

Relation between Treatment Period and Patient Experience of Injured Workers

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ABSTRACT

This study aimed to provide baseline data for the preparation of medical services and industrial accident insurance policies provided to injured workers by analyzing the relationship between patient experience and the treatment period provided by medical institutions. This study used integrated data from the 2017 Panel Study of Workers' Compensation Insurance (PSWCI) conducted by the Korea Labor Welfare Corporation and analyzed 1,565 subjects. The results showed that chronic disease ($p < .05$) was a factor affecting patient experience regarding periodic assessment of recovery at medical institutions, while treatment period ($p < .001$), age ($p < .05$), chronic disease ($p < .01$), and medical rehabilitation service ($p < .05$) significantly influenced patient experience regarding the appropriateness of the duration of treatment provided by the medical institution. Therefore, medical institutions and the Korea Labor Welfare Corporation need to prepare various channels to reflect the opinions of injured workers and improve the system when determining the length of treatment.

Keywords: Injured workers, treatment period, patient experience, and the Panel Study of Workers' Compensation Insurance (PSWCI)

1. INTRODUCTION

The Occupational Safety and Health Act (2017) defines an industrial accident as a death, injury, or illness of a person providing labor due to construction, equipment, steam, raw materials, gas, vapor, dust, etc. related to the work. The Industrial Accident Compensation Insurance Act (2022) defines it as an injury, illness, disability, or death of a worker due to work-related causes.

The Industrial Accident Compensation Insurance Act was enacted in 1964 to protect workers who were unable to receive compensation under the Labor Standards Act because the number of workplace accidents increased rapidly with industrialization in the 1960s, and the assets of small business owners were often insufficient to compensate workers who suffered workplace injuries. The Accident Compensation Insurance is a system in which the state collects certain insurance premiums from employers and uses the funds raised from the premiums to pay workers' compensation benefits on behalf of the employer to workers who are injured on the job in lieu of compensation under the Labor Standards Act.

When the Accident Compensation Insurance was enacted in 1964, it was applied to workplaces with 500 or more employees. Since 2000, it has been expanded to workplaces with one or more full-time workers, except for some industries (e.g., agriculture, forestry, and fishery). As of the end of 2020, it covers approximately 2.87 million workplaces and 19.37 million workers, an increase of approximately 44,947 times in the number of workplaces and 236 times in the number of workers since its implementation (64 workplaces and 82,000 workers).

The main value of workers' compensation insurance is more inclusive and comprehensive than other social insurance programs. In particular, it provides medical treatment and benefits for injuries, illnesses, and disabilities during the worker's working life and for the rest of their lives (Yoon, 2016). Therefore, it not only protects workers in the current year but also contributes to a better quality of life for their

families (Yoon, 2016). As of the end of 2021, there were 48,810 worker patients, an approximately 143% increase compared to 2012 (34,016 patients). In terms of treatment period, 25,363 were treated for less than 6 months, while 9,217, 4,846, 2,044, 1,917, 1,784, and 3,639 people were treated for 6 months to 1 year, 1 year to 2 years, 2 to 3 years, 3 to 5 years, 5 to 10 years, and more than 10 years, respectively. The increase in the number of injured workers, who received the benefit from the Industrial Accident Compensation Insurance over time indicates the importance of the role of medical institutions designated as workers' compensation centers and the medical services provided by medical staff.

On the other hand, patient experience surveys are almost identical to patient satisfaction surveys in that they evaluate the quality of services for patients. Led by the OECD, other countries have collected "Patient Reported Experience Measures" (PREMS) data from general households and reported the results to the "Quality of Healthcare" section of OECD Health Data (now OECD Health Statistics) since 2013. The OECD recommends member countries gather information about patients' experiences of care by measuring and monitoring patient experience. It prepares a mechanism for patients to manage their own care, including participating in decision-making while receiving medical care and increasing their understanding of the treatment process, as well as strengthening patients' rights.

