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Article

Effect of Outdoor Sports Participants on Leisure Identity, Leisure Flow, Leisure Satisfaction, and Re-Participate Intention

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Abstract: The aim of this study was to study the effect of leisure identity, flow, satisfaction, and re-participate intention among outdoor leisure activity participants in South Korea. Due to the recent COVID-19 pandemic, there has been a tendency to more frequently participate in outdoor leisure activities as opposed to indoor leisure activities. Leisure activities bestow various benefits. Therefore, this study was used to analyze the relationships amongst leisure identity, flow, leisure satisfaction, and re-participate intention among various theories about leisure. The participants in this study were collected from amongst 369 people who were frequent participants in outdoor leisure activities. For the data analysis, the researchers used frequency, confirmatory analysis, reliability, correlation and structural equaling modeling. The findings were as follows: First, leisure identity had wielded an influence on leisure flow. Second, leisure identity had influence leisure satisfaction. did not have any significant influence on re-participate intention. Fourth, leisure flow did not have any significant influence on leisure satisfaction. And finally, leisure satisfaction had an influence on reparticipate intention. In the era of the COVID-19 pandemic, a new leisure identity has been formed, and it is believed to be a new study on leisure flow, leisure satisfaction, and re-participation intention. This study aims to provide basic data for constructing infrastructure to enable continued participation in outdoor sports in Korea.

Keywords: outdoor leisure activity; leisure identity; leisure flow; leisure satisfaction; re-participate intention

1. Introduction

COVID-19 brought many changes to our culture, behavior, and way of life. With the onset of the pandemic we turned to passive leisure activities rather than active ones and afterwards there was a shift from indoor to outdoor leisure activities. In the field of sports, there is a tendency to prefer individual sports activities over group sports. In modern society, interest in outdoor leisure comes to some degree from a desire to return to nature. People can feel helpless in harsh urban environments, and a repetitive lifestyle without rest deteriorates the quality of life, while physical and mental fatigue adds to modern stress levels. In addition, outdoor sports activities have the effect of providing opportunities to directly apply one's abilities educationally by making full use of the natural environment and have the effect of cultivating a strong spirit and attitude necessary for group social life. In addition, because it has the effect of mentally relieving anxiety and tension through interactions in the natural environment, it is possible to learn knowledge about exercise and health from a sports perspective [1]. Especially in the post-COVID-19 era, people will be participating in more outdoor sports activities again for their health. As well, there is an increase in leisure time available for many and an appreciation that outdoor sports activities improves quality of life. This study focuses from a leisure studies perspective on establishing the relationships between leisure identity, leisure immersion, leisure satisfaction, and intention to return.

First, leisure identity can be defined as an internalized role expectation formed through identification with a leisure group through continuous participation in specific activities [2]. Leisure identity is something that one voluntarily chooses and creates and has characteristics that distinguish

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it from other identities in that it requires effort on one's part to maintain it on an ongoing basis. There are no obligatory elements of leisure identity, and leisure identity can exist when there is no personal attachment [2]. In addition, the subjective emotional and cognitive experiences of individuals who participate in the same leisure activity may appear differently, and the leisure satisfaction formed through these activities may appear unique and important in the individual's overall self-identity [3]. In this study, we will analyze the leisure identity of outdoor sports participants post-COVID-19 and determine how this newly formed identity affects leisure immersion, leisure satisfaction, and reparticipation intention.

Hypothesis 1. The leisure identity of outdoor sports participants will have an effect on leisure flow, leisure satisfaction, and re-participation intention.

Second, leisure flow is defined as a state of being deeply immersed in something when participating in a specific activity due to an individual's intrinsic motivation [4]. Tinsley & Tinsley [5] argued that leisure experiences with a high level of flow can satisfy various needs that cannot be met in other areas of life. Jeong [6] said that participants in recreational sports feel positive emotions just by participating. In particular, the level of flow in leisure sports varies depending on the level of skill and individual ability. Han & Kim [7] reported that the degree of immersion in mountaineering participation has a positive effect on psychological well-being. Jeong [8] said that a high level of selection and participation in the sport of golf is related to immersion. Therefore, it can be said that leisure competence, reflected by an individual's ability, is highly likely to be related to leisure flow. In general, satisfaction with leisure sports activities increases when one is immersed in the activity rather than participating in it daily, and this is believed to have a positive effect on intention to reparticipate.

Hypothesis 2. The leisure flow of outdoor sports participants will have an effect on leisure satisfaction and reparticipation intention.

