A Study on the Refresher Training of Physical Therapist in Gwangju and Jeonnam

Seong-Hun Yu¹, Seung-Rae Kim², Sung-Hyoun Cho³, Il-Yong Jang⁴, Jin-Ah Hwang⁵, Yong-Seong Kim³, Hyun-Jin Kim⁶

¹Gwangju Trauma Center, Gwangju; ²Gwangju Donggu Public Health Center, Gwangju; ³Department of Physical Therapy, Nambu University, Gwangju; ⁴Suwan Medical Center, Gwangju; ⁵X-sports Rehabilitation Exercise Center, Gwangju; ⁶Department of Physical Therapy, Hanlyo University, Gwangju, Korea

Purpose: The current study seeks to examine the continuing education of physical therapist in Gwangju, Jeonnam.

Methods: A survey was conducted during the continuing education of physical therapist held in Gwangju in 2015 with 297 participants. The survey questionnaire consisted of 13 questions on characteristics of physical therapist, 7 questions on the level of satisfaction with continuing education, 11 questions regarding the need for continuing education, and 8 questions concerning how to improve continuing education.

Results: As for the level of satisfaction with the content of continuing education, the survey results indicated that there were significant differences across respondents' age and career period. Regarding the level of satisfaction with the environment in which continuing education was provided; significant differences were observed across respondents' age, education, marital status, monthly pay, career period, and service period. Regarding the level of satisfaction with the expense in which continuing education was provided; significant differences were observed across respondents' sex, age, education, marital status, dependent family, monthly pay, career period, and position. In terms of the level of satisfaction with the operation method in which continuing education was carried out, there were significant differences across respondents' age, education, and career period.

Conclusion: The survey found the level of satisfaction with continuing education to be average among physical therapist in Gwangju and Jeonnam. In addition, as for ways to take continuing education courses for those who have never taken it, online education was mentioned the most. Therefore, there is a need for advertising online continuing education.

Keywords: Continuing education, Physical therapist, Satisfaction

INTRODUCTION

With changes in healthcare environment and an increase in national income and public awareness of right to know, people's demand for quality medical services is rising ever more.¹ In addition, since medical skills and knowledge are evolving at unprecedented speeds, there should be a persistent effort to organically embrace the skills and knowledge of medical professionals and develop their expertise.^{2,3}

Therefore, in order to meet the needs of the changing healthcare environment and people, appropriate education is needed which is most critical to building the capacity of individuals and to surviving

in the era of infinite competition.⁴⁻⁶ Physical therapists should receive eight hours or more of continuing education every year in pursuance of Article 20 of the Act on medical professionals.⁷ The education is mandatory for every physical therapist and is part of their lifelong education to acquire up-to-date knowledge and information while complementing and supplementing the skills and knowledge needed for the profession.⁸ Such continuing education must be in line with trainees' current work and should be aimed at improving their capacity to carry out the roles and responsibilities involved.^{9,10}

However, in the past, many physical therapists could not participate in the education due to various limitations even though con-

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Corresponding author Hyun-Jin Kim

E-mail gini51@naver.com

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tinuing education was essential for them. Nevertheless, with the recent medical license reporting system, continuing education has become more stringent and binding.¹¹ Although continuing education has now been made highly mandatory, the awareness of and needs for such education among physical therapists is modest at best. Therefore, it is very important to conduct research into the continuing education for physical therapists, and to analyze and evaluate the current continuing education to see whether it has achieved its original purpose.

The needs to license update existing health care provider and medical technician have been raised due to various medical emergencies. Because of these reasons were studied to increase the continuing education quality. Hence, the present study aims to provide baseline data for the quality improvement of continuing education for physical therapists by examining the current status of education and investigating the awareness of and needs for continuing education among physical therapists.

METHODS

1. Subjects

A survey was conducted at one of the continuing education programs for physical therapists in Gwangju in 2015 with the therapists who had agreed to take part in the survey after being informed of the survey purpose. A total of 297 respondents participated in the survey.