South Korea has evaluated the experience of patients, such as general medical services, through the operation evaluation of regional public hospitals annually since 2006 by targeting medical centers across the country and Red Cross hospitals according to the evaluation of medical benefit settlement and appropriateness. and the Act on the Establishment and Management of Local Medical Centers. In 2017, the Korea Health Insurance Review and Assessment Service introduced the "Patient Experience Evaluation", a telephone survey for patients discharged from tertiary general hospitals and general hospitals with more than 500 beds. It released the evaluation results in August 2018 and July 2020. It also prepared a mid- to long-term development plan for the PROMs-PRIMs from April to December 2020 and held the Evaluation Subcommittee to discuss the detailed implementation plan. It will evaluate the patient experience for adults (≥19 years) who were hospitalized for at least one day in a tertiary general hospital or general hospital (within 2 to 56 days after discharge). Patient experience is treated as an essential area to evaluate the performance of the healthcare system.

Although some studies evaluated the reinstatement (Yang et al., 2012; Lee & Lee, 2015) and turnover intention (Clinebell & Clinebell, 2007; Wittmer & Martin, 2011) of injured workers, only a few studies examined the patient experience of injured workers who were treated in a medical institution. The experience in a medical institution is very important for injured workers because they face various circumstances such as returning to work, developing acquired disabilities, and living and economic activities after the end of treatment.

Therefore, this study aimed to provide baseline data for the preparation of medical services and industrial accident insurance policies provided to injured workers by analyzing the relationship between patient experience and the treatment period provided by medical institutions.

2. MATERIALS AND METHODS

2.1. Subjects

This study utilized integrated data from the 2017 Panel Study of Workers' Compensation Insurance (PSWCI) conducted by the Korea Labor Welfare Corporation. The target population of the PSWCI was 89,921 workers who ended medical treatment in 2012 after experiencing a work accident. This study analyzed 1,565 subjects who responded to the patient experience items, after excluding patients with missing values.

2.2. General variables

The general variables utilized in this study are as follows. Gender was reverse-coded as "male=1" or "female=2", age was reverse-coded as "≥60 years=1", "50-59 years=2", "40-49 years=3", "30-39 years=4", or "≤30 years=5", and the highest level of education was reverse-coded as "≥college graduation=1", "high school graduation=2", "middle school graduation=3", or "≤elementary school graduation=4". Marital status was reverse-coded as "single=0", "married=1", "separated, divorced, or widowed=2", economic activity as "not employed=0" or "employed=1", and chronic disease as "no=0" or "yes=1". The work duration was reverse-coded as "≥10 years=1", "≥5 and <10 years=2", "≥3 and <5 years=3", "≥1 and <3 years=4", "≥6 months and <1 year=5", "≥3 months and <6 months=6", "≥1 month and <3 months=7", or "<1 month=8". Disaster types were "disease=1" and "accident=2", and medical rehabilitation services were classified as "not used=1" and "used=2". Disability was coded as "no=1" and "yes=2".

2.3. Patient experience variables

The patient experience variables utilized in this study were as follows: "Did the doctor give you detailed explanations of your injury (injured area, severity, expected duration of treatment, etc.)? ("yes=1" or "no=2")", "Did you receive a periodic assessment of your recovery at the medical institution? ("yes=1" or "no=2")", and "Do you think the duration of treatment was adequate? ("Adequate=1" or "Insufficient=2")".

2.4. Analysis methods

This study conducted percentage analysis (frequency analysis) to understand the sociodemographic characteristics of the study subjects by using SPSS 27.0. Chi-square test was used to analyze the relationship between patient experience regarding detailed explanations from doctors and sociodemographic characteristics, the relationship between patient experience regarding periodic assessment of recovery at the medical institution and sociodemographic characteristics, and the relationship between patient experience regarding the appropriateness of the duration of treatment provided by medical institutions and sociodemographic characteristics. This study also conducted a logistic analysis to analyze the factors affecting each patient's experience. All significant difference were determined at $p=0.05$, with a 95% confidence interval.

