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## Effect of SNS Sports Community participants' Perception of Sports Value on Perception of Fun and Sports Activities

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## Abstract

This study shows that, in a situation where the influence of the mobile Internet is increasing in all areas of modern society, SNS users' participation in sports has a significant impact on the development of the sports market and the public's exercise methods and sports awareness. Therefore, the purpose of this study is to determine the impact of awareness of sports values through SNS on participation in sports activities. In order to achieve this research purpose, the population of the study was adults who had experience participating in SNS sports communities. The sampling method used was convenience sampling, and a total of 300 people, 150 men and 150 women, were selected as research subjects through sharing the questionnaire link online and via email. The survey tool used was a questionnaire, and it was modified and supplemented for this study based on a questionnaire that had secured reliability and validity in previous studies. The statistical analysis used for data analysis using SPSS Windows 20.0 Version. The conclusions obtained in this study through data analysis according to these methods and procedures are as follows. First, SNS sports community participants' perception of sports value was found to partially affect their perception of fun. Second, SNS sports community participants' perception of sports value was found to partially affect sports activities. Third, SNS sports community participants' perception of the fun of sports partially influenced sports activities.

Keywords: SNS Sports Community, Perception of Sports Value, Perception of Fun, Sports Activities

## **1. INTRODUCTION**

As the 4th industrial revolution continues to progress, production and services are becoming increasingly intelligent, and life is becoming more informationized and intelligent due to the promotion of IoT technology, big data, cloud computing, and artificial intelligence. As a result, humanity has entered the era of big data and the sharing economy. The continuous development of various Social Network Service (SNS) software industries is having a significant impact on people's learning and lifestyle. As dependence on smart devices

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increases, it is becoming difficult to live without smartphone support in all aspects of life [1, 2]. Due to the rapid development of smart mobile devices and improvements in Internet connectivity and mobility over the past decade, The ways and forms of participation in Internet activities have changed [3]. Now, it is possible to quickly obtain information and enjoy content through new, simple SNS without having to spend a lot of time watching videos [4]. The continued diversification of sports-related content on SNS provides people with more opportunities to interact with friends and family, and has made more people aware of the value of sports. Providing sports activities and information on SNS not only provides users with a mentally and physically enjoyable experience, but also spreads positive sports values, promotes users' pursuit of value in life, and greatly increases users' participation in sports activities and awareness of their needs. promote and provide a good spiritual foundation for economic and social development. In particular, it plays a major role in delivering sports expertise, strengthening interest and passion for sports, activating and normalizing sports participation, spreading sports culture, and strengthening the physical health and personality development of members of society. For the development of SNS sports, it is very important to understand user participation motivations, which can provide high-quality video and interactive services suitable for participants. The operation method of SNS continues to be simplified, the content and scope continue to expand, and with the continuous improvement of mobile terminal services, it has recently become one of the representative methods of online entertainment [5, 6]. Users can have a lot of fun while using SNS, and the enjoyment of the participation experience provides a higher level of pleasure [7]. Such fun and pleasure stimulates users' actual desire to participate, and sports activities provide participants with enjoyment, health, and beauty, making them aware of its value. This positive influence causes participants to actively participate in exercise activities, forming a cycle of positive exercise effects. Additionally, we found that the fun immersive experience of the online virtual environment and the positive influence of the virtual coach helped increase exercise participation [8]. Value perception is a term that describes the overall impression of an experience and can be described as influencing all the factors that people like or dislike. This affects not only how much people will pay for it, but also what they get from it. As is known, sports media is an important link between the public and sports. SNS, a member of the media, plays a similar role, stimulating sports passion through active and effective delivery of information, promoting correct awareness of the value of sports, and providing various forms to influence people's ideas about exercise [9]. As is known, sports media is an important link between the public and sports. SNS, a member of the media, plays a similar role, stimulating sports passion through active and effective delivery of information, promoting correct awareness of the value of sports, and providing various forms to influence people's ideas about exercise [10]. In a situation where the impact of the mobile Internet on each stage of life, society, and work in modern society is increasingly and constantly connected, SNS users' participation in sports has a significant impact on the development of the sports market and the public's exercise methods and sports awareness. Therefore, the purpose of this study is to determine the impact of sports value awareness through SNS on participation in sports activities.