Third, leisure satisfaction is a positive result felt after experiencing leisure activities, and leisure satisfaction is defined as an emotion or perception acquired through experience [9]. Leisure satisfaction is an important factor that plays a role in increasing life satisfaction and quality of life. In other words, leisure satisfaction is also a major variable that increases life satisfaction, and the importance of its role is recognized, and its importance is emphasized in the field of leisure studies [10]. In addition, leisure satisfaction is also an important factor in increasing revisit intention in sports activities, and conveying word of mouth intention to others [11]. Han, Jeong, & Lee [12] said that leisure satisfaction has a positive effect on quality of life or life satisfaction. In other words, leisure satisfaction is an important variable that increases life satisfaction and is therefore assiduously investigated in the field of leisure studies.

Hypothesis 3. Leisure satisfaction of outdoor sports participants will have an effect on re-participation intention.

Fourth, re-participation intention can be defined as the possibility that a customer will repeatedly use the service provider they currently use in the future and is closely related to actual repurchase behavior and customer retention [13]. The intention to re-participate is determined by the level of satisfaction of the participant in outdoor sports and is judged to be very closely related to leisure satisfaction. In other words, since the intention to re-participate is determined by the satisfaction experienced after participating in outdoor sports, it is necessary to study it together with leisure identity, leisure flow, and leisure satisfaction. Bae [14] said that the behavior felt after playing golf affects the intention to return and use word of mouth recommendations, depending on the participant's satisfaction. Cho & Kim [15] stated that when an achievement is goal orientation and emotional and environmental satisfaction are high, the level of re-participation intention factor is high.

Therefore, this study aims to establish the relationship between leisure identity, leisure immersion, leisure satisfaction, and re-participation intention of participants in outdoor sports activities in Korea. In the post-COVID-19 period interest has markedly increased and participation in various leisure activities has become possible again. Leisure identity, leisure immersion, leisure satisfaction, and re-participation intention for outdoor sports will be newly formed for many. The aim of this study therefore is to improve societal health through understanding the importance of outdoor sports activities and to further emphasize the importance of leisure activities. In addition,

we intend to provide basic data to support building infrastructure for participation in outdoor sports and establishing new policies.

1.1 Purpose of the study

With this study, we sought to facilitate leisure, recreational specialization, and leisure satisfaction in participants in two outdoor sports, golfing and yachting. Currently, COVID-19 has led to many restrictions on participation in leisure activities, but participation in outdoor sports is recognized as increasing vitality and immunity in our lives. Thus, we aimed to analyze the psychological factors of leisure among outdoor sports participants and provide data to support policymaking toward developing outdoor sports.

2. Method

2.1 Research subject

The subjects of this study were adult men and women living in Seoul, Gyeonggi-do, and Chungcheong-do in Korea, who had participated in hiking, biking, golf, and paragliding activities for more than six months. We used convenience sampling, a non-probability sampling method, to recruit the study participants. Convenience sampling refers to randomly selecting a sample according to the convenience of the researcher. For this study, we limited subjects to hiking, biking, golf and paragliding participants, distributing a total of 400 copies of the questionnaire. We excluded 31 that we judged to be duplicates or that had responses omitted, leaving 369 completed surveys for empirical analysis.

2.2 Measurement

For this study, we measured leisure identity, leisure flow, leisure satisfaction and re-participate intention using preexisting survey questions First, in measuring leisure identity, the survey questions used by Park [2] were used based on the survey questions used in the studies of Callero [16] and Laverie [17]. Leisure identity was assessed using a 5-point Likert scale with responses ranging from 'strongly disagree (1 point)' to 'very much agree (5 points).' Examples of items include "Outdoor sports activities have special meaning to me (esteem)," "I like talking about outdoor sports activities (identification)", and "Evaluation of people who engage in outdoor sports activities is the positiveness (emotional attachment)", etc.

Second, to measure leisure flow, 18 questions were used by Lee [18] based on the Flow State Scale (FSS) created by Jackson & Marsh [19] based on the flow experience factors of Csikszentmihalyi [4]. Leisure flow was assessed using a 5-point Likert scale with responses ranging from 'strongly disagree (1 point)' to 'very much agree (5 points).' As an example of a question, "I know clearly what I want when participating in outdoor sports (clear goals)", "When participating in outdoor sports activities, the challenges are at the same level as my skill level (balance of challenge and technology)", "I really enjoy outdoor sports activities (self-experience)", "I don't care about how I behave during outdoor sports activities (ecstasy)", "I am in complete control of my body while participating in outdoor sports activities (control ability)", "When I participate in outdoor sports activities, I feel that time passes faster than usual (transformation of time)".

Third, to measure leisure satisfaction, the questions used in Ahn's [20] development of a tool to measure leisure satisfaction among Korean adults were modified and used. Leisure satisfaction was assessed using a 5-point Likert scale with responses ranging from 'strongly disagree (1 point)' to 'very much agree (5 points).' As an example of a question, "My outdoor sports activities are helpful for self-development (self-development)", "My outdoor sports activities are effective in relieving daily stress (stress solution)", "My outdoor sports activities help my mental health (health promotion)", "I participate in outdoor sports activities because they require appropriate skills. (technology improvement)", "My outdoor sports activities give me greater satisfaction when I do them with other people (improve interpersonal relationships)".

