

Convergence Influence of Clinical Physical Therapist's Attitude toward Work Environment and Professionalization on Job Satisfaction

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임상 물리치료사의 업무환경 및 전문성 제도화에 대한 태도가 직업만족도에 미치는 융복합적 영향

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Abstract This study investigated the influence of clinical physical therapist's perception of their work environment and their attitude toward professionalization on individual job satisfaction. This study is a cross-sectional survey of clinical physical therapists 356 working in hospital, and utilized a structured questionnaire. As a result of this study, in their twenties, women, physical therapist with low clinical experience, and physical therapists working at hospital level showed low job satisfaction. Most of the physical therapists said that they needed a system for professionalism, and the lower the job satisfaction was, the higher the attitude toward the necessity of introducing a professional system. The variables affecting job satisfaction were academic background and annual salary. Therefore, in order to improve the job satisfaction of physical therapists, improvement of salary and learning for professionalism played an important role in improving job satisfaction. Self-development and job specialization through the introduction of a system for equipping expertise appear to be important to improve the job satisfaction.

Key Words : Clinical physical therapist, Convergence, Job satisfaction, Professional system, Work environment

요약 본 연구는 임상 물리치료사들의 업무 환경 및 전문성 제도화에 대한 태도가 직업 만족도에 미치는 영향을 알아보고자 실시하였다. 이 연구는 설문지를 이용한 횡단적 연구로서 병원에서 근무하고 있는 물리치료사 356명을 대상으로 하였다. 결과에서는 20대, 여성, 임상 경력이 낮은 물리치료사, 병원급에서 근무하는 물리치료사가 직업 만족도가 낮았다. 대부분의 물리치료사들의 전문성을 위한 제도가 필요하다고 하였고 직업 만족도가 낮을수록 전문 제도 도입의 필요성에 대한 태도가 높았다. 직업 만족도에 영향을 미치는 변인은 학력과 연봉이었다. 따라서, 물리치료사들의 직업 만족도를 향상시키기 위하여서 연봉의 개선과 전문성을 위한 학습이 직업 만족도 향상에 중요한 역할을 하고 있었다. 전문성을 갖추기 위한 제도 도입을 통한 자기 계발과 업무의 전문화는 물리치료사의 직업 만족도를 향상시키기 위하여 중요한 것으로 보인다.

주제어 : 임상 물리치료사, 융복합, 직업 만족도, 전문성 제도, 업무 환경

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1. Introduction

Many of those living in modern industrial societies spend most of their time at work, so their jobs hold an important position in their lives[1]. Job satisfaction is the emotional, qualitative, and satisfactory state obtained from the evaluation of the job environment[2] and is related to the perceived difference between what is experienced and what is expected in various aspects of the job situation[3]. Both job performance and the job content itself impact workers' mental state[3]. Job satisfaction is not only a matter of realizing the interests of the organization but also related to the realization of individual values[2] and quality of life[31]. Thus, job satisfaction is influenced by several factors[6], including working conditions, such as remuneration and working environment, management methods, such as promotion and work management[7,8], and personal characteristics[3].

Professionalism refers to the attitudes and behaviors of those who are engaged in a profession and comprises belief in one's work, commitment to one's profession, and job autonomy[2]. Physical therapists engage in thermal therapy, electric therapy, phototherapy, hydrotherapy, mechanical and instrument therapy, and massage function training, which are not just technical jobs, but specialized jobs that require specialized knowledge and technical skills[9]. The World Confederation for Physiotherapy (WCPT) define physiotherapy as: "Physical therapy is concerned with identifying and maximising quality of life and movement potential within the spheres of promotion, prevention, treatment/intervention, habilitation and rehabilitation[15].

When a physical therapist lacks job satisfaction, it is difficult to expect effective physical therapy for the patient, and their professional development may be stunted [10]. Giving an important value to one's job or job is to increase job satisfaction[11].

Kwon and Kim[12] argued that higher job satisfaction led to more kindness and higher patient satisfaction, so physical therapists should focus on improving occupational consciousness.