3. RESULTS

3.1. Sociodemographic characteristics of study subjects

The results showed that there were more males (82.2%) than females (17.8%). In terms of age, ≥ 60 years was 34.4%, and 50-59 years was 32.0%. In terms of the highest level of education, high school graduation was 44.0% and $\leq$ elementary school graduation was 21.7%. The most common marital status was married (71.8%), the most common economic activity was employed (81.1%), and 61.9% did not have a chronic disease. In terms of work duration, 18.1% were " ≥ 3 and < 5 years", 14.4% were " ≥ 1 month and < 3 months", and 13.5% were " ≥ 10 years". Accident (92.7%) was the most common disaster type, while medical rehabilitation service was not used (61.3%) and the majority had a disability (82.2%) [Table 1].

Table 1. Sociodemographic characteristics of study subjects

Classification		People	%
Gender	Male	1,287	82.2
	Female	278	17.8
Age	≥ 60	539	34.4
	50-59	501	32.0
	40-49	333	21.3
	≤ 30	192	12.3
Highest Level of Education	$\geq$ College graduation	241	15.4
	High school graduation	688	44.0
	Middle school graduation	297	19.0
	$\leq$ Elementary school graduation	339	21.7
Marital Status	Single	193	12.3
	Married	1,123	71.8
	Separated, divorced, or widowed	249	15.9
Economic Activity	Not employed	296	18.9
	Employed	1,269	81.1
Chronic Disease	No	968	61.9
	Yes	597	38.1
Work duration	≥ 10 years	211	13.5
	≥ 5 and < 10 years	41	2.6
	≥ 3 and < 5 years	284	18.1
	≥ 1 and < 3 years	171	10.9
	≥ 6 months and < 1 years	83	5.3
	≥ 3 and < 6 months	38	2.4

	≥1 and <3 months	225	14.4
	<1 month	512	32.7
Disaster Type	Disease	115	7.3
	Accident	1,450	92.7
Medical Rehabilitation Service	Not used	960	61.3
	Used	605	38.7
Disability	No	279	17.8
	Yes	1,286	82.2
Total		1,565	100.0

3.2. Relationship between patient experience and sociodemographic characteristics

3.2.1. Patient experience regarding detailed explanations from doctors

When analyzing the relationship between patient experience regarding detailed explanations from doctors and sociodemographic characteristics, it was experienced when the treatment period was 3 months < and ≤6 months (42.5%), gender was male (82.2%), age was >60 years (31.8%), the highest level of education was high school graduation (44.1%), marital status was married (71.4%), economic activity was employed (61.9%), there was no chronic disease (61.9%), work duration was ≥3 and <5 years (18.6%), disaster type was an accident (92.5%), medical rehabilitation service was not used (61.2%), and there was disability (82.4%). All variables did not show significant differences [Table 2].

Table 2. Patient experience regarding detailed explanations from doctors

Classification		Yes		No		χ ² (p)
		N	%	N	%	
Treatment Period	≤3 months	239	16.1	15	17.9	4.176(.383)
	3 months < and ≤6 months	629	42.5	27	32.1	
	6 months < and ≤9 months	345	23.3	26	31.0	
	9 months < and ≤1 year	119	8.0	7	8.3	
	>1 year	149	10.1	9	10.7	
Gender	Male	1,217	82.2	70	83.3	.073(.787)
	Female	264	17.8	14	16.7	
Age	≥60	514	34.7	25	29.8	1.029(.794)
	50-59	471	31.8	30	35.7	
	40-49	314	21.2	19	22.6	
	≤30	182	12.3	10	11.9	
Highest Level of Education	≥ College graduation	229	15.5	12	14.3	.441(.932)
	High school graduation	653	44.1	35	41.7	
	Middle school graduation	280	18.9	17	20.2	
	≤ Elementary school graduation	319	21.5	20	23.8	
Marital Status	Single	185	12.5	8	9.5	2.037(.361)
	Married	1,057	71.4	66	78.6	
	Separated, divorced, or widowed	239	16.1	10	11.9	
Economic Activity	Not employed	276	18.6	20	23.8	1.387(.239)
	Employed	1,205	81.4	64	76.2	
Chronic Disease	No	917	61.9	51	60.7	.049(.825)
	Yes	564	38.1	33	39.3	
Work duration	≥10 years	197	13.3	14	16.7	8.784(.269)
	≥5 and <10 years	37	2.5	4	4.8	

