

# Physical Therapists' Awareness of Dementia and Attitude

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**Purpose:** The purpose of this study was to find out the personal characteristics of physical therapists, dementia awareness and dementia attitude, and to find out what relationship is there between personal characteristics and dementia awareness and dementia attitude.

**Methods:** Participants in this study surveyed physical therapists who are members of the Association of Korean Physical Therapists on their awareness of dementia, and conducted online surveys from January 28 to February 27, 2021. The survey questions used in the survey consisted of 29 questions in total, including 9 general characteristics of the participant, 10 questions on perception of dementia, and 10 attitudes toward dementia. All 104 participants were surveyed, and 100 surveys were analyzed, excluding 4 surveys with insufficient responses.

**Results:** In this study, the correct answer rate for all items in the dementia awareness sub-item was 65%, and the dementia attitude-related sub-items were generally positive. However, there was no significant correlation between personal characteristics such as gender, age, educational background, treatment target, treatment experience and dementia awareness, and no correlation with dementia attitude was significant.

**Conclusion:** Regardless of personal characteristics such as gender, age, treatment target, and treatment experience, a positive attitude and correct recognition of dementia can improve the quality of treatment with dementia patients and increase the reliability of patients and caregivers.

**Keywords:** Attitude, Awareness, Dementia, Physical therapist

## INTRODUCTION

The number of 65-year-olds in our country is now more than 8 million people, of whom more than 700,000 people have dementia, and the estimated incidence of dementia is more than 10.3%.<sup>1</sup> Dementia is a disease most feared by the elderly than cancer or cardiovascular disease.<sup>2</sup> Dementia is a syndrome caused by chronic or progressive degeneration in the international classification of diseases, defined as multiple disorders of cerebral function, such as memory, thinking, judgement and speech impairment.<sup>3</sup> Dementia continues to deteriorate, making it impossible to perform routine activities, and reducing cognitive abilities to unpredictable levels.<sup>4</sup> It is a disease caused by the damage of high brain function to a disease caused by a clear cause, not a natural aging process, and is accompanied by physical diseases and complications that are common in normal elderly people.<sup>5</sup> In the treatment of such dementia, drug therapy and non-

drug therapy has been conducted a variety of programs, such as cognitive therapy, behavioral therapy, flashback therapy, occupational therapy, music therapy.<sup>6</sup>

Physiotherapists spend more time with patients than with other health care personnel, such as treating patients with muscle, skeletal and nervous system diseases with non-surgical therapy, maintaining mental function of dementia patients, and promoting concentration and self-expression.<sup>7,8</sup> In addition, it is conducting exercise programs to improve the physical ability of patients with severe dementia, prevent cognitive abilities, and play a very important role in preventing dementia from increasing the risk of developing dementia before the age of 60.<sup>9</sup>

Dementia awareness refers to the level of knowledge about dementia and information that includes not only the disease itself but also behaviors to manage and respond to the disease.<sup>10</sup> Dementia attitude refers to a behavioral attitude based on cognitive and emotional attitudes as a personal

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opinion or opinion perceived about dementia disease the elderly with dementia, and is an important factor that has a decisive influence on the behavior of the therapist along with dementia awareness.<sup>11</sup> If a physiotherapist who treats dementia awareness and attitudes closest to you knows it, you can help people with dementia and their families get help from their community or country when they seek help with dementia. However, our reality is still lacking awareness and is not helping in time.<sup>3</sup>

Every year, the National Health Insurance Corporation receives applications for “dementia specialized education” in each region, and through theory and practice, it produces dementia specialists for customized care for dementia recipients, such training is only available to staff and facility directors dedicated to dementia, caregivers and nursing assistants, social workers and physiotherapists.<sup>12</sup> If caregivers or therapists who receive such education make efforts to promote prevention behaviors with correct dementia awareness and attitude as dementia specialists, the positive awareness of dementia will increase and the quality of care services will be improved.<sup>9</sup> In addition, it will be possible to make understand the awareness of dementia to the caregivers and family members of dementia patients, to improve the negative perception of dementia, and to become a helper with the family of the dementia patient so that they can receive full treatment and awareness at home and in society.<sup>13</sup>

