

# The Effects of Accreditation system on the Management, Organization, and Personnel of Physical Therapy Department: Comparison of JCI-accredited hospitals, KOIHA-accredited hospitals, and non-accredited hospitals

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## Abstract

*This study investigates essential areas for future physical therapists and provides necessary materials for presenting an alternative such as education by identifying the influence of healthcare accreditation on the management, organization, personnel of physical therapy center. Questionnaires consist of 20 questions on a 4-point Likert scale collected from 351 physical therapists (175 males and 176 females) who works in JCI-accredited, KOIHA-accredited, and nonaccredited institutions. It showed that healthcare accreditation had a significant influence on items about the management, organization, personnel of physical therapy centers ( $p < .05$ ). A structure that removes this bias in education for physical therapists will help to up with such changes as the future opening of practice.*

*Key Words: Accreditation, Hospital, Physical Therapy Department, Practice management.*

## 1. Introduction

The solutions to resolve the imbalanced medical service is to provide the medical service at the level required by the people (Boissonnault et al., 2010; Park et al., 2016). Therefore, guidelines for the entire medical institution are essential. The medical institution should improve the quality of medical care and develop patients into safe medical institutions through voluntary service improvement activities and facility environment improvement (Kim et al., 2020). In order to present guidelines, medical institutions' analyses, which are various expert groups, must be preceded (Duxbury, 2008; Kim et al., 2020). Guidelines should be presented based on the analyzed content and relevant laws, and medical institutions should implement them by the appropriate regulations and guidelines.

One of the ways to relieve regional inequality in healthcare service is to shift from medical staff-centered thinking to patient-centered thinking. Another is to achieve sustained improvement in the quality of healthcare (Arasteh et al., 2018). There is KOIHA's (Korea Institute for Healthcare Accreditation) accreditation system that reflects these institutionally.

Various studies have shown to present the apparent rationale for healthcare institution employees' jobs and roles and to provide the correct service since the healthcare institution assessment and accreditation were implemented in Korea (Avia and Hariyati, 2019) (Binagwaho et al., 2020). However, studies on physical therapists are inadequate. The purpose of this study was to study the Effects of Accreditation system on the Management, Organization, and Personnel of Physical Therapy Department: Comparison of JCI-accredited hospitals, KOIHA-accredited hospitals, and non-accredited hospitals.

## 2. METHODS

### • Participants

Questionnaires collected from physical therapists that worked in the healthcare institution. They agreed to participate in this study, excluding inadequate responses such as no description, were a total of 351 copies comprising 33 copies from JCI-accredited institutions, 142 copies from KOIHA-accredited institutions, and 176 copies from non-accredited institutions. The ethical committee of Daegu Catholic University has approved this study (CUIRB-2019-0001).

### • Experiment procedure

The questionnaire consisted of 20 questions in total. Questions about general characteristics included the eight items of age, gender, level of education, employment, position, place of work, duty term, and, and practical term. The practical term divided into one year to less than two years, two years to less than four years, four years to less than seven years, seven years to less than ten years, and ten years or longer. As for the composition of 12 questions about operation, Questions 9 – 12 related to effects on business administration, Questions 13 – 16 to effects on organization management, and Questions 21 – 24 to effects on personnel management, respectively. The subjects selected from physical therapists at KOIHA-accredited institutions and non-accredited institutions based on regions of JCI-accredited hospitals that had physical therapists.

### • Statistical Analysis

Collected data analyzed using SPSS ver. 21. The statistical significance level was set to  $\alpha=0.05$ . The subjects' general characteristics analyzed using the descriptive statistics analysis. The percentage and frequency for each question analyzed using the Multiple response analysis. Intergroup differences in questionnaire survey results analyzed using the chi-square test, Fisher's exact test, and goodness of fit test. The items of the questionnaire analyzed using a 4-point Likert scale. The reliability coefficient using the Cronbach's  $\alpha$ , which verifies internal consistency, was found to be 0.968. The internal consistency between items on the questionnaire was secured.

## 3. RESULTS

Table 1 shows the general characteristics of participants. Questions about management comprise Question 9 'Has the number of physical therapy outpatients per day increased?', Question 10 'Is the optimum number of inpatients in medical specialties related to the therapy center maintained?', Question 11 'Has the therapy center come to have its differentiation strategy?', and Question 12 'Is the allocation of technologies and resources required by the therapy center achieved?'.