## 2. ANALYSIS METHOD AND SURVEY TOOL

#### 2.1 Study Subjects

The study subjects were selected as a population of adults aged 20 or older who participate in SNS sports community activities in China, and a total of 300 people, 150 male and 150 female, were sampled as research subjects through convenience sampling by sharing the questionnaire link online and sending emails. The details of the study subjects are shown in <Table 1>.

Vá	ariable	Ν	%
Gender	Male	150	50
	Female	150	50
Age	20's	110	36.7
	30's	100	33.3
	40+	90	30
Household income (won)	200↓ 200↑-300↓ 300↑	90 120 90	30 40 30

Table 1	1. Study	<b>Subjects</b>
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## 2.2 Research Tool

The survey tool used was a questionnaire, and it was modified and supplemented for this study based on a questionnaire that had secured reliability and validity in previous studies.

SNS sports value recognition refers to the concept and attitude that an individual has toward sports activities, and refers to the recognition and evaluation of the importance, meaning, purpose, effect, and influence of sports activities [11]. It was composed of three factors: physical value, social value, and educational value. Sports fun refers to a positive emotional response to sports experience, joy in sports, and fun felt in the process of achieving goals [12]. It is composed of three factors: promoting physical and psychological health, cultivating social skills, and a sense of accomplishment. Sports activity refers to the nature of participation in relation to the form of sports activity and the internal and external behavior of humans [13]. consists of three factors: cognitive activity, affective activity, and behavioral activity. The detailed composition of the questions on the test paper is shown in <Table 2>.

Factor	Household income Social value	Number of questions
	Gender	1
Demographic characteristics	Age	1
	Household income	1
	Social value	7
Sports value perception	Physical value	7
	Educational value	5
	Cultivating social skills	4
Fun perception	Achievement	4
	Physical/ psychological health	4
	Behavioral	4
Sports activities	Cognitive	4
	Definitional	4

#### **Table 2. Questionnaire Composition Indicator**

## **3. VALIDITY AND RELIABILITY OF THIS STUDY**

**3.1 Exploratory Factor Analysis** 

Table 3. Ex	Table 3. Exploratory factor analysis of sports value perception				
Question		Factor 1	Factor 2	Factor 3	
	Q05	0.811	0.309	0.315	
	Q01	0.798	0.235	0.285	
	Q07	0.777	0.288	0.287	
Social value	Q03	0.770	0.348	0.264	
	Q04	0.766	0.146	0.239	
	Q02	0.758	0.282	0.293	
	Q06	0.715	0.355	0.222	
	Q09	0.256	0.788	0.281	
	Q11	0.203	0.781	0.240	
	Q10	0.213	0.757	0.100	
Physical value	Q14	0.237	0.731	0.317	
	Q08	0.288	0.726	0.259	
	Q12	0.299	0.725	0.210	
	Q13	0.150	0.691	0.275	
	Q16	0.170	0.294	0.795	
	Q15	0.251	0.352	0.782	
Educational value	Q19	0.279	0.297	0.780	
	Q17	0.249	0.254	0.757	
	Q18	0.157	0.217	0.707	
Characteristic value	)	5.677	5.364	4.405	
Dispersion %		29.877	28.234	23.185	
Accumulation %		29.877	58.111	81.297	

The results of the exploratory factor analysis on sports values are shown in <Table 3>.

Looking at this specifically, there are seven questions, 5, 1, 7, 3, 4, 2, and 6, that show high factor loadings (over 0.715) on factor 1, all of which are related to social values. The seven questions showing high loadings (over 0.691) on factor 2 are 9, 11, 10, 14, 8, 12, and 13, all of which are related to physical value. The five questions showing high loadings (over 0.707) on factor 3 are 16, 15, 19, 17, and 18, all of which are related to educational value. And the cumulative ratio explaining the three factors of social value, physical value, and educational value in sports value perception was 81.297%.

The results of exploratory factor analysis on perception of fun are shown in <Table 4>.