Park[13] stated that improvement of the educational environment, the introduction of a specialist physical therapist, and the revision of the medical law increased physical therapists' professional morale and job satisfaction. However, as of 2015, Korea is one of 84 countries (Japan and Korea) in which physical therapists cannot independently operate[14]. In addition, Korean physical therapists not only have insufficient social awareness compared with those of other countries, such as Japan, the United States, Europe, and Australia, but also work in a very poor environment, in terms of working hours, workload, remuneration, and welfare facilities[15-17]. Although the pattern of patients using physical therapy rooms is changing because of the increase in the elderly population and the changes in social structure, the working environment of the physical therapist has not changed significantly over time[18]. The reason why the change in the working environment of the physical therapy room has not changed significantly compared to the change of the times seems to be the lack of awareness of the professionalism of the physical therapists in their work. In addition, the physical therapist, who is a medical engineer, is allowed to do its work only by holding it under the guidance of a doctor[4], this limitation seems to have an effect on the social perception of physical therapists as well as lower the self-esteem and satisfaction of physical therapists' work.

Therefore, this study investigated the influence of clinical physical therapists' perception of their work environment and their attitude toward professionalization on individual job satisfaction to facilitate the creation of an environment wherein physical therapists' job satisfaction can be improved.

2. Subjects and Methods

2.1 Study design

This study is a cross-sectional survey of clinical physical therapists working in Seoul, Gyeonggi Province, Gyeongsang Province, and Gangwon Province.

2.2 Subject and data collection

From April 21 to June 8, 2019, 390 surveys were distributed, and 376 copies were collected either by a physical therapist who participated in the maintenance training or by Google questionnaire. After excluding responding unfaithfully or duplicate questionnaires, 356 surveys were included in the final analysis. On the basis of Cohen's Power analysis formula, for a significance level of 0.05, effect size of 0.20, and power (1- β) of 0.95, the minimum number of subjects was calculated as 262. Therefore, the 356 subjects in this study were found to be sufficient to proceed with the study. The purpose of the study was explained in the data collection procedure, and all subjects were assured that all displayed information would be kept confidential and used only for the purpose of the study. In addition, subjects were notified that they may withdraw from the study at any time. and it is notified that the collected data will be processed anonymously, and only if you voluntarily agree to participate in the investigation.

2.3 Research tools

This study utilized a structured questionnaire to gather information on the general characteristics of physical therapists (age, gender, education, and marriage), job characteristics (clinical experience, salary, and workplace), job satisfaction, and attitude toward professionalization. Job satisfaction was ranked using a 5-point Likert scale, from "very satisfied" (1 point) to "very unsatisfied" (5 points), in which

lower scores indicated higher satisfaction. The attitude toward professionalization was also scored using a 5-point Likert scale, from "very necessary"(1 point) to "very not necessary"(5 points), wherein higher score indicated a more negative attitude toward the professional system.

2.4 Statistical analysis

Data were analyzed using the SPSS WIN 19.0 program: p-values <0.05 indicated statistical significance. First, descriptive statistics were conducted to evaluate general characteristics. Then, one-way analysis of variance, post hoc, and chi-squared analysis were conducted to evaluate job satisfaction and attitude toward professionalization based on the general characteristics. Finally, regression analysis was conducted to determine the effect of job characteristics and attitudes toward professionalization on job satisfaction.

3. Results

3.1 General characteristics of the subjects

The general characteristics of the study subjects are shown in Table 1.

Table 1. General characteristics of the subjects n(%)

Variable		Gender		Total
		M	F	
Age	20-29	19(5.3)	83(23.3)	102(28.7)
	30-39	66(18.5)	50(14.0)	116(32.6)
	40-49	57(16.0)	38(10.7)	95(26.7)
	≥50	26(7.3)	17(4.8)	43(12.1)
Marriage	UM	55(15.4)	99(27.8)	154(43.3)
	Married	113(31.7)	89(25.0)	202(56.7)
Education	College	53(14.9)	116(32.6)	169(47.5)
	Bachelor	75(21.1)	63(17.7)	138(38.8)
	Master	29(8.1)	9(2.5)	38(10.7)
	Doctor	11(3.1)	0(0.0)	11(3.1)
Total		168(47.2)	188(52.8)	356(100.0)

M±SD: Mean±Standard deviation, M: male, F: Female, UM: unmarried.