2. Experimental methods

The survey questionnaire consisted of 13 questions about the general characteristics of physical therapists, 7 questions about satisfaction with continuing education, 11 questions about the needs for continuing education, and 8 questions about improvement of continuing education. This survey was made on the basis of the literature; physical therapy processor and doctor's degree decided appropriate question number and details.¹²⁻¹⁵ The survey was filled out anonymously. With regard to the questions about satisfaction with continuing education in particular, the respondents were asked to rate their level of satisfaction on a five-point scale with one being very dissatisfied, two being dissatisfied, three being neutral, four being satisfied and five being very satisfied, and moreover, on the questions about improvement of continuing education, the respon-

dents could give as many as three answers.

3. Data analysis

The survey responses were analyzed using SPSS 18.0 software. For the data of the respondents' general characteristics and questions about continuing education, frequency analysis was used while an independent t-test was conducted to investigate the respondents' satisfaction with continuing education by their general characteristics such as gender, marital status, number of dependents, job position and place of residence. In addition, an analysis of variance (ANOVA) was conducted to examine the satisfaction with continuing education by group with regard to the age, educational level, remuneration, work hours, employment history and job responsibilities of the respondents and the number of patients they oversee. A post hoc test was carried out using Tukey's method. The statistical significance was set at $\alpha = 0.05$.

RESULTS

1. General characteristics of physical therapist

There were a total of 297 physical therapists participating in the survey, of whom 67.3% were female and 42.4% were the respondents aged between 30-39 years which constituted the largest group. Most of the respondents were college graduates 59.6%, unmarried 61.6% and did not have any dependent family members 57.6%. In addition, a majority of them were paid between 1,510,000-2,000,000 won per month on average 43.8%, working for five years or less 38.0% and held the position of a physical therapist 72.1%. Furthermore, a lion's share of them had the working week of between 41-49 hours 70.0%, were living in Gwangju 76.1%, had the service period of five years or less 73.4%, were in part of electrotherapy physical therapy 45.1% and had 31-40 patients per day 24.9% (Table 1).

2. Level of satisfaction with continuing education in physical therapist

With regard to the level of satisfaction with continuing education among physical therapists, 61.6% of the respondents were satisfied with the education content while the satisfaction levels for the method, environment, instructors, hours and operation method of continuing education were 62.3%, 52.5%, 68.0%, 56.6%, and 66.3%, respectively. A majority of their responses were neutral. However,

Table 1. General characteristics of physical therapist

Characteristics	N	%
Sex		
Male	97	32.7
Female	200	67.3
Age		
20-29 years old	116	39.1
30-39 years old	126	42.4
< 40 years old	55	18.5
Education		
College graduate	177	59.6
University graduate	97	32.7
A postgraduate school	23	7.7
Marital status		
Unmarried	183	61.6
Married	114	38.4
Dependent family		
No	171	57.6
Yes	126	42.4
Monthly pay		
< 1,500,000	48	16.2
1,510,000-2,000,000	130	43.8
2,010,000-2,500,000	57	19.2
2,510,000-3,000,000	42	14.1
< 3,010,000	20	6.7
Physical therapist career period		
< 5 years old	113	38.0
6-9 years old	106	35.7
< 10 years old	78	26.3
Position		
Manager of physical therapy	76	25.6
Physical therapy	214	72.1
And so on	7	2.4
Working week		
< 40 times	66	22.2
41-49 times	208	70.0
< 50 times	23	7.7
Site		
Gwangju	226	76.1
Jeonnam	71	23.9
Service period		
< 5 years old	218	73.4
6-9 years old	58	19.5
< 10 years old	21	7.1
Part		
Neurological physical therapy	65	21.9
Electrotherapy physical therapy	134	45.1
Pediatric physical therapy	43	14.5
Orthopedic physical therapy	55	18.5
1 day number of patient care		
< 10 peoples	25	8.4
11-20 peoples	67	22.6
21-30 peoples	71	23.9
31-40 peoples	74	24.9
< 41 peoples	47	15.8
And so on	13	4.4

with regard to the education expense, the largest number of them 38.7% were dissatisfied (Table 2).