In 2018, Seoul metropolitan government investigated dementia awareness for Seoul citizens along with the Metropolitan Dementia Center,<sup>10</sup> and in 2017, there was also survey for local residents in Gyeonggi-do.<sup>14</sup> In addition, dementia awareness was investigated for students of physical therapy department, and a study on dementia knowledge and attitude of students of nursing department and social welfare department was also investigated.<sup>3,15</sup> In 2020, there was also a research study on the national responsibility for dementia for physiotherapists in The University of Technology, but no studies were conducted on dementia awareness and attitudes toward physiotherapists.<sup>2</sup>

Therefore, this study will look at the personal characteristics and dementia awareness and dementia attitudes of physiotherapists in situations where physiotherapists are treating dementia patients directly in the field, and to find out what the correlation between personal characteristics and dementia awareness and dementia attitudes. This will be an opportunity to further improve the dementia awareness of physiotherapists in the future, and will be a base material for expanding the field of treatment of dementia and increasing their expertise as professionals.

## METHODS

### 1. Subjects and Collection methods

Participants in this study were surveyed on dementia perceptions by physiotherapists who are members of the Association of Physiotherapists. From January 28 to February 27, 2021, we conducted an online survey and obtained consent to participate in the survey. If you do not agree, you do not need to take the survey. The survey questions used in the survey are a total of 29 questions, including the general characteristics of the participants 9 questions, the perceptions of dementia 10 questions, and the attitude towards dementia 10 questions. All survey participants were 104, and the survey of 100 people was analyzed except for four insufficient responses. The calculation of the sample number was made using G-power as effect size  $d: 0.55/\alpha: 0.05/\text{power} (1-\beta): 0.95$  (Table 1). The re-

**Table 1.** Characteristics of participations

	Characteristics	Participants (N)	%
Gender	Male	57	57
	Female	43	43
Age	20s	24	24
	30s	36	36
	40s	29	29
	50s	11	11
Final education	College	25	25
	Bachelor	36	36
	Master	19	19
	Doctor	16	16
	Etc	4	4
Therapy target	Children	10	10
	Adults	65	65
	Seniors	25	25
Therapy experience	Yes	79	79
	No	21	21
Intention to therapy	Yes	72	72
	No	28	28
Dementia therapy possible	Not at all	5	5
	Not like that	29	29
	So so	31	31
	Mostly	30	30
Dementia awareness	It really	5	5
	Not at all	18	18
	Not like that	51	51
	So so	24	24
	Mostly	7	7
Dementia contact pathway	It really	18	18
	Mass media	20	20
	Expert	26	26
	Friend, neighbor	2	2
	Professional books	52	52

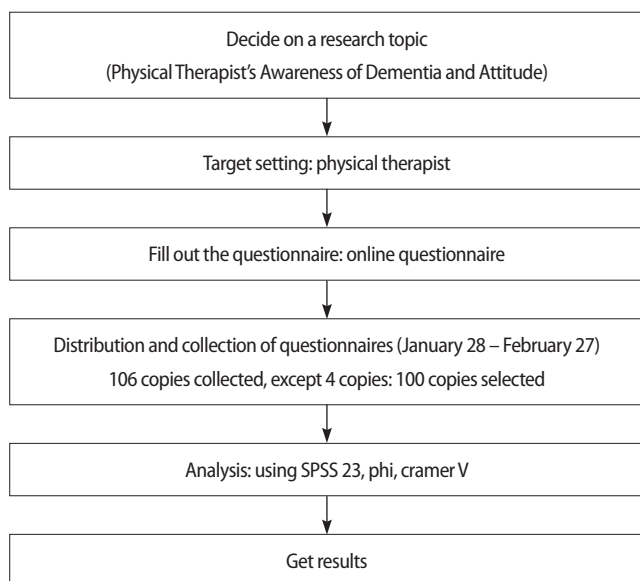


Figure 1. Study Protocol.

search process is as follows Figure 1.

## 2. Measurement tools and methods

### 1) Dementia awareness

Awareness of dementia was used by modifying the questionnaire used in Kim and Cho's research on dementia awareness among students of physical therapy department and Kim's research on awareness and attitude toward dementia of Jeju citizens.<sup>16</sup> The awareness of dementia is 10 questions. In Kim's study, the reliability was shown as Cronbach's  $\alpha = 0.74$ , and in Son's study, Cronbach's  $\alpha = 0.75$ .<sup>12,15</sup> The reliability of this study was shown as Cronbach's  $\alpha = 0.76$ .