Non-accredited institutions were more positive than accredited institutions with respect to the increase in the number of physical therapy outpatients and the maintenance of the number of inpatients in relevant specialties. There was no significant difference in other questions. Therefore, it showed that accreditation had no very significant effect on the management environment.

As for questions about organization management, Question 13 "Has any of therapy center staff come to attend formal or informal meetings (after accreditation)?", Question 14 "Has the power of the therapy center director or a therapist to make a decision increased (after accreditation)?", Question 15 "Have the cases of promotion to the manager increased after accreditation?" and Question 16 "Have the motivation and goal-setting of the organization been raised (after accreditation)?" showed smoother organization management

among accredited institutions than non-accredited institutions. It showed that the power to decide Question 14 was higher among JCI-accredited institutions than KOIHA-accredited institutions.

As for questions about personnel management, Question 17 "Have job characteristics analysis and assessment come to be implemented (after accreditation)?", Question 18 "Have the recruitment, selection, and redeployment of manpower become facilitated (after accreditation)?", Question 19 "Have career management, promotion, and education support been implemented (after accreditation)?" and Question 20 "Have suggestions, grievance adjustment, and morale been managed (after accreditation)?" showed that management was overall performed better in KOIHA-accredited institutions than other institutions.

#### 4. Discussion

As for effectiveness on hospital management, accredited institutions showed statistically more significant effectiveness than non-accredited institutions. For example, there were the increase in the number of outpatients and inpatients, the increase in staff's business performance accuracy due to business standardization, the efficient utilization of hospital resources (fund, materials), satisfaction with internal members' healthcare service, staff's morale, availability of related data from information system, and the implementation of necessary education (Colombo et al., 2015). That is, the accredited institutions fulfill their mission and vision based on the therapy service provided by physical therapy center management and knowledge related to the therapy service (Park et al., 2016). There was strategic management as performing different activities or performing similar activities in different ways from competitors (Duxbury, 2008; Gutiérrez Panchana et al., 2018). As such, physical therapy centers also need differentiated strategies under the competitive medical system. It is necessary to cultivate a strategic management mindset among clinical physical therapists and provide them with relevant education and information to improve their status as healthcare professionals (Medina-Mirapeix et al., 2015; Miller and Solomon, 2002).

The organization is a goal-oriented social unit and an intelligent activity system of the division of labor and integration. The objectives of hospital organization are: first, to provide healthcare users (patients) with quality healthcare service as cheap as possible; second, to guarantee healthcare providers (staff) the quality of professional life; third, to guarantee the hospital founder (management) the fulfillment of founding purpose and the safety of invested capital; and fourth, to carry out duties as a member of society, such as the medical development of local society (state), the supply of health professionals, and the improvement of the health system (Nam et al., 2010).

Recently, the Korean Society of Hospital Management surveyed hands-on workers of accreditation preparation and ordinary workers at institutions completing healthcare organization accreditation. As a result of the survey, the society reported positive changes in patient safety, the quality of healthcare service, decision-making system, hospital organization culture, and leadership among the healthcare institutions. In this study, as for organization management, the respondents replied that accredited institutions were more effective than non-accredited institutions. KOIHA-accredited institutions were more advantageous than JCI-accredited institutions, in questions about attendance to meetings, decision-making authority, promotion to manager, and the motivation and goal-setting of organization (Schuette, 2015).

HRM (human resources management) means the system of planned and organized management activities for recruiting, retaining, rewarding, and developing human resources needed by the organization (Korea Society of Health Service Management, 2016). The HRM process organically implements the HRM activities of human resources recruitment, development, reward, and retention management. If the results of job characteristics analysis and human characteristics analysis input, the organization's philosophy and objectives, the results of organization effectiveness, job performance, and job satisfaction output through the processes of recruitment management, development management, and reward management, and retention management (Areeauey and Leethongdee, 2019). In this study, as for personnel management, it was found that accredited institutions were more effective than non-accredited institutions. KOIHA-

accredited institutions were more effective than JCI-accredited institutions in terms of the analysis and evaluation of job characteristics, the recruitment, selection, and redeployment of human resources, career management, promotion, education support, the management of suggestions and grievance adjustment, and the distribution of technologies and resources(Henke et al., 2018; Kim et al., 2020).