Of the 356 study participants, 52.8%(n = 188) were women and 47.2%(n = 168) were men. With respect to age, the majority of men held their 30s(18.5%, n = 66), whereas the majority of women were their 20s(23.3%, n = 83). Most of the men(31.7%, n = 113) were married, whereas most of the women were unmarried(27.8%, n = 99). As for the academic background, the majority of men held bachelor's degrees(21.1%, n = 75), whereas the majority of women were college(32.6%, n = 116).

3.2 Degrees of job satisfaction according to the general characteristics

The degree of job satisfaction according to the general characteristics of physical therapists was investigated are shown in Table 2.

Men showed a significantly higher level of job satisfaction than women(2.49 ± 0.92 vs. 2.69 ± 0.82 , respectively, $p < 0.05$). There was a statistically significant difference in job satisfaction according to age ($p < 0.05$); job satisfaction was the lowest in physical therapists in their 20s and highest in those aged ≥ 50 s. Unmarried subjects showed statistically less job satisfaction than married subjects ($p < 0.001$). According to academic background, subjects with a Doctor had statistically higher job satisfaction than those

with college ($p < 0.001$). The job satisfaction of all study subjects was 2.60 ± 0.87 , which is slightly higher than the median.

3.3 Attitude toward professionalization according to general characteristics

Regarding the necessity of increasing the significant portion of both men and women deemed professionalization of physical therapists, a statistically it was "necessary"(46.4%, n = 78 vs 52.1%, n = 98 respectively, $p < 0.05$). Subjects who are in their 20s, 30s, and 40s reported that professionalization was "needed," whereas those aged ≥ 50 years reported it was "very necessary," which was statistically significant ($p < 0.001$). According to marital status, a statistically significant number of both unmarried and married subjects deemed it was "necessary"($p < 0.01$). According to marital status, a statistically significant number of both unmarried and married subjects deemed it was "necessary"($p < 0.01$).

In academic background, professionalization was considered "necessary" for both college and those with bachelor's degrees(46.2%, n = 78; 58.7%, n = 81, respectively). For those with master's degrees, most regarded it as "needed," followed by "very necessary"(39.5%, n = 15; 31.6%, n = 12, respectively), and those with

Table 2. Subjects characteristics and job satisfaction

	Variable	N(%)	M \pm SD	t/F	p	Post-hoc
Gender	Male	168 (47.2)	2.49 \pm 0.92	-2.09	0.04	-
	Female	188 (52.8)	2.69 \pm 0.82			
Age	20-29 ¹	102 (28.7)	2.75 \pm 0.88	2.77	0.04	3,4)1,2,3
	30-39 ²	116 (32.6)	2.61 \pm 0.85			
	40-49 ³	95 (26.7)	2.55 \pm 0.88			
	≥ 50 ⁴	43 (12.1)	2.30 \pm 0.83			
Marriage	UM	154 (43.3)	2.75 \pm 0.85	3.01	0.00	-
	Married	202 (56.7)	2.48 \pm 0.87			
Education	College ¹	169 (47.5)	2.82 \pm 0.84	9.51	0.00	3,4)2,3)1,2
	Bachelor ²	138 (32.8)	2.48 \pm 0.83			
	Master ³	38 (10.7)	2.24 \pm 0.88			
	Doctor ⁴	11 (3.1)	1.91 \pm 0.83			
Total		356 (100.0)	2.60 \pm 0.87			

Doctor considered professionalization “very necessary”(72.7%, n = 8), which was statistically significant (p <0.05).

3.4 Job satisfaction according to work environment

The degree of job satisfaction according to work environment is shown in Table 4.

Those with 1-5 years of clinical experience showed the lowest job satisfaction(2.72 ± 0.91), and those with >20 years of clinical experience reported the highest job satisfaction(2.32 ± 0.83),

but the level of job satisfaction according to years of clinical experience was not statistically significant. Job satisfaction was lowest for those working at the hospital level(2.86 ± 0.85) and highest for those working at university/general hospitals(2.32 ± 0.84, p <0.05). There was a statistically significant difference in job satisfaction according to annual salary(p <0.001); job satisfaction was the lowest in physical therapists in their 25 million won(2.76 ± 0.67) and highest in those over 40 million won(2.18 ± 0.79).