### 2) Dementia attitude

Kim's study on Jeju citizens' awareness and attitudes toward dementia and the questionnaire used in Yang's study were revised.<sup>16,17</sup> There are 10 questions about attitudes to dementia. In a study of Jeju citizens, Cronbach's  $\alpha = 0.75$ , and Choi and Kwon's studies showed Cronbach's  $\alpha = 0.68$ .<sup>16,18</sup> In this study, Cronbach's  $\alpha = 0.75$ , and Cronbach's  $\alpha = 0.79$ .

## 3. Data Analysis

The data in this study were analyzed as SPSS 23.0. Participants' general characteristics, dementia awareness, and dementia attitude were analyzed frequently and percentage, and phi and Cramer V were analyzed through cross-analysis between gender, age, educational level, treatment, dementia experience, and dementia attitude. The phi correlation coefficient and Cramer V are used to analyze between nominal scales, using pies if there

are two categories or less, and Cramer V if there are more than three categories. Cramer V correlation number is lower correlation closer to 0, the closer to 1 means the higher the correlation. The significance level is  $p < 0.05$ .

## RESULTS

### 1. Dementia awareness

The details of the physical therapist's awareness of dementia are "As we get older, everyone gets dementia due to aging", "Dementia is linked to genetic factors", "Men are more susceptible to dementia than women", "Dementia is caused by various diseases such as internal medicine, psychiatry, neurology, and disease", "Your risk of developing dementia is proportional to your age", "People with dementia remember recent events better than past events", "When you get dementia, you don't have a sense of time, you wander around, and you can't recognize people", "Eating lightly and eating well-balanced meals is good for preventing dementia", "Regular living and regular physical examination help prevent dementia", "For the elderly with dementia, it is helpful to change the environment frequently". Dementia awareness also has an overall correct answer rate of 65% of the details. More information is as follows (Table 2).

### 2. Dementia Attitudes

The details of the physical therapist's dementia attitude are "Dementia patients feel useless", "Dementia is a personal problem, not a social problem", "I don't want to be as close as possible to a person with dementia", "An old man with dementia is better off for himself or his family", "If you have dementia in your family, you want to hide that fact", "I want to take a simple test that can diagnose dementia", "I think it is important for the general public to be interested in dementia", "For the latest information on dementia and the media, and it comes to see the precautions", "I would like to have more specialized facilities that can treat dementia patients", "Countermeasures against dementia should be implemented socially and nationally". Dementia attitudes as a whole are positive. More information is as follows (Table 3).

### 3. Correlation between personal characteristics dementia awareness

The relationship between dementia awareness and gender, age, educational level and treatment subjects and dementia experience was analyzed. Gender and dementia experiences were analyzed as phi because there

**Table 2.** Characteristics of participations

	N	%
As we get older, everyone gets dementia due to aging		
Not at all	15	15
Not like that	39	39
So so	9	9
Mostly	34	34
It really	3	3
Dementia is linked to genetic factors		
Not at all	2	2
Not like that	13	13
So so	41	41
Mostly	40	40
It really	2	2
Men are more susceptible to dementia than women		
Not at all	7	7
Not like that	52	52
So so	25	25
Mostly	14	14
It really	2	2
Dementia is caused by various diseases such as internal medicine, psychiatry, neurology, and disease		
Not at all	2	2
Not like that	10	10
So so	25	25
Mostly	49	49
It really	14	14
Your risk of developing dementia is proportional to your age		
Not at all	2	2
Not like that	17	17
So so	11	11
Mostly	61	61
It really	9	9
People with dementia remember recent events better than past events		
Not at all	30	30
Not like that	52	52
So so	10	10
Mostly	7	7
It really	1	1
When you get dementia, you don't have a sense of time, you wander around, and you can't recognize people		
Not at all	0	0
Not like that	8	8
So so	13	13
Mostly	59	59
It really	20	20

(Continued to the next)

**Table 2.** Continued

	N	%
Eating lightly and eating well-balanced meals is good for preventing dementia		
Not at all	0	0
Not like that	9	9
So so	31	31
Mostly	45	45
It really	15	15
Regular living and regular physical examination help prevent dementia		
Not at all	0	0
Not like that	3	3
So so	10	10
Mostly	57	57
It really	30	30
For the elderly with dementia, it is helpful to change the environment frequently		
Not at all	39	39
Not like that	21	21
So so	14	14
Mostly	19	19
It really	7	7

were two categories, and age, educational background, and treatment subjects were more than three categories, so Cramer V was analyzed. As a result of the analysis, the correlation between gender and dementia awareness was not significant in 0.295 ( $p > 0.851$ ), and the treatment experience was not significant in 0.294 ( $p > 0.858$ ). Age is 0.429 ( $p > 0.084$ ) and educational background is 0.430 ( $p > 0.55$ ), the treatment target 0.334 ( $p > 0.770$ ), was not significant (Table 4).