Question		Factor 1	Factor 2	Factor 3
	Q03	0.830	0.305	0.251
	Q02	0.789	0.383	0.293
Cultivating social skills	Q04	0.776	0.398	0.250
	Q01	0.740	0.203	0.527
	Q07	0.390	0.776	0.313
Achievement	Q08	0.380	0.753	0.368
Physical/	Q11	0.358	0.299	0.833
psychological health	012	0.287	0.509	0.718

### Table 4. Exploratory factor analysis on perception of fun

Characteristic value	2.967	1.956	1.932
Dispersion %	37.088	24.454	24.146
Accumulation %	37.088	61.542	85.688

Looking at this specifically, the four questions (3, 2, 4, and 1) showing high factor loadings (over 0.740) on factor 1 are questions related to cultivating social skills. The two questions showing high loadings (over 0.753) on factor 2 are questions 7 and 8, both of which are related to a sense of accomplishment. Items 5 and 6 were removed because their factor loadings were low. The two questions showing high loadings (over 0.718) on factor 3 are questions 11 and 12, which are all related to promoting physical and psychological health. Items 9 and 10 were removed because their factor loadings were low. And the cumulative ratio explaining the three factors of fun perception cultivating social skills, achievement, and promoting physical and psychological health was found to be 85.688%.

The results of exploratory factor analysis on sports activities are shown in <Table 5>.

Question		Factor 1	Factor 2	Factor 3
	Q04	0.846	0.196	0.100
Behavioral	Q02	0.833	0.249	0.185
Denavioral	Q03	0.812	0.321	0.210
	Q01	0.780	0.233	0.311
Cognitive	Q05	0.219	0.853	0.223
	Q06	0.177	0.807	0.126
	Q08	0.135	0.789	0.258
	Q07	0.288	0.770	0.165
	Q09	0.107	0.226	0.828
Definitional	Q11	0.184	0.204	0.707
Characteristic	value	3.303	3.238	1.752
Dispersion	%	33.030	32.378	17.519
Accumulatio	n %	33.030	65.408	82.927

## Table 5. Exploratory factor analysis and of loyalty

Looking at this specifically, the four questions showing high factor loadings (over 0.780) on factor 1 are questions 4, 2, 3, and 1, which are questions related to behavioral activities. The four questions showing high loadings (over 0.770) on factor 2 are 5, 6, 8, and 7, all of which are related to cognitive activities. The two questions showing high loadings (over 0.707) on factor 3 are questions 9 and 11, both of which are related to affective activities. Items 10 and 12 were removed because their factor loadings were low.

And the cumulative ratio explaining the three factors of cognitive activity, affective activity, and value recognition of behavioral activity in sports activities was found to be 82.927%.

#### 3.2 Reliability Analysis of This Study

The results of the questionnaire reliability analysis in this study are shown in <Table 6>.

Factor	Sub-factor	Cronbach's $\alpha$
	Social value	0.96
Sports value perception	Physical value	0.95
	Educational value	0.95
	Cultivating social skills	0.93
Fun perception	Achievement	0.84
	Physical/ psychological health	0.87
	Behavioral	0.93
Sports activities	Cognitive	0.93
-	Definitional	0.82

Table 6. Reliability analysis

The Cronbach's  $\alpha$  value for sports value recognition was .95 to .96, and the Cronbach's  $\alpha$  value for fun perception was .84 to .93. In addition, the Cronbach's  $\alpha$  value of sports activities was found to be .92 to .93. In this study, the Cronbach's  $\alpha$  value, the reliability coefficient for all factors, was found to be at a high level, making it a reliable item.

## 4. STATISTICAL ANALYSIS

For the collected data, double-entered and un-entered data were excluded from the analysis, and only valid samples were coded according to coding guidelines. After individually entering the information into the computer, frequency analysis, exploratory factor analysis, reliability analysis, and multiple regression analysis were performed using the statistical program SPSS Windows 20.0 Version. The statistical significance level was set at p<0.05.

## **5. RESULTS**

#### 5.1. Effect of SNS sports community participants' perception of sports value on perception of fun

The results of a multiple regression analysis to determine the impact of sports value perception on enjoyment perception are shown in <Table 7>.

		peroc	puon			
Variable	Cultivating	g social skills	Achie	evement		sychological alth
	β	t	β	t	β	t
Constant		3.974		3.575		2.966
Social value	0.417	6.324***	0.415	5.812***	0.226	3.075**
Physical value	0.204	2.952**	0.184	2.465*	0.400	5.206***
Educational value	0.211	3.120**	0.171	2.420*	0.121	1.656
R <sup>2</sup>	0	.586	0.	514	0.4	186

## Table 7. Multiple regression analysis of the impact of sports value perception on fun perception

F	139.705***	104.522***	93.421***
		*p<0.05	

Looking at this specifically, the final regression equation showed that sports value perception had a statistically significant effect at the 0.1% level on the perception of fun, cultivating social skills, sense of accomplishment, and promoting physical and psychological health.