Table 3. Necessity of professionalization according to subjects' characteristics n(%)

Variable		Very necessary	Necessary	Average	Low	Very low	Other	Total	x ²
Gender	Male	49 (29.2)	78 (46.4)	28 (16.7)	10 (6.0)	2 (1.2)	1 (0.6)	168 (100.0)	12.153*
	Female	35 (18.6)	98 (52.1)	49 (26.1)	4 (2.1)	1 (0.5)	1 (0.5)	188 (100.0)	
Age	20-29	13 (12.7)	55 (53.9)	32 (31.4)	2 (2.0)	0 (0.0)	0 (0.0)	102 (100.0)	45.593***
	30-39	21 (18.1)	57 (49.1)	28 (24.1)	6 (5.2)	2 (1.7)	2 (1.7)	116 (100.0)	
	40-49	27 (28.4)	48 (50.5)	15 (15.8)	4 (4.2)	1 (1.1)	0 (0.0)	95 (100.0)	
	≥50	23 (53.5)	16 (37.2)	2 (4.7)	2 (4.7)	0 (0.0)	0 (0.0)	43 (100.0)	
Marriage	UM	21 (13.6)	84 (54.5)	42 (27.3)	4 (2.6)	2 (1.3)	1 (0.6)	154 (100.0)	18.774**
	Married	63 (31.2)	92 (45.5)	35 (17.3)	10 (5.0)	1 (0.5)	1 (0.5)	202 (100.0)	
Education	College	36 (21.3)	78 (46.2)	47 (27.8)	6 (3.6)	1 (0.6)	1 (0.6)	169 (100.0)	28.939*
	Bachelor	28 (20.3)	81 (58.7)	21 (15.2)	5 (3.6)	2 (1.4)	1 (0.7)	138 (100.0)	
	Master	12 (31.6)	15 (39.5)	8 (21.1)	3 (7.9)	0 (0.0)	0 (0.0)	38 (100.0)	
	Doctor	8 (72.7)	2 (18.2)	1 (9.1)	0 (0.0)	0 (0.0)	0 (0.0)	11 (100.0)	
Total		84 (23.6)	176 (49.4)	77 (21.6)	14 (3.9)	3 (0.9)	2 (0.6)	356 (100.0)	

*p<.05, **p<.01, ***p<.001, UM: unmarried

Table 4. Work environment and career

Variable		N(%)	M±SD	t/F	p	Post-hoc
Career (year)	1-5 ¹	107 (30.0)	2.72 ± 0.91	2.43	0.07	3,4>1,2,3
	6-10 ²	87 (24.4)	2.64 ± 0.70			
	11-20 ³	118 (33.1)	2.55 ± 0.95			
	>20 ⁴	44 (12.4)	2.32 ± 0.83			
Type of hospital	University/General Hospital ¹	84 (23.6)	2.32 ± 0.84	3.42	0.01	1,2,5>2,4,5
	Nursing/Rehabilitation hospital ²	113 (31.7)	2.65 ± 0.85			
	Hospital ³	28 (7.9)	2.86 ± 0.85			
	Clinic ⁴	91 (25.6)	2.73 ± 0.83			
	Other ⁵	40 (11.2)	2.55 ± 0.99			
Annual Salary (₩)	<25,000,000 ¹	55 (15.4)	2.76 ± 0.67	6.91	0.00	5>1,2,3,4
	25,000,000-30,000,000 ²	88 (24.7)	2.74 ± 0.88			
	30,000,000-35,000,000 ³	86 (24.2)	2.72 ± 0.90			
	35,000,000-40,000,000 ⁴	40 (11.2)	2.68 ± 0.97			
	≥40,000,000 ⁵	87 (24.4)	2.18 ± 0.79			
Total		356 (100.0)	2.60 ± 0.87			

Table 5. Analysis of the correlation between satisfaction and system necessity (n=356)

	Necessity of the system
Job satisfaction	.137**

**p<0.01

3.5 Correlation analysis of job satisfaction and the necessity of professionalization

There was a positive significant correlation ($r = 0.137$, $p < 0.01$) between job satisfaction and the need for professionalization. Therefore, it was thought that the lower the job satisfaction, the more professionalization was needed are shown in Table 5.

3.6 Attitudes toward professionalization according to work environment

The attitude of physical therapists toward professionalization according to work environment is shown in Table 6.