#### 4. Correlation between personal characteristics dementia attitudes

The relationship between dementia attitude and gender, age, educational background level and treatment subjects and dementia experience was analyzed. Gender and dementia experiences were analyzed in phi because they had two categories, and age, educational background, and treatment subjects were more than three categories, so they were analyzed in Cramer V. According to the analysis, the correlation between gender and dementia attitude was not significant with 0.488 ( $p > 0.160$ ), and the treatment experience was not significant with 0.460 ( $p > 0.271$ ). Age is 0.453 ( $p > 0.216$ ) Academic background 0.416 ( $p > 0.567$ ), and treatment target is 0.398 ( $p > 0.671$ ) was not significant (Table 5).

**Table 3.** Characteristics of participations

	N	%
Dementia patients feel useless		
Not at all	43	43
Not like that	43	43
So so	8	8
Mostly	6	6
It really	0	0
Dementia is a personal problem, not a social problem		
Not at all	65	65
Not like that	26	26
So so	3	3
Mostly	4	4
It really	2	2
I don't want to get as close as possible to a person with dementia		
Not at all	29	29
Not like that	30	30
So so	24	24
Mostly	16	16
It really	1	1
An old man with dementia is better off for himself or his family		
Not at all	32	32
Not like that	33	33
So so	20	20
Mostly	13	13
It really	2	2
If you have dementia in your family, you want to hide that fact		
Not at all	43	43
Not like that	39	39
So so	14	14
Mostly	3	3
It really	1	1
I want to take a simple test that can diagnose dementia		
Not at all	4	4
Not like that	11	11
So so	17	17
Mostly	41	41
It really	27	27
I think it is important for the general public to be interested in dementia		
Not at all	0	0
Not like that	1	1
So so	5	5
Mostly	39	39
It really	55	55

(Continued to the next)

**Table 3.** Continued

	N	%
For the latest information on dementia and the media, and it comes to see the precautions		
Not at all	2	2
Not like that	6	6
So so	32	32
Mostly	40	40
It really	20	20
I would like to have more specialized facilities that can treat dementia patient		
Not at all	0	0
Not like that	0	0
So so	5	5
Mostly	38	38
It really	57	57
Countermeasures against dementia should be implemented socially and nationally		
Not at all	0	0
Not like that	1	1
So so	6	6
Mostly	32	32
It really	61	61

**Table 4.** Perceptions of dementia

	phi coefficient	Cramer V	p
Gender	0.295	-	0.851
Age	-	0.429	0.084
Education	-	0.430	0.550
Treatment target	-	0.334	0.770
Treatment experience	0.294	-	0.858

**Table 5.** Attitude of dementia

	phi coefficient	Cramer V	t
Gender	0.488	-	0.160
Age	-	0.453	0.216
Education	-	0.416	0.567
Treatment target	-	0.398	0.671
Treatment experience	0.460	-	0.271

## DISCUSSION

Dementia goes beyond simple illness and has a huge impact on family life and social life.<sup>17</sup> There is a lack of prior research on dementia awareness and attitudes for physiotherapists and medical technicians who encounter this situation at close range. This study sought to correlate the personal characteristics of physiotherapists with dementia awareness and attitudes.