	≥3 and <5 years	275	18.6	9	10.7	
	≥1 and <3 years	164	11.1	7	8.3	
	≥6 months and <1 years	79	5.3	9	4.8	
	≥3 and <6 months	38	2.6	0	0.0	
	≥1 and <3 months	211	14.2	14	16.7	
	<1 month	480	32.4	32	38.1	
Disaster Type	Disease	11	7.5	4	4.8	.872(.350)
	Accident	1,370	92.5	80	95.2	
Medical Rehabilitation Service	Not used	907	61.2	53	63.1	.115(.734)
	Used	574	38.8	31	36.9	
Disability	No	261	17.6	18	21.4	.786(.375)
	Yes	1,220	82.4	66	78.6	
Total		1,481	100.0	84	100.0	

3.2.2 Patient experience regarding periodic assessment of recovery at medical institutions

When analyzing the relationship between patient experience regarding periodic assessment of recovery at medical institutions and sociodemographic characteristics, it was experienced when the treatment period was 3 months< and ≤ 6 months (42.5%), gender was male (82.2%), age was >60 years (34.3%), the highest level of education was high school graduation (44.4%), marital status was married (71.6%), economic activity was employed (61.9%), chronic disease (63.1%), work duration was ≥3 and <5 years (18.7%), disaster type was an accident (93.1%), medical rehabilitation service was not used (61.4%), and there was disability (82.5%). It was found that chronic disease ($p=.006$) was significantly affected by patient experience regarding periodic assessment of recovery at medical institutions [Table 3].

Table 3. Patient experience regarding periodic assessment of recovery at medical institutions

Classification		Yes		No		$\chi^2(p)$
		N	%	N	%	
Treatment Period	≤3 months	217	15.9	37	18.7	1.750(.782)
	3 months < and ≤6 months	579	42.4	77	38.9	
	6 months < and ≤9 months	322	23.6	49	24.7	
	9 months < and ≤1 year	109	8.0	17	8.6	
	>1 year	140	10.2	18	9.1	
Gender	Male	1,123	82.2	164	82.8	.054(.816)
	Female	244	17.8	34	17.2	
Age	≥60	469	34.3	70	35.4	1.047(.790)
	50-59	435	31.8	66	33.3	
	40-49	291	21.3	42	21.2	
	≤30	172	12.6	20	10.1	
Highest Level of Education	≥ College graduation	215	15.7	26	13.1	3.972(.265)
	High school graduation	607	44.4	81	40.9	
	Middle school graduation	259	18.9	38	19.2	
	≤ Elementary school graduation	286	20.9	53	26.8	
Marital Status	Single	166	12.1	27	13.6	1.079(.583)
	Married	979	71.6	144	72.7	
	Separated, divorced, or widowed	222	16.2	27	13.6	

Economic Activity	Not employed	254	18.6	42	21.2	.781(.377)
	Employed	1,113	81.4	156	78.8	
Chronic Disease	No	504	36.9	105	53.0	7.478(.006)
	Yes	863	63.1	93	47.0	
Work duration	≥10 years	184	13.5	27	13.6	9.307(.231)
	≥5 and <10 years	36	2.6	5	2.5	
	≥3 and <5 years	256	18.7	28	14.1	
	≥1 and <3 years	151	11.0	20	10.1	
	≥6 months and <1 years	70	5.1	13	6.6	
	≥3 and <6 months	37	2.7	1	.5	
	≥1 and <3 months	188	13.8	37	18.7	
	<1 month	445	32.6	67	33.8	
Disaster Type	Disease	95	6.9	20	10.1	2.523(.112)
	Accident	1,272	93.1	178	89.9	
Medical Rehabilitation Service	Not used	840	61.4	120	60.6	.052(.820)
	Used	527	38.6	78	39.4	
Disability	No	239	17.5	40	20.2	.872(.350)
	Yes	1,128	82.5	158	79.8	
Total		1,367	100.0	198	100.0	