Like the above, it showed that accredited institutions were overall more effective than non-accredited institutions, and thus it is deemed that accreditation is helpful to physical therapy operation, organization, and personnel management. Moreover, the comparison between JCI-accredited institutions and KOIHA-accredited institutions showed that KOIHA-accredited institutions were more effective than JCI-accredited institutions (Singh and Rangnekar, 2020). However, they do not imply the defects of the JCI system, but there is a possibility that the variable of the hospital scale had effects. There is no previous study dealing with physical therapists and operation, administration, marketing, quality improvement(Areeauey and Leethongdee, 2019). Further studies are required and are expected to contribute to the development of the Korean physical therapy world and the opening of physical therapy centers of various types.

**Table 1. General characteristic** (Units: people/%)

Item	subitem	JCI (n=33)	KOI HA (n=142 )	Nona ccredited (n=176)	Total( %)
Age	20	11 (4%)	76 (22%)	110 (32%)	197 (57%)
	30	13 (4%)	52 (15%)	52 (15%)	117 (34%)
	40	7 (2%)	12 (4%)	9 (3%)	28 (11%)
	50	2 (1%)	2 (1%)	5 (2%)	9 (3%)
Gend er	Male	23 (7%)	79 (23%)	73 (21%)	175 (50%)
	Female	10 (3%)	63 (18%)	103 (30%)	176 (50%)
level of educ ation	associate degree	1 (1%)	65 (19%)	126 (36%)	192 (55%)
	Universit y garaduate	22 (7%)	59 (17%)	38 (11%)	119 (34%)
	Master's degree	9 (3%)	16 (5%)	5 (2%)	30 (9%)
	Doctor's degree	1 (1%)	2 (1%)	7 (2%)	10 (3%)
empl oyment	Regular	26 (8%)	115 (33%)	124 (36%)	265 (76%)

	Temporary	7 (2%)	27 (8%)	52 (15%)	86 (25%)
Position	Staff	25 (8%)	121 (35%)	119 (34%)	265 (76%)
	Assistant section manager	4 (2%)	11 (4%)	34 (10%)	49 (14%)
	Administrative manager	1 (1%)	5 (2%)	8 (3%)	14 (4%)
	Section chief	3 (1%)	4 (2%)	11 (4%)	18 (5%)
	Director	0 (0%)	1 (1%)	4 (2%)	5 (1%)
Place of work	Gymnastic therapy	20 (6%)	115 (33%)	86 (25%)	221 (63%)
	Thermoelectric therapy	8 (3%)	21 (6%)	69 (20%)	98 (28%)
	Hydrotherapy	3 (1%)	0 (0%)	4 (2%)	7 (2%)
	Etc.	2 (1%)	6 (2%)	17 (5%)	25 (8%)
Duty term	More than 1 year and less than 2 years	7 (2%)	53 (15%)	65 (19%)	125 (36%)
	More than 2 years and less than 4 years	4 (2%)	25 (8%)	48 (14%)	77 (22%)
	More than 4 years and less than 7 years	8 (3%)	21 (6%)	21 (6%)	50 (15%)
	More than 7 years and less than 10 years	2 (1%)	18 (6%)	22 (7%)	42 (12%)
	More than 10 years	12 (4%)	25 (8%)	20 (6%)	57 (17%)
	More than 1 years and	4 (2%)	27 (8%)	25 (8%)	56 (16%)

Practical term	less than 2 years				
	More than 2 years and less than 4 years	4 (2%)	31 (9%)	62 (18%)	97 (28%)
	More than 4 years and less than 7 years	6 (2%)	28 (8%)	36 (11%)	70 (20%)
	More than 7 years and less than 10 years	5 (2%)	20 (6%)	23 (7%)	48 (14%)
	More than 10 years	14 (4%)	36 (11%)	30 (9%)	80 (23%)

