lot of information about dementia diseases on social media such as TV and radio have less stigma for dementia[19]. This can be improved by giving men more access to cases of dementia patients in programs that take care of dementia families.

People with dementia patients in their families showed moderate attitudes toward dementia patients, and those without dementia patients showed lower attitudes, indicating that the more people with dementia patients, the more positive attitudes they had toward dementia. These results can be seen as consistent with Aijia Song's

[20] emphasis on dementia through literature review that people need information on disease and patient care, nursing provider's service, and nursing provider's self-care. They emphasize that information related to health care services is essential in the study.

There were three areas of knowledge about dementia diseases used in this study. In other words, it was knowledge of a disease called dementia, knowledge of dementia treatment, and knowledge of dementia nursing. The only positive effect of the regression analysis results to confirm whether the level of these three areas is positive or negative for dementia was the knowledge of dementia treatment ($t=5.29$, $p<0.01$). Unlike dementia treatment, dementia nursing is mainly centered on patients, and Jackie Bridges [21] emphasizes whether even patients with the same dementia reconstructs the direction of treatment centered on patients or applies music. In other words, dementia nursing refers to the direction of improving the worsening of symptoms centered on patients rather than the medical aspect of treatment. In this way, it can be thought that the level of knowledge about dementia nursing will show a more positive attitude toward dementia. However, the results of this study showed that nursing knowledge did not affect the positive attitude toward dementia patients, and dementia treatment knowledge had an effect. The results of this study need to be studied a little more in the future. However, it is understandable that dementia treatment knowledge also affects positive attitudes toward dementia patients. This is because dementia is mainly recognized as impossible to treat. Therefore, the high knowledge of dementia treatment can be judged as an attitude to help dementia patients more actively with high interest in dementia.

It can be inferred from the fact that Fatma Nisa Bally et al., [22] mediated clinical drugs in the treatment of dementia and the knowledge of nursing providers, and that intervention combining knowledge of dementia and dementia treatment was more effective.

Based on the above research results, it can be seen that the program to establish a positive attitude toward dementia patients needs to provide more information and provide information on accurate treatment methods. In particular, it can be seen that raising awareness that dementia is not far from one's surroundings and developing participation programs to have a positive attitude toward dementia diseases should take precedence over other treatment developments.

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