For those with ≤ 20 years of experience, professionalization was significantly considered

“necessary,” whereas for those with >20 years of experience, it was significantly regarded as “very necessary”(p <0.001). Professionalization was most commonly deemed “necessary” among all types of hospitals. For those earning annual salary <40 million won, professionalization was regarded as “necessary,” whereas it was significantly considered “very necessary” for those earning ≥ 40 million won annually(p <0.01).

3.7 Effects of general characteristics on job satisfaction

To examine the effect of subjects' general characteristics on job satisfaction, job satisfaction was set as the dependent variable, and gender, age, marriage, and education were set as independent variables. Then regression analysis was performed by converting it into a dummy variable are shown in Table 7. The only general characteristic that affected job satisfaction was the educational background ($\beta = -0.248$), for which the model explanatory power was at a low level ($R^2 = 0.075$).

Table 6. Necessity of professionalism system according to work environment

n(%)

Variable		Very necessary	Necessary	Average	Low	Very low	Other	Total	x2
Career (year)	1-5	13 (12.1)	60 (56.1)	30 (28.0)	3 (2.8)	0 (0)	1 (0.9)	107 (100.0)	41.487***
	6-10	16 (18.4)	48 (55.2)	19 (21.8)	3 (3.4)	0 (0)	1 (1.1)	87 (100.0)	
	11-20	33 (28.0)	51 (43.2)	26 (22.0)	5 (4.2)	3 (2.5)	0 (0.0)	118 (100.0)	
	>20	22 (50.0)	17 (38.6)	2 (4.5)	3 (6.8)	0 (0.0)	0 (0.0)	44 (100.0)	
Type of hospital	University/General hospital	16 (19.0)	46 (54.8)	16 (19.0)	3 (3.6)	1 (1.2)	2 (2.4)	84 (100.0)	28.617
	Nursing/Rehabilitation hospital	25 (22.1)	53 (46.9)	31 (27.4)	4 (3.5)	0 (0.0)	0 (0.0)	113 (100.0)	
	Hospital	5 (17.9)	13 (46.4)	9 (32.1)	0 (0.0)	1 (3.6)	0 (0.0)	28 (100.0)	
	Clinic	29 (31.9)	47 (51.6)	12 (13.2)	3 (3.3)	0 (0.0)	0 (0.0)	91 (100.0)	
	Other	9 (22.5)	17 (42.5)	9 (22.5)	4 (10.0)	1 (2.5)	0 (0.0)	40 (100.0)	
Annual Salary (₩)	<25,000,000	5 (9.1)	28 (50.9)	19 (34.5)	3 (5.5)	0 (0.0)	0 (0.0)	55 (100.0)	39.691**
	25,000,000-30,000,000	17 (19.3)	48 (54.5)	19 (21.6)	3 (3.4)	1 (1.1)	0 (0.0)	88 (100.0)	
	30,000,000-35,000,000	16 (18.6)	48 (55.8)	18 (20.9)	2 (2.3)	0 (0.0)	2 (2.3)	86 (100.0)	
	35,000,000-40,000,000	13 (32.5)	21 (52.5)	5 (12.5)	0 (0.0)	1 (2.5)	0 (0.0)	40 (100.0)	
	$\geq 40,000,000$	33 (37.9)	31 (35.6)	16 (18.4)	6 (6.9)	1 (1.1)	0 (0.0)	87 (100.0)	
Total		84 (23.6)	176 (49.4)	77 (21.6)	14 (3.9)	3 (0.8)	2 (0.6)	356 (100.0)	

p <.01, *p <.001

Table 7. Effect of general characteristics on job satisfaction

Independent variable	Gender		Age		Marriage		Highest academic career	
	β	t	β	t	β	t	β	t
Constant	3.372***							
Satisfaction	-.004	-.076	-.076	-.029	-.442	-.087*	-.248	-4.454***
R2 (Adj. R2)	.085(.075)							
F	8.176***							

* $p < 0.05$, *** $p < 0.001$

Table 8. Effect of work environment on job satisfaction

Independent variable	Career		Institution		Salary	
	β	t	β	t	β	t
Constant	2.859***					
Satisfaction	-.023	-.329	.101	1.872	-.207	-3.018*
R2 (Adj. R2)	.062(.054)					
F	7.794***					

* $p < 0.05$, *** $p < 0.001$

3.8 Effects of work environment on job satisfaction

The effect of work environment on job satisfaction shown in Table 8. Neither the clinical experience nor the type of hospital significantly affected job satisfaction. However, the annual salary ($\beta = -0.207$) was found to affect the job satisfaction, and the model explanatory power is at a low level ($R^2 = 0.054$).