3. Level of satisfaction with continuing education in terms of physical therapist characteristics

The satisfaction level for the content of continuing education was significantly different by age and physical therapist career period while there were significant differences in the satisfaction level for the environment of continuing education by age, educational level, marital status, monthly pay, physical therapist career period and service period. In addition, with regard to the satisfaction level for the expense of continuing education, there were significant differ-

Table 2. Level of satisfaction with continuing education in physical therapist

Characteristics	N	%
Are you satisfied with the content of continuing education?		
Very dissatisfied	19	6.4
Dissatisfied	55	18.5
Neutral	183	61.6
Satisfied	38	12.8
Very satisfied	2	0.7
Are you satisfied with the method of continuing education?		
Very dissatisfied	14	4.7
Dissatisfied	56	18.9
Neutral	185	62.3
Satisfied	37	12.5
Very satisfied	5	1.7
Are you satisfied with the environment of continuing education?		
Very dissatisfied	11	3.7
Dissatisfied	45	15.2
Neutral	156	52.5
Satisfied	79	26.6
Very satisfied	6	2.0
Are you satisfied with the instructor of continuing education?		
Very dissatisfied	10	3.4
Dissatisfied	32	10.8
Neutral	202	68.0
Satisfied	49	16.5
Very satisfied	4	1.3
Are you satisfied with the hour of continuing education?		
Very dissatisfied	18	6.1
Dissatisfied	72	24.2
Neutral	168	56.6
Satisfied	37	12.5
Very satisfied	2	0.7
Are you satisfied with the expense of continuing education?		
Very dissatisfied	64	21.5
Dissatisfied	115	38.7
Neutral	107	36.0
Satisfied	11	3.7
Very satisfied	0	0
Are you satisfied with the operation method of continuing education?		
Very dissatisfied	18	6.1
Dissatisfied	54	18.2
Neutral	197	66.3
Satisfied	26	8.8
Very satisfied	2	0.7

ences by sex, age, educational level, marital status, number of dependent family members, monthly pay, physical therapist career period, and job position. Moreover, the satisfaction level for the operation method of continuing education was significantly different according to age, educational level and physical therapist career period ($p < 0.05$). However, no significant difference was observed in the satisfaction levels for the method, instructors, and hours of continuing education (Table 3).

4. Need for continuing education

On the question of "Do you satisfied with the contents of the continuing education?", 85.9% of the respondents answered they were "very dissatisfied". The question of "do you think continuing education is needed?", most of the respondents' answers 48.8% were "neutral". In addition, 40.4% of them answered "neutral", when asked "how helpful do you think continuing education is to your work?"

Table 3. The level of satisfaction with continuing education in terms of physical therapist characteristics

Characteristics			N	M±SD	t or F
Are you satisfied with the content of continuing education?	Sex	Male	97	2.84±0.77	0.10
		Female	200	2.83±0.75	
	Age	20-29 years old	116	2.72±0.74	2.85*
		30-39 years old	126	2.86±0.80	
		<40 years old	55	3.00±0.64	
	Education	College graduate	177	2.82±0.75	1.62
		University graduate	97	2.77±0.78	
		A postgraduate school	23	3.09±0.67	
	Marital status	Unmarried	183	2.79±0.06	-1.04
		Married	114	2.89±0.07	
	Dependent family	No	171	2.80±0.76	-0.87
		Yes	126	2.87±0.75	
	Monthly pay	<1,500,000	48	2.77±0.95	0.80
		1,510,000-2,000,000	130	2.83±0.66	
		2,010,000-2,500,000	57	2.88±0.71	
		2,510,000-3,000,000	42	2.71±0.86	
		<3,010,000	20	3.05±0.69	
	Physical therapist career period	<5 years old	113	2.81±0.74	3.78*
		6-9 years old	106	2.71±0.84	
		<10 years old	78	3.01±0.61	
	Position	Manager of physical therapy	76	2.72±0.76	-1.53
		Physical therapy	214	2.88±0.75	
	Working week	<40 times	66	2.89±0.64	1.13
		41-49 times	208	2.79±0.81	
		<50 times	23	3.00±0.52	
	Site	Gwangju	226	2.85±0.75	0.68
		Jeonnam	71	2.77±0.78	
	Service period	<5 years old	218	2.81±0.75	0.95
		6-9 years old	58	2.81±0.83	
		<10 years old	21	3.05±0.50	
	Part	Neurological physical therapy	65	2.82±0.58	1.82
		Electrotherapy physical therapy	134	2.92±0.74	
		Pediatric physical therapy	43	2.77±0.90	
		Orthopedic physical therapy	55	2.65±0.82	
	1 day number of patient care	<10 peoples	25	2.76±1.01	0.91
		11-20 peoples	67	2.90±0.63	
		21-30 peoples	71	2.94±0.70	
		31-40 peoples	74	2.70±0.79	
		<41 peoples	47	2.81±0.83	
		And so on	13	2.77±0.60	
Are you satisfied with the method of continuing education?	Sex	Male	97	2.89±0.72	0.18
		Female	200	2.87±0.76	
	Age	20-29 years old	116	2.78±0.76	1.74
		30-39 years old	126	2.90±0.75	
		<40 years old	55	3.00±0.69	
	Education	College graduate	177	2.85±0.74	1.05
		University graduate	97	2.88±0.78	
		A postgraduate school	23	3.09±0.60	
	Marital status	Unmarried	183	2.86±0.06	-0.35
		Married	114	2.89±0.07	
	Dependent family	No	171	2.88±0.75	0.05
		Yes	126	2.87±0.74	
	Monthly pay	<1,500,000	48	2.83±0.96	0.64
		1,510,000-2,000,000	130	2.85±0.65	
		2,010,000-2,500,000	57	2.96±0.76	
		2,510,000-3,000,000	42	2.81±0.77	
		<3,010,000	20	3.05±0.61	
	Physical therapist career period	<5 years old	113	2.88±0.73	0.66
		6-9 years old	106	2.82±0.84	
		<10 years old	78	2.95±0.62	
	Position	Manager of physical therapy	76	2.75±0.70	-1.55
		Physical therapy	214	2.93±0.75	