The correct answer rate for physiotherapists according to the details of dementia awareness is 54% that “As we get older, everyone gets dementia

due to aging”, 42% that “Dementia is linked to genetic factors”, 59% that “Men are more susceptible to dementia than women”, 63% that “Dementia is caused by various diseases such as internal medicine, psychiatry, neurology, and disease”, 59% that “Your risk of developing dementia is proportional to your age”, 82% who “People with dementia remember recent events better than past events”, and 82% who “When you get dementia, you don’t have a sense of time, you wander around, and you can’t recognize people” “loosing the place, not to know the person” 79%, “Eating lightly and eating well-balanced meals is good for preventing dementia” 60%, “Regular living and regular physical examination help prevent dementia” 87%, “For the elderly with dementia, it is helpful to change the environment frequently” was found to be 60%, the overall question-specific correctness rate is 65%. In the 2018 Seoul National Survey, the correct answer to the question rate was 72.5%.<sup>10</sup> A study of physiotherapy students showed 113.89 out of 180, while a study of nursing and social welfare students scored 16.42% and 16.02% respectively out of 20.<sup>3,15</sup> Students and ordinary citizens have a higher level of awareness than clinical physiotherapists. It is a result outside the expected that dementia awareness will be high in physiotherapy to treat dementia patients directly in the field. Nursing students have experience in dementia through practice, social welfare students are educated in the welfare service of dementia patients, and ordinary citizens know about dementia through the media or the media, think seriously and sympathize with their families and people around them.<sup>10,15</sup> However, physiotherapists are often exposed to dementia in the medical field, so they may be less serious, and they may not have been able to think and treat dementia only because they treat patients with other diseases as well as dementia patients.

According to the details on dementia attitudes, 14% of “Dementia patients feel useless”, 9% who say “Dementia is a personal problem, not a social problem”, 41% who “I don’t want to get as close as possible to a person with dementia”, 35% who “An old man with dementia is better off for himself or his family”, and 18% who “If you have dementia in your family, you want to hide that fact want to hide that fact” answered negatively 68%, “I want to take a simple test that can diagnose dementia”, “I think it is important for the general public to be interested in dementia” 94%, “For the latest information on dementia and the media, and it comes to see the precautions” 60%, “I think it is important for the general public to be interested in dementia” 95%, “Countermeasures against dementia should be implemented socially and nationally” 93% of the positive answers. A study of nursing and social welfare students came out positive with 40.48% and 40.54% respectively out of 50.<sup>15</sup> A study on dementia attitudes in nursing

college students showed positively with an average of 65.09.<sup>18</sup>

In this study, positive answers were also higher than negative answers. Dementia is not a disease that needs to be treated personally, but a disease that is treated by the state. Therefore, people who work on dementia, whether they are physiotherapists or students, will think about dementia and think more positively about dementia attitudes. Also, only positive attitudes can help dementia patients, families and cares.

In this study, there was no significant correlation between individual characteristics, such as gender, age, educational background, treatment target, treatment experience, and dementia awareness, and there was no significant correlation with dementia attitude. In a study of students in the Department of Social Welfare, the correlation between personal characteristics and perception of dementia was not significant, and the relationship between attitude toward dementia was significant in gender.<sup>18</sup> In Son’s study,<sup>12</sup> age, education and dementia attitudes were significant in nursing home managers, and nursing caregivers were not significant. Lee and Jo<sup>19</sup> showed that dementia awareness was significant in terms of age and education. There will be differences between males and females in terms of gender for students of the Department of Social Welfare, and managers of nursing homes will have differences in terms of age and academic background. In addition, ordinary citizens will learn about dementia awareness and attitude toward dementia based on what they each feel in terms of age and education. Because physical therapists treat dementia as a therapist, it is thought that they will treat and treat dementia patients regardless of their personal characteristics.

This study was meaningful in that it looked into dementia awareness and dementia attitude regardless of gender, age, and treatment target of the physical therapist’s personal characteristics. As a limitation of the study, it was a study targeting all physical therapists in the medical field. It is not, and it is difficult to directly compare and evaluate this study due to the lack of previous studies. Therefore, it is difficult to generalize the results of this study.

As a therapist, having a correct understanding and positive attitude toward dementia is an important factor in caring for dementia patients, and treatment methods and processes may vary depending on the perception and attitude toward dementia. Therefore, if not properly educated, misunderstandings and misjudged decisions can affect the treatment of people with dementia. However, most of the training offered by the Physiotherapists Association is about the near and old world, or about the elderly. The courses for dementia should be put in place within the training programs offered to physiotherapists to ensure that physiotherapists have the right

dementia awareness and attitude. In addition, on-site education should be operated in a systematic way, not as a one-time event, by making promotional materials for dementia, planning education, and implementing programs tailored to each career. The positive attitude of physical therapists and correct dementia awareness in the health care field through such education will increase the quality of treatment for dementia patients and increase the trustworthiness of patients and caregivers.

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