3.2.3 Patient experience regarding the appropriateness of the duration of treatment provided by medical institutions

When analyzing the relationship between patient experience regarding the appropriateness of the duration of treatment provided by medical institutions and sociodemographic characteristics, it was experienced when the treatment period was 3 months< and ≤ 6 months (45.4%), gender was male (81.0%), age was >60 years (33.3%), the highest level of education was high school graduation (46.2%), marital status was married (71.6%), economic activity was employed (83.8%), there was no chronic disease (66.7%), work duration was ≥3 and <5 years (20.7%), disaster type was an accident (92.5%), medical rehabilitation service was not used (66.9%), and there was disability (79.5%). Treatment period ($p=.000$), age ($p=.002$), the highest level of education ($p=.007$), economic activity ($p=.003$), chronic disease ($p=.000$), work duration ($p=.001$), medical rehabilitation services ($p=.000$), and disability ($p=.002$) were significantly affected by patient experience regarding the appropriateness of the duration of treatment provided by medical institutions [Table 4].

Table 4. Patient experience regarding the appropriateness of the duration of treatment provided by medical institutions

Classification		Yes		No		$\chi^2(p)$
		N	%	N	%	
Treatment Period	≤3 months	168	19.5	86	12.3	50.439(.000)
	3 months < and ≤6 months	392	45.4	264	37.6	
	6 months < and ≤9 months	192	22.2	179	25.5	
	9 months < and ≤1 year	45	5.2	81	11.5	
	>1 year	66	7.6	92	13.1	
Gender	Male	699	81.0	588	83.8	2.025(.155)
	Female	164	19.0	114	16.2	
Age	≥60	287	33.3	252	35.9	15.172(.002)
	50-59	254	29.4	247	35.2	
	40-49	196	22.7	137	19.5	
	≤30	126	14.6	66	9.4	

Highest Level of Education	$\geq$ College graduation	145	16.8	96	13.7	12.040(.007)
	High school graduation	399	46.2	289	41.2	
	Middle school graduation	155	18.0	142	20.2	
	$\leq$ Elementary school graduation	164	19.0	175	24.9	
Marital Status	Single	116	13.4	77	11.0	3.046(.218)
	Married	618	71.6	505	71.9	
	Separated, divorced, or widowed	129	14.9	120	17.1	
Economic Activity	Not employed	140	16.2	156	22.2	9.086(.003)
	Employed	723	83.8	546	77.8	
Chronic Disease	No	576	66.7	392	55.8	19.505(.000)
	Yes	287	33.3	310	44.2	
Work duration	$\geq$ 10 years	121	14.0	90	12.8	25.313(.001)
	$\geq$ 5 and <10 years	20	2.3	21	3.0	
	$\geq$ 3 and <5 years	179	20.7	105	15.0	
	$\geq$ 1 and <3 years	102	11.8	69	9.8	
	$\geq$ 6 months and <1 years	49	5.7	34	4.8	
	$\geq$ 3 and <6 months	28	3.2	10	1.4	
	$\geq$ 1 and <3 months	110	12.7	115	16.4	
	<1 month	254	29.4	258	36.8	
Disaster Type	Disease	65	7.5	50	7.1	.095(.758)
	Accident	798	92.5	652	92.9	
Medical Rehabilitation Service	Not used	577	66.9	383	54.6	24.703(.000)
	Used	286	33.1	319	45.4	
Disability	No	117	20.5	102	14.5	9.450(.002)
	Yes	686	79.5	600	85.5	
Total		863	100.0	702	100.0	

3.3 Factors influencing patient experience

It was found that no chronic disease influenced patient experience regarding periodic assessment of recovery at medical institutions significantly more than the presence of a chronic disease (OR=.673 [95% CI=.483-.940]).