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Table 3. Continued

Characteristics			N	M±SD	t or F
Are you satisfied with the environment of continuing education?	Working week	< 40 times	66	2.95±0.64	1.74
		41-49 times	208	2.83±0.77	
		< 50 times	23	3.09±0.73	
	Site	Gwangju	226	2.88±0.74	0.21
		Jeonnam	71	2.86±0.78	
	Service period	< 5 years old	218	2.88±0.74	0.21
		6-9 years old	58	2.86±0.83	
		< 10 years old	21	2.86±0.57	
	Part	Neurological physical therapy	65	2.83±0.68	0.06
		Electrotherapy physical therapy	134	3.00±0.73	
		Pediatric physical therapy	43	2.72±0.83	
		Orthopedic physical therapy	55	2.75±0.78	
	1 day number of patient care	< 10 peoples	25	3.00±1.04	1.09
		11-20 peoples	67	2.79±0.66	
		21-30 peoples	71	3.01±0.49	
		31-40 peoples	74	2.78±0.82	
		< 41 peoples	47	2.89±0.89	
		And so on	13	2.77±0.60	
	Sex	Male	97	3.12±0.77	0.64
		Female	200	3.06±0.82	
	Age	20-29 years old	116	2.87±0.75	9.11*
		30-39 years old	126	3.13±0.81	
		< 40 years old	55	3.40±0.76	
	Education	College graduate	177	3.03±0.79	2.66*
		University graduate	97	3.09±0.83	
		A postgraduate school	23	3.43±0.73	
	Marital status	Unmarried	183	2.98±0.06	-2.67*
		Married	114	3.24±0.08	
	Dependent family	No	171	3.02±0.79	-1.58
		Yes	126	3.17±0.82	
	Monthly pay	< 1,500,000	48	2.90±0.97	2.46*
		1,510,000-2,000,000	130	3.03±0.73	
		2,010,000-2,500,000	57	3.19±0.77	
		2,510,000-3,000,000	42	3.10±0.85	
		< 3,010,000	20	3.50±0.69	
	Physical therapist career period	< 5 years old	113	2.92±0.77	6.85*
		6-9 years old	106	3.06±0.82	
		< 10 years old	78	3.35±0.77	
	Position	Manager of physical therapy	76	3.11±0.78	0.38
		Physical therapy	214	3.07±0.80	
	Working week	< 40 times	66	3.11±0.75	0.31
		41-49 times	208	3.09±0.83	
		< 50 times	23	2.96±0.71	
	Site	Gwangju	226	3.09±0.81	0.29
		Jeonnam	71	3.06±0.79	
	Service period	< 5 years old	218	3.01±0.80	4.73*
		6-9 years old	58	3.19±0.76	
		< 10 years old	21	3.52±0.75	
	Part	Neurological physical therapy	65	2.95±0.72	0.23
		Electrotherapy physical therapy	134	3.17±0.78	
		Pediatric physical therapy	43	3.12±1.01	
		Orthopedic physical therapy	55	2.98±0.76	
	1 day number of patient care	< 10 peoples	25	3.04±1.02	0.19
		11-20 peoples	67	3.04±0.79	
		21-30 peoples	71	3.13±0.68	
		31-40 peoples	74	3.05±0.86	
		< 41 peoples	47	3.15±0.78	
		And so on	13	3.00±0.91	
Are you satisfied with the instructor of continuing education?	Sex	Male	97	3.00±0.77	-0.29
		Female	200	3.03±0.64	
	Age	20-29 years old	116	3.00±0.59	0.39
		30-39 years old	126	3.00±0.75	
		< 40 years old	55	3.09±0.70	