The social value of sports value recognition was found to have a significant effect at the 0.1% level, and the physical value and educational value were found to have a significant effect at the 1% level on cultivating the sociality of fun perception. At the % level, social value was found to have a significant impact at the 0.1% level. In addition, social value was found to have a significant effect on the perception of fun and promotion of physical and psychological health at the 1% level, and physical value was found to have a significant effect at the 0.1% level. Looking at the beta ( $\beta$ ) value, which represents the relative contribution, it was found that the perception of sports value has an influence on the cultivation of social skills in the perception of fun in the following order: social value (0.417), educational value (0.211), and physical value (0.204). The explanatory power was 58.6%3. In addition, the perception of sports value was found to have an effect on the sense of accomplishment in the perception of fun in the following order: social value (0.171), with an explanatory power of 51.4%. The perception of sports value was found to have an influence on the perception of physical and psychological health in the following order: physical value (0.400), social value (0.226), and educational value (0.212), with an explanatory power of 48.6%.

Looking at previous studies based on the results of this study, Social Media Sports activities are one of the important means of maintaining physical health, and by participating in sports activities, people can improve their physical abilities, strengthen stamina and endurance, and promote the growth and health of each body system [14]. At the same time, it helps reduce mental stress and alleviate negative emotions such as anxiety and depression. In relation to this, Jong-gil Lee's study on street basketball participants reported that the degree of participation has a significant influence on fun, and Hyeong-gil Kang's study on college students reported that participation It was reported that degree and frequency had an effect on competence and achievement factors, which was consistent with the results of this study [15]. Meanwhile, many sports scholars have proven that the main reason for youth's participation and continuation of sports activities is 'fun' rather than adults' health and physical fitness and socialization [16]. These research results show that the perception of fun in sports participation is an essential factor in motivating sports participation.

#### 5.2. Effect of SNS sports community participants' perception of sports value on sports activities

The results of multiple regression analysis to determine the impact of sports value perception on sports activities are shown in <Table 8>.

## Table 8. Multiple regression analysis of the impact of sports value perception on sports activities

Variable	Behavioral Cognitiv		nitive	ive Definitional		
Variable	β	t	β	t	β	t

F	0.566		•.	363***		387***
$R^2$	0	566	0	587	0.4	585
Educational value	0.025	0.379	0.300	4.596	0.224	3.424***
Physical value	0.483	6.831***	0.178	2.575**	0.210	3.040**
Social value	0.288	4.265***	0.350	5.328***	0.390	5.917***
Constant		2.803		4.623		3.806

\*\*p<0.01, \*\*\*p<0.001

Looking at this specifically, the final regression equation showed that sports value awareness had a significant effect at the 0.1% level on behavioral, cognitive, and affective activities of sports activities. The social value and physical value of sports value awareness were found to have a significant impact at the 0.1% level on the behavioral activity of sports activities, and the social value and physical value were found to have a significant impact at the 0.1% level on the cognitive activity of sports activities. It was found to have a significant effect at the % level. In addition, social value and educational value were found to have a significant impact on the affective activity of sports activities at the 0.1% level, and physical value was found to have a significant impact at the 1% level. Looking at the beta ( $\beta$ ) value, which represents the relative contribution, it appears that the perception of sports value influences behavioral activities of sports activities in the following order: physical value (0.483), social value (0.288), and educational value (0.025), and an explanatory power of 56.6% was found. In addition, sports value awareness was found to have an influence on cognitive activities in the following order: social value (0.350), educational value (0.300), and physical value (0.178), with an explanatory power of 58.7%. Sports value awareness was found to have an influence on affective sports activities in the following order: social value (0.390), educational value (0.224), and physical value (0.210), with an explanatory power of 58.5%.

Looking at previous studies based on the results of this study, the higher an individual's awareness of the sporting value of a sporting activity, the deeper their understanding of the sporting activity, the better they can understand and master the rules and techniques, and the higher their cognitive level [17]. In addition, physical value, social value, and educational value promote individual reactiveness, and humans can participate more actively in social activities and sports activities, increasing their input and participation in sports activities. In behavioral activities such as physical fitness activities and competitions, if the individual recognizes the value that these activities can improve in terms of an individual's physical strength, athletic ability, etc., the individual will participate more actively in these activities and challenge himself to improve his physical strength and skills. You can improve your level. Therefore, in various types of sporting activities, an individual's perception of value can influence their level of participation and performance.