In terms of treatment period, 3 months< and $\leq$ 6 months (OR=1.497[95% CI=1.017-2.205]), 6 months< and $\leq$ 9 months (OR=2.860[95% CI=1.735-4.713]), and >1 year (OR=2.015[95% CI=1.251-3.244]) influenced patient experience regarding the appropriateness of the duration of treatment provided by medical institutions significantly more than $\leq$ 3 months. Moreover, in terms of age, $\leq$ 30 years influenced patient experience significantly more than $\geq$ 60 years (OR=1.466[95% CI=1.106-1.914]) [Table 5]. In addition, in terms of chronic disease, no chronic disease affected patient experience significantly more than the presence of a chronic disease (OR=.680[95% CI=.540-.857]) [Table 5]. Furthermore, in terms of medical rehabilitation services, using them influenced patient experience significantly more than not using them (OR=1.316[95% CI=1.033-1.676]) [Table 5].

Table 5. Factors influencing patient experience

Classification		A		B		C	
		OR	95%CI	OR	95%CI	OR	95%CI
Treatment Period	$\leq$ 3 months	1		1		1	
	3 months < and $\leq$ 6	.791	.380-1.650	.792	.488-1.287	1.149	.813-1.624

	months						
	6 months < and ≤9 months	1.494	.680-3.285	.892	.517-1.540	1.497*	1.017-2.205
	9 months < and ≤1 year	1.108	.390-3.142	.876	.435-1.762	2.860***	1.735-4.713
	>1 year	1.115	.409-3.036	.668	.331-1.35.	2.015**	1.251-3.244
Gender	Male	1		1		1	
	Female	1	.529-1.890	.942	.613-1.446	.827	.617-1.108
Age	≥60	1		1		1	
	50-59	2.350	.862-6.403	1.021	.505-2.062	.957	.599-1.526
	40-49	2.047	.952-4.403	1.379	.823-2.311	1.205	.849-1.712
	≤30	1.794	.967-3.330	1.316	.875-1.978	1.466**	1.106-1.914
Highest Level of Education	≥ College graduation	1		1		1	
	High school graduation	1.659	.678-4.061	1.542	.843-2.819	1.277	.845-1.928
	Middle school graduation	1.438	.607-3.406	1.190	.657-2.155	1.133	.762-1.686
	≤ Elementary school graduation	1.104	.543-2.247	1.059	.647-1.731	.935	.677-1.291
Marital Status	Single	1		1		1	
	Married	.895	.310-2.584	1.702	.887-3.268	.948	.604-1.486
	Separated, divorced, or widowed	1.594	.786-3.233	1.351	.855-2.134	.979	.728-1.316
Economic Activity	Not employed	1		1		1	
	Employed	.664	.369-1.194	.915	.608-1.377	.901	.676-1.200
Chronic Disease	No	1		1		1	
	Yes	.948	.576-1.562	.673*	.483-.940	.680**	.540-.857
Work duration	≥10 years	1		1		1	
	≥5 and <10 years	.917	.460-1.830	1.119	.670-1.571	1.281	.902-1.819
	≥3 and <5 years	.873	.393-1.935	1.467	.838-2.568	1.425	.995-2.217
	≥1 and <3 years	.000		.214	.028-1.637	.525	.237-1.163
	≥6 months and <1 years	.707	.221-2.263	1.425	.684-2.971	.996	.583-1.702
	≥3 and <6 months	.575	.221-1.494	1.002	.530-1.895	.996	.648-1.533
	≥1 and <3 months	.453	.188-1.091	.824	.463-1.468	.861	.588-1.261
	<1 month	1.746	.529-	1.009	.358-	1.816	.912-