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Table 3. Continued

Characteristics			N	M±SD	t or F
	Education	College graduate	177	3.02±0.67	1.36
		University graduate	97	2.96±0.69	
		A postgraduate school	23	3.22±0.67	
	Marital status	Unmarried	183	3.01±0.05	-0.36
		Married	114	3.04±0.07	
	Dependent family	No	171	3.01±0.66	-0.15
		Yes	126	3.02±0.71	
	Monthly pay	< 1,500,000	48	3.04±0.85	0.68
		1,510,000-2,000,000	130	2.97±0.57	
		2,010,000-2,500,000	57	3.12±0.63	
		2,510,000-3,000,000	42	2.95±0.83	
		< 3,010,000	20	3.10±0.72	
	Physical therapist career period	< 5 years old	113	3.03±0.62	1.25
		6-9 years old	106	2.94±0.75	
		< 10 years old	78	3.10±0.66	
	Position	Manager of physical therapy	76	2.93±0.74	-1.46
		Physical therapy	214	3.07±0.65	
	Working week	< 40 times	66	3.06±0.63	0.61
		41-49 times	208	2.99±0.72	
		< 50 times	23	3.13±0.34	
	Site	Gwangju	226	3.00±0.68	-0.56
		Jeonnam	71	3.06±0.67	
	Service period	< 5 years old	218	2.98±0.67	1.53
		6-9 years old	58	3.10±0.74	
		< 10 years old	21	3.19±0.60	
	Part	Neurological physical therapy	65	2.94±0.56	0.04
		Electrotherapy physical therapy	134	3.14±0.64	
		Pediatric physical therapy	43	2.93±0.80	
		Orthopedic physical therapy	55	2.87±0.77	
	1 day number of patient care	< 10 peoples	25	2.84±0.94	0.91
		11-20 peoples	67	2.94±0.55	
		21-30 peoples	71	3.13±0.56	
		31-40 peoples	74	3.03±0.72	
		< 41 peoples	47	3.02±0.85	
		And so on	13	3.08±0.28	
Are you satisfied with the hour of continuing education?	Sex	Male	97	2.87±0.73	1.43
		Female	200	2.73±0.78	
	Age	20-29 years old	116	2.64±0.76	3.21
		30-39 years old	126	2.84±0.79	
		< 40 years old	55	2.91±0.67	
	Education	College graduate	177	2.70±0.74	2.38
		University graduate	97	2.86±0.78	
		A postgraduate school	23	3.00±0.91	
	Marital status	Unmarried	183	2.75±0.06	-0.57
		Married	114	2.81±0.07	
	Dependent family	No	171	2.77±0.78	-0.21
		Yes	126	2.79±0.76	
	Monthly pay	< 1,500,000	48	2.75±0.98	0.36
		1,510,000-2,000,000	130	2.73±0.69	
		2,010,000-2,500,000	57	2.84±0.75	
		2,510,000-3,000,000	42	2.79±0.72	
		< 3,010,000	20	2.90±0.85	
	Physical therapist career period	< 5 years old	113	2.75±0.76	2.62
		6-9 years old	106	2.68±0.78	
		< 10 years old	78	2.94±0.74	
	Position	Manager of physical therapy	76	2.83±0.70	0.62
		Physical therapy	214	2.77±0.78	
	Working week	< 40 times	66	2.91±0.67	1.71
		41-49 times	208	2.72±0.80	
		< 50 times	23	2.87±0.63	
	Site	Gwangju	226	2.77±0.76	-0.18
		Jeonnam	71	2.79±0.79	