**Table 2. Management**

Item		JCI (n=33)	KOIHA (n=142)	Non- accredited (n=176)	$\chi^2(p)$
Q 9	Never	0 (0%)	8 (4.57%)	0 (0%)	20.189 (0.001)*
	Rarely	16 (48.48%)	58 (40.85%)	64 (36.36%)	
	Often	15 (45.45%)	74 (52.11%)	98 (55.68%)	
	Every time	2 (6.06%)	2 (1.41%)	14 (7.95%)	
Q10	Never	2 (6.06%)	4 (2.82%)	0 (0%)	29.952 (0.000)*
	Rarely	13 (30.39%)	24 (16.9%)	50 (28.41%)	
	Often	17 (51.52%)	109 (76.76%)	103 (58.52%)	
	Every time	1 (3.03%)	5 (3.52%)	23 (13.07%)	
Q11	Never	2 (6.06%)	0 (0%)	0 (0%)	37.247 (0.000)*
	Rarely	8 (24.24%)	48 (33.8%)	73 (41.48%)	

	Often	22 (66.67%)	89 (62.68%)	80 (45.45%)	
	Every time	1 (3.03%)	5 (3.52%)	23 (13.07%)	
Q12	Never	1 (3.03%)	0 (0%)	0 (0%)	
	Rarely	6 (18.18%)	26 (18.31%)	25 (14.2%)	32.932
	Often	22 (66.67%)	114 (80.28%)	119 (67.61%)	(0.000)*
	Every time	4 (12.12%)	2 (1.41%)	32 (18.18%)	

\*p<0.05

**Table 3. Organizational management**

Item		JCI (n=33)	KOIIHA (n=142)	Nonaccredited (n=176)	$\chi^2(p)$
Q13	Never	2 (6.06%)	1 (0.7%)	8 (4.55%)	
	Rarely	9 (27.27%)	41 (28.87%)	82 (46.59%)	28.470
	Often	19 (57.58%)	95 (66.9%)	86 (48.86%)	(0.000)*
	Every time	3 (9.09%)	5 (3.52%)	0 (0%)	
Q14	Never	3 (9.09%)	4 (2.82%)	23 (13.07%)	
	Rarely	10 (30.3%)	56 (39.44%)	98 (55.68%)	32.357
	Often	18 (54.55%)	76 (53.52%)	47 (26.7%)	(0.000)*
	Every time	2 (6.06%)	6 (4.23%)	8 (4.55%)	
Q15	Never	14 (42.42%)	33 (23.24%)	104 (59.09%)	42.110
	Rarely	13 (39.39%)	73 (51.41%)	48 (27.27%)	(0.000)*

	Often	6 (18.18%)	35 (24.65%)	24 (13.64%)	
	Everytime	0 (0%)	1 (0.7%)	0 (0%)	
Q16	Never	5 (15.15%)	18 (12.68%)	47 (26.7%)	60.269 (0.000)*
	Rarely	12 (36.36%)	47 (33.10%)	98 (55.68%)	
	Often	16 (48.48%)	76 (53.52%)	25 (14.2%)	
	Everytime	0 (0%)	1 (0.7%)	6 (3.41%)	

\*p<0.05

**Table 4. Personnel management**

Item		JCI (n=33)	KOIHA (n=142)	Nonaccredited (n=176)	$\chi^2(p)$
Q17	Never	1 (3.03%)	1 (0.7%)	17 (9.66%)	47.538 (0.000)*
	Rarely	12 (36.36%)	39 (27.46%)	95 (53.98%)	
	Often	19 (57.58%)	97 (68.31%)	64 (36.36%)	
	Everytime	1 (3.03%)	5 (3.52%)	0 (0%)	
Q18	Never	6 (18.18%)	4 (2.82%)	0 (0%)	51.617 (0.000)*
	Rarely	15 (45.45%)	50 (35.21%)	97 (53.98%)	
	Often	11 (33.33%)	81 (57.04%)	79 (44.89%)	
	Everytime	1 (3.03%)	5 (3.52%)	0 (0%)	
Q19	Never	3 (9.09%)	4 (2.82%)	0 (0%)	50.938 (0.000)*
	Rarely	13 (39.39%)	59 (41.55%)	122 (69.32%)	
	Often	16 (48.48%)	73 (51.41%)	37 (21.02%)	



	Everytime	1 (3.03%)	6 (4.23%)	17 (9.66%)	
Q20	Never	3 (9.09%)	1 (0.7%)	0 (0%)	
	Rarely	6 (18.18%)	38 (26.76%)	104 (59.09%)	66.889
	Often	20 (60.61%)	95 (66.9%)	57 (32.39%)	(0.000)*
	Everytime	4 (12.12%)	8 (5.63%)	15 (8.52%)	

\*p<0.05

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