#### 5.3. Effect of SNS sports community participants' perception of fun on sports activities

The results of a multiple regression analysis to determine the impact of fun perception on sports activities are shown in <Table 9>.

# Table 9. Multiple regression analysis of the impact of sports fun perception on sports activities

Variable	Behavioral		Cognitive		Definitional	
	β	t	β	t	β	t

F	R <sup>2</sup> 0.500           F         98.858***		107.640***		127.939*** **p<0.01, ***P<0.001	
			0.522		0.565	
Constant Cultivating social skills Achievement Physical/ psychological health	0.472 -0.010 0.292	4.758 2.618** -0.058 4.697***	.842 -0.128 0.114	6.919 4.768*** -1.337 1.879	0.699 -0.200 0.292	5.221 4.151*** -1.286 5.023***

Looking at this in detail, the final regression equation showed that the perception of fun had a significant effect at the 0.1% level on the behavioral, cognitive, and affective activities of sports activities. The promotion of physical and psychological health through the perception of fun on the behavioral activities of sports activities was found to have a significant effect at the 0.1% level, and the cultivation of social skills was found to have a significant effect at the 1% level, and the cultivation of social skills on the cognitive activities of sports activities was found to have a significant effect at the 0.1% level. It was found to have a significant effect at the level. In addition, cultivating social skills and promoting physical and psychological health were found to have a significant impact on the affective activities of sports activities at the 0.1% level. Looking at the beta ( $\beta$ ) value, which represents the relative contribution, the perception of fun affects the behavioral activities of sports activities in the following order: cultivating social skills (0.472), promoting physical and psychological health (0.292), and feeling of accomplishment (-0.010), and found to have an explanatory power of 50%. In addition, the perception of fun in the cognitive activities of sports activities was found to have an effect in the following order: cultivating social skills (0.842), promoting physical and psychological health (0.114), and feeling of accomplishment (-0.128), with an explanatory power of 52.2%. The perception of fun in the affective activities of sports activities was found to have an influence in the following order: cultivating social skills (0.699), promoting physical and psychological health (0.292), and sense of accomplishment (-0.200), with an explanatory power of 56.5%.

Looking at previous studies based on the results of this study, by participating in sports activities, people can improve their physical skills and strengthen their psychological abilities, which can increase their confidence and sense of accomplishment [18]. Additionally, sports can be a great help to an individual's social skills and interpersonal relationships by helping them learn social skills such as communication and cooperation. Cognitive activities in SNS sports activities include understanding and learning the methods, techniques, strategies, and tactics of various sports [19]. Participating in sports activities can improve cognitive and coping skills and strengthen motor skills and wisdom. Additionally, various types of SNS sports activities affect individual participation. Cognitive activities are training in technical and tactical aspects and are aimed at increasing an individual's level of skill and awareness. Therefore, promoting an individual's physical and psychological health, cultivating social skills, and the level of accomplishment affect an individual's participation and performance in various types of sports activities.

## 5. CONCLUSION

The purpose of this study is to identify the causal relationship between SNS sports community participants' perception of sports value and their perception of fun and sports activities. The results obtained to identify the purpose of this study are as follows.

First, sports community participants' perception of sports value was found to partially affect their perception

of sports community fun. In other words, the higher the recognition of the social value and educational value of sports value recognition, the higher the perception of social skill development, and the higher the recognition of the social value, physical value, and educational value of sports value recognition, the higher the perception of achievement. In addition, the higher the social value and physical value of sports value recognition, the higher the perception of promoting physical and psychological health.

Second, sports community participants' perception of sports value was found to partially affect sports activities. In other words, the higher the recognition of the social value and physical value of sports value recognition, the higher the recognition of behavioral and cognitive activities of sports activities, and the higher the recognition of the social value, physical value, and educational value of sports value recognition, the higher the recognition. It was found that the positive nature of the activity was highly recognized.

Third, sports community participants' perception of sports enjoyment was found to partially affect sports activities. In other words, the higher the perception of cultivating sociality in the perception of fun in sports and the promotion of physical and psychological health, the higher the perception of behavioral and affective activities in sports activities, and the higher the perception of cultivating sociality in perception of fun in sports, the more awareness of sports activities. It was found that there was a high level of awareness of enemy activities.

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