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Table 3. Continued

Characteristics			N	M±SD	t or F
Are you satisfied with the expense of continuing education?	Service period	< 5 years old	218	2.77±0.76	0.14
		6-9 years old	58	2.76±0.78	
		< 10 years old	21	2.86±0.79	
	Part	Neurological physical therapy	65	2.72±0.60	0.59
		Electrotherapy physical therapy	134	2.84±0.77	
		Pediatric physical therapy	43	2.67±0.94	
		Orthopedic physical therapy	55	2.76±0.79	
	1 day number of patient care	< 10 peoples	25	2.80±0.91	0.55
		11-20 peoples	67	2.73±0.61	
		21-30 peoples	71	2.86±0.70	
		31-40 peoples	74	2.70±0.84	
		< 41 peoples	47	2.85±0.83	
		And so on	13	2.62±0.87	
	Sex	Male	97	2.47±0.86	3.68*
		Female	200	2.10±0.78	
	Age	20-29 years old	116	1.98±0.75	10.65*
		30-39 years old	126	2.29±0.86	
		< 40 years old	55	2.56±0.76	
	Education	College graduate	177	2.10±0.80	7.25*
		University graduate	97	2.31±0.83	
		A postgraduate school	23	2.74±0.75	
	Marital status	Unmarried	183	2.10±0.06	-3.24*
		Married	114	2.41±0.08	
	Dependent family	No	171	2.12±0.83	-2.36*
		Yes	126	2.35±0.80	
	Monthly pay	< 1,500,000	48	2.06±0.81	5.42*
		1,510,000-2,000,000	130	2.09±0.76	
		2,010,000-2,500,000	57	2.37±0.82	
		2,510,000-3,000,000	42	2.26±0.89	
		< 3,010,000	20	2.90±0.79	
	Physical therapist career period	< 5 years old	113	2.06±0.79	9.37*
		6-9 years old	106	2.14±0.81	
		< 10 years old	78	2.55±0.80	
	Position	Manager of physical therapy	76	2.41±0.87	2.28*
		Physical therapy	214	2.16±0.80	
	Working week	< 40 times	66	2.24±0.75	0.07
		41-49 times	208	2.21±0.85	
		< 50 times	23	2.26±0.86	
	Site	Gwangju	226	2.19±0.80	-1.23
		Jeonnam	71	2.32±0.89	
	Service period	< 5 years old	218	2.14±0.83	4.07
		6-9 years old	58	2.45±0.78	
		< 10 years old	21	2.43±0.81	
	Part	Neurological physical therapy	65	2.22±0.80	0.37
		Electrotherapy physical therapy	134	2.14±0.79	
		Pediatric physical therapy	43	2.28±0.88	
		Orthopedic physical therapy	55	2.36±0.89	
	1 day number of patient care	< 10 peoples	25	2.36±0.95	1.12
		11-20 peoples	67	2.24±0.74	
		21-30 peoples	71	2.32±0.73	
		31-40 peoples	74	2.04±0.90	
		< 41 peoples	47	2.26±0.90	
		And so on	13	2.15±0.69	
Are you satisfied with the operation method of continuing education?	Sex	Male	97	2.86±0.69	0.98
		Female	200	2.77±0.71	
	Age	20-29 years old	116	2.72±0.67	3.57*
		30-39 years old	126	2.78±0.70	
		< 40 years old	55	3.01±0.76	
	Education	College graduate	177	2.76±0.76	3.63*
		University graduate	97	2.78±0.70	
		A postgraduate school	23	3.17±0.49	
	Marital status	Unmarried	183	2.75±0.05	-1.52

(Continued to the next page)