4. Discussion

This study, which evaluated physical therapists' job satisfaction and attitudes toward professionalization, found that men physical therapists reported a higher degree of job satisfaction than women physical therapists. Similarly, previous reports by Lim[21] and Park[13] of medical technicians and physical therapists, respectively, showed that men studies higher satisfaction than women. In addition, in this study, it was found that those aged ≥ 50 years, who were married, and with a Doctor had a higher degree of job satisfaction. Reportedly, the most influential factors in reducing work-

family conflict among married working women are regular leaves, statutory holidays, and observance on Saturdays and Sundays as working hours[22]. Physical therapists do not work night shifts, have regular commute hours, and observe legal holidays and Sundays, which are considered factors in the improved job satisfaction of married people. Manual therapy has been changed to unpaid health insurance under the Health Insurance Act of 2006[23]. Thus, it has substantially increased hospital revenue, and accordingly, the expertise of physical therapists is recognized as important. In terms of such professionalism, it seems that the job satisfaction of those with Doctor is high.

In this study, those working in university/general hospitals reported the highest degree of job satisfaction. Likewise, Paek and Hong[24] studied the analysis of job satisfaction, management satisfaction, and organizational commitment of general hospital workers and found that medical technicians showed the highest job satisfaction among occupations. As shown in Lee's[25] study on job satisfaction and self-reliance of physical therapists in the Gyeongnam region, general hospital workers showed the highest level of

satisfaction with their opportunities for professional development, which were more guaranteed than those in other institutions. Therefore, it seems that these factors also contributed to higher satisfaction among the physical therapists in this study working in general hospitals.

As for the annual salary in this study, job satisfaction was lowest for those earning <25 million won and highest for those earning ≥ 40 million won. According to the "Income (remuneration) results for wage-working jobs in 2018" released by the National Statistical Office on January 22, 2020, the average monthly income for regular workers as of 2018 was 3.234 million won[26]. Therefore, occupational satisfaction appears to be high among physical therapists who receive salaries higher than the average salary. In Lee's[27] study on the relationship between professional self-concept and job satisfaction of physical therapists, the higher the age, the higher the career, the higher the salary, the higher the professional self-concept and job satisfaction. Through this, it can be seen that work experience and salary level are important predictors for job satisfaction[28].

In this study, most of the physical therapists were aware of the necessity of professionalization. Experts are qualified individuals who adhere to a set of values and a code of ethics while utilizing knowledge and skills to provide services to client systems[29]. In this study, the lower the job satisfaction, the more professionalization was needed. Those with low job satisfaction were not satisfied with the current physical therapy system and the current physical therapy system could be considered insufficient to improving professionalism. Therefore, it can be said that it is important for a physical therapist to secure an exclusive physical therapist position through professionalization to be recognized as a professional and feel job satisfaction.

In this study, the variables that most influenced physical therapists' job satisfaction

were academic background and annual salary. Similarly, Park[30] found that the work environment, including remuneration, was the most important factor determining hospital work satisfaction. Lim[21] stated that although medical technicians, including physical therapists, had high job performance and attitudes toward the organization, their wages were below average. This relatively low annual salary is thought as a hindrance to job satisfaction.

The effects of social contribution, sense of belonging, and self-esteem in the workplace were not included as variables affecting job satisfaction in this study. Therefore, it is considered that there is a need for a study on the satisfaction of physical therapists with these variables in the future.

5. Conclusion

The purpose of this study was to investigate the effect of clinical physical therapists' attitudes toward work environment and professional institutionalization on job satisfaction.

In conclusion, this study found that the variables most affecting job satisfaction were academic background and annual salary. Therefore, in order to improve the job satisfaction of physical therapists, improving their annual salary should be the first priority. Furthermore, learning for professionalism played an important role in improving job satisfaction. Self-development and job specialization through the introduction of a system for equipping expertise seems to be necessary to improve the job satisfaction of physical therapist.

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