			5.768		2.841		3.615
Disaster Type	Disease	1		1		1	
	Accident	1.817	.622- 5.305	.625	.362- 1.078	1.135	.750- 1.717
Medical Rehabilitation Service	Not used	1		1		1	
	Used	.898	.526- 1.534	1.089	.760- 1.561	1.316*	1.033- 1.676
Disability	No	1		1		1	
	Yes	1.386	.703- 2.733	1.177	.738- 1.877	1.011	.728- 1.405
-2Log L(p)		628.934(.419)		1158.878(.143)		2044.030(.000)	

Note 1) A: Patient experience regarding detailed explanations from doctors, **B:** Patient experience regarding periodic assessment of recovery at medical institutions, **C:** Patient experience regarding the appropriateness of the duration of treatment provided by medical institutions

Note 2) *: p <.05, ******: p <.01, *******: p <.001

4. CONCLUSIONS

This study aimed to analyze the relationship between patient experience and the treatment period provided by medical institutions for injured workers. The main results are as follows.

First, when analyzing the relationship between patient experience and sociodemographic characteristics, there was no factor significantly influencing patient experience regarding detailed explanations from doctors. However, it was experienced when the treatment period was >3 and ≤6 months, it was male, age was ≥60 years, the highest level of education was high school graduation, subjects were married and employed, their work duration was ≥1 and <3 years, and disaster type was an accident. Patient experience with periodic assessment of recovery at medical institutions was significantly related to patient experience with the presence of a chronic disease (p=.006). Patient experience regarding the appropriateness of the duration of treatment provided by medical institutions was significantly related to patient experience when the treatment period was 3< and ≤6 months, gender was male, age was >60 years, the highest level of education was high school graduation, marital status was married, economic activity was employed, there was no chronic disease, work duration was ≥3 and <5 years, disaster type was an accident, medical rehabilitation service was not used, and there was disability. These results agreed with previous studies, which showed that medical professionalism and patient education and counseling were associated with the satisfaction of injured workers (Lee, 2010; Wee et al., 2020).

Second, no chronic disease affected patient experience regarding periodic assessment of recovery at medical institutions significantly more than the presence of a chronic disease (p<.05). In terms of appropriate treatment period, 3 months< and ≤6 months, 6 months< and ≤9 months, and >1 year influenced patient experience regarding the appropriateness of the duration of treatment provided by medical institutions 1.497 (p<.05), 2.860 (p<.01), and 2.015 (p<.001) times significantly more, respectively, than ≤3 months. Moreover, in terms of age, ≤30 years influenced patient experience 1.466 times more than ≥60 years. In addition, in terms of chronic disease, no chronic disease affected patient experience significantly more than the presence of a chronic disease (p<.01). Furthermore, in terms of medical rehabilitation services, using them influenced patient experience 1.316 times (p<.05) more than not using them. These results were similar to the results of previous studies that reported that the treatment period was related to the presence of disability (Ko, 2010). and the length of care (Kim & Kim, 2015). It can be inferred that the results of this study reflect the patient's experience of being respected in the treatment process, having their thoughts and opinions valued equally with the opinions of the medical personnel (Elwin et al., 2007), the failure to focus on treatment while receiving treatment at medical institutions, fear of returning to work, psychological anxiety such as disability, and economic difficulties.

Therefore, medical institutions need to improve the system and draw agreement so that the opinions of injured workers, who are relatively vulnerable compared to other patients, can be reflected in the treatment process along with the medical judgment of medical personnel. In addition, medical institutions should diversify their programs so that psychological rehabilitation services can be provided for the recovery of patients' psychological anxiety during the treatment process.

This study had several limitations. First, since only a few studies evaluated the patient experience of

injured workers, it was difficult to discuss the results of this study. Second, this study could not reflect various variables that could affect patient experience other than treatment period. Third, although the PSWCI represented injured South Korean workers, it should not be interpreted as representative of the views of all injured workers.

Nevertheless, the results of this study are meaningful because it provided the basis for studies on patient experience with detailed explanations from doctors, patient experience with periodic assessment of recovery at medical institutions, and patient experience with the appropriateness of the duration of treatment provided by medical institutions.

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