Table 3. Continued

Characteristics		N	M±SD	t or F
Dependent family	Married	114	2.88±0.07	-0.91
	No	171	2.77±0.69	
Monthly pay	Yes	126	2.84±0.73	1.12
	< 1,500,000	48	2.73±0.82	
	1,510,000-2,000,000	130	2.75±0.65	
	2,010,000-2,500,000	57	2.79±0.75	
	2,510,000-3,000,000	42	2.90±0.69	
Physical therapist career period	< 3,010,000	20	3.05±0.69	3.86*
	< 5 years old	113	2.73±0.69	
	6-9 years old	106	2.74±0.76	
	< 10 years old	78	2.99±0.63	
Position	Manager of physical therapy	76	2.88±0.67	1.07
	Physical therapy	214	2.78±0.71	
Working week	< 40 times	66	2.89±0.66	1.03
	41-49 times	208	2.76±0.74	
	< 50 times	23	2.87±0.46	
Site	Gwangju	226	2.79±0.71	-0.26
	Jeonnam	71	2.82±0.68	
Service period	< 5 years old	218	2.74±0.69	3.15
	6-9 years old	58	2.29±0.77	
	< 10 years old	21	3.05±0.74	
Part	Neurological physical therapy	65	2.80±0.62	0.99
	Electrotherapy physical therapy	134	2.80±0.69	
	Pediatric physical therapy	43	2.81±0.79	
	Orthopedic physical therapy	55	2.78±0.79	
1 day number of patient care	< 10 peoples	25	2.80±0.87	0.27
	11-20 peoples	67	2.79±0.66	
	21-30 peoples	71	2.87±0.63	
	31-40 peoples	74	2.76±0.79	
	< 41 peoples	47	2.79±0.72	
	And so on	13	2.69±0.48	

*p<0.05.

M±SD, mean±standard deviation.

while 67.3% answered “neutral” when asked “do you think the number of continuing education programs is reasonable?”. Moreover, 55.9% of the responses were “neutral” when the question of “can your employer pay for your continuing education?” while 56.9% of the respondents answered “satisfied” when asked “do you think continuing education needs to be improved?”. What is more, 37.7% of them answered “weekends or holidays” when asked “when do you think it is most suitable to participate in continuing education?”. As for the question of “how many hours a day do you think are appropriate for continuing education?” 76.1% answered “8 hours a day”, and with regard to the question of “how do you think continuing education should be delivered?” a majority of them 55.6% preferred the “lectures”. To the question of “have you ever taken online courses as part of continuing education?”, 90.2% answered “no”. In addition, a lion’s share of the respondents 41.8% preferred “online education” when asked “how do you want to continuing education courses?” (Table 4).

5. Measures to improve continuing education

With respect to the improvement measures for continuing education, 54.9% of the respondents said that quantitative improvement was needed in educational content while 66.0% of them said that a reduction in the program fee was needed. A total of 73.1% answered “no” to a need for high-quality teaching staff while 54.9% said there was “no” need for a variety of educational programs. In addition, 92.3% answered “no” to a need for more advertising for continuing education while 85.2% said that there was “no” need for improvement in educational environment. Moreover, 89.9% of the respondents answered “no” to a need for improvement in the attitude of participation among physical therapists while there was a large number of a response (62.0%) of “no” for a need for special programs in specialized fields (Table 5).

DISCUSSION

The present study aims to provide baseline data to improve the

Table 4. The need for continuing education

Characteristics		N	%
Do you satisfied with the contents of the continuing education?	Very dissatisfied	255	85.9
	Dissatisfied	9	3.0
	Neutral	24	8.1
	Satisfied	3	1.0
	Very satisfied	6	2.0
Do you think continuing education is need?	Very dissatisfied	27	9.1
	Dissatisfied	59	19.9
	Neutral	145	48.8
	Satisfied	58	19.5
	Very satisfied	8	2.7
How helpful do you think are continuing education in your work?	Very dissatisfied	72	24.2
	Dissatisfied	94	31.6
	Neutral	120	40.4
	Satisfied	10	3.4
	Very satisfied	1	0.3
Do you think reasonable number of continuing education?	Very dissatisfied	9	3.0
	Dissatisfied	66	22.2
	Neutral	200	67.3
	Satisfied	16	5.4
	Very satisfied	6	2.0
Can you work place pay the fees for continuing education?	Very dissatisfied	80	26.9
	Dissatisfied	48	16.2
	Neutral	166	55.9
	Satisfied	3	1.0
	Very satisfied	0	0
Do you think continuing education need to be improved?	Very dissatisfied	3	1.0
	Dissatisfied	12	4.0
	Neutral	57	19.2
	Satisfied	169	56.9
	Very satisfied	56	18.9
When do you think is the most suitable to participate in continuing education?	Weekday mornings	54	18.2
	Weekday afternoons	50	16.8
	Weekday evenings	49	16.5
	Weekends or holidays	112	37.7
	Any time	23	7.7
	And so on	9	3.0
How many hours a day do you think are appropriate for continuing education?	8 hours a time	226	76.1
	4 hours at a time two separate	39	13.1
	Many times	13	4.4
	Doesn't matter	12	4.0
	And so on	7	2.4
How do you think continuing education should be delivered?	Lectures	165	55.6
	Consultation and discussion	4	1.3
	Presentation of case study	55	18.5
	Practicum	43	14.5
	Field trips	14	4.7
	And so on	16	5.4
Have you ever taken continuing education courses online?	Yes	29	9.8
	No	268	90.2
How do you want to take continuing education courses?	Offline education	70	23.6
	Online education	124	41.8
	Offline and online education	103	34.7

quality of continuing education by investigating the current status of continuing education programs for physical therapists and their perception of and needs for continuing education.

Since a majority of the participants in the continuing education were between 30 and 39 years old, unmarried and working for five years or less, it is thought that they might need continuous self-de-

velopment with regard to physical therapy approaches. Therefore, the education content related to professional expertise or physical therapy should be taken as a priority.¹⁶ In addition, it appears that many of the respondents were working at clinics since about half of them were in charge of electrotherapy physical therapy. Hence, continuing education should also focus on the expert knowledge such

Table 5. Measures to improve continuing education

Characteristics		N	%
Qualitative improvement of educational content	No	134	45.1
	Yes	163	54.9
High-quality instructor staff	No	217	73.1
	Yes	80	26.9
A variety of educational programs	No	163	54.9
	Yes	134	45.1
Reduction in program fees	No	101	34.0
	Yes	196	66.0
More advertising of continuing education	No	274	92.3
	Yes	23	7.7
Improvement of educational environment	No	253	85.2
	Yes	44	14.8
Attitude of participating physical therapist	No	267	89.9
	Yes	30	10.1
Provision of special lectures on specific fields	No	184	62.0
	Yes	113	38.0

as how to treat chronic pain or aftereffects of a car accident which are often dealt with at clinics.

Particularly, most of the respondents were found to be dissatisfied with fees for continuing education and significant differences were largely observed in the general characteristics of a program fee. As such, the association of physical therapy should explore various ways for improvement, including group discounts as well as individual discounts for outstanding members and people who have taken continuing education for an extended period. In addition, it appears that such dissatisfaction stemmed from the involuntary participation of physical therapists in the current continuing education which is mandatory in the medical license reporting system. Therefore, for future satisfaction, there needs to be gradual improvement.¹⁷ Selecting the education program topics through a needs analysis among education consumers or through the cooperation with educational institutions is deemed to be an excellent idea.^{18,19}

Many physical therapists see a need for continuing education and think that it is helpful to their work. Though they are somewhat satisfied or satisfied with the number and hours of education at large, most of them expressed strong dissatisfaction with having to participate in education. This is partly because most of the respondents have never taken online continuing education courses offered by the association of physical therapy, and it appeared that many of them preferred either online continuing education courses or a combination of online of offline continuing education courses.

This shows that many physical therapists would want more online education which is not bound by time and space, and the therapists who received continuing education in the past would want to complement the necessary knowledge and skills, and not have just a one-off education system. Moreover, while most of the respondents were in agreement to continue with the current eight hours of education while a few said they would rather divide them into two to four hours a day or more. At present, the number of hours of the continuing education for dental hygienists is eight hours which is the same as that of physical therapists but the education takes place both in the first and second halves of a year and the dates and contents of the education are advertised on the association's website.^{9,14} In addition, with regard to the improvement measures for continuing education, many respondents answered that the quality of educational content should be improved along with a reduction in educational fees. Therefore, there is a need to diversify continuing education through online education and various other means and to change it with a diverse teaching staff.^{16,20} In addition, it is thought that there needs to be program development in continuing education and practical provision of continuing education while working on the job at hospitals and clinics.

According to the findings of the present study, the satisfaction level of physical therapists in Gwangju and Jeonnam with continuing education was found to be average while the quality improvement of continuing education and reduction in the program fee were shown to be needed most urgently. In addition, though the respondents have rarely taken continuing education online, since their preference for online education was the highest, there needs to be more efforts to promote the online continuing education programs.

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