Fourth, we measured re-participate intention using a scale Park [21] developed for Korean adults. Respondents rated these items on 5-point Likert scales that ranged from 1 (very little) to 5 (very much). As an example of a question, "I will definitely participate for my own development."

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2.3 Data processing and anlaysis

We used SPSS 21.0 and AMOS 18.0 for data processing. We used SPSS 21.0 to analyze the frequencies of sociodemographic characteristics and the reliabilities and correlations of the subject variables to verify the relationships among leisure identity, leisure flow, leisure satisfaction, and participate intention. We analyzed the structural equation model for confirmatory factor analysis and tested the study hypotheses using AMOS 18.0.

2.4 Research Ethics

All study procedures were reviewed and approved by the Sehan University Institutional Review Board and conducted according to the principles expressed in the Declaration of Helsinki. After we explained the purposes and length of this research study, respondents provided consent to participate. All participants agreed to allow researchers to use their personal information obtained from questionnaires for the purposes of this study, and all understood that they could refuse to continue to participate in the study at any time.

3. Results

3.1 Participants

Regarding the demographic and sociological variables of the study subjects, there were 217 men (58.8%), and 152 women (41.2%). The types of outdoor sports included hiking (90 people) (24.4%), cycling (97 people (26.3%)), golf (94 people (25.5%)), and paragliding (88 people (23.8%)). The places of residence include 110 people (29.8%) in Seoul, 134 people (36.3%) in Gyeonggi-do, and 125 people (33.9%) in Chungcheong-do. Participation period: 124 people (33.6%) for less than 1 year, 87 people (23.6%) for 1 to 3 years, 65 people (17.6%) for 3 to 5 years, and 93 people (25.2%) for more than 5 years. Table 1 presents the detailed survey respondent characteristics.

Variable		N	%
C 1	Male	217	58.8
Gender	Female	152	41.2
Outdoor sports	Hiking	90	24.4
	Bicycle	97	26.3
	Golf	94	25.5
	Paragliding	88	23.8
Age	20s and under	64	17.3
	30s	101	27.4
	40s	112	30.4
	50s and over	92	24.9
	Seoul	110	29.8
Living area	Gyounggi-do	134	36.3
	Chungcheong-do	125	33.9
Participation duration	Under 1 year	124	33.6
	1 year - under 3 years	87	23.6
	3 years - under 5 years	65	17.6
	Over 5 years	93	25.2

Table 1. Characteristics of Outdoor Sports Participants in This Study

3.2 Validity and reliability

Confirmatory factor analysis was conducted to check the validity of this measurement tool. Confirmatory factor analysis verifies whether measurement variables can explain the concept of a latent variable. In other words, it is a procedure that checks whether the collected data can appropriately explain the research model [22]. The goodness-of-fit indices used in this study are x2/df, TLI, CFI, and RMSEA. The TLI index was presented by Bentler & Bonett [23], and the goodness-

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of-fit standard is 0.90 or higher. The CFI index was presented by Bentler [24], and the goodness-of-fit standard is 0.90 or higher. Lastly, the RMSEA index was presented by Steiger & Lind [25], and the goodness-of-fit standard is 0.08 or less [26]. From the confirmatory factor analysis of this study, the goodness-of-fit indices for CFI, TLI, and RMSEA values explaining each factor structure were found to be appropriate, as shown in <Table 2>. For TLI, CFI and RMSEA, the 'leisure attitude' fit indices were 0.903, 0.940, and 0.078 respectively. Fitness indices of 'leisure flow' for TLI, CFI and RMSEA were 0.915, 0.937, and 0.061 respectively. Fitness indices of 'leisure satisfaction' for TLI, CFI and RMSEA were 0.942, 0.962, and 0.079 respectively. Additionally, the variance extraction index (AVE) value was calculated to verify convergent validity. Based on previous research [27], AVE values of 0.5 or higher were set as the ideal standard. As a result, all latent factors were determined to fit the standard, so there was no problem with concentrated validity <Table 2>.

To verify reliability, Cronabach's α coefficient was calculated. The reliability of each leisure attitude factor was 0.902 for esteem, 0.860 for presence, and 0.633 for identification. The reliability of each factor of leisure immersion was 0.809 for clear goals, 0.690 for balance between challenge and skill, 0.815 for self-purpose experience, and 0.849 for ecstasy. The reliability of leisure satisfaction factors was 0.776 for self-development, 0.827 for stress relief, 0.802 for health promotion, 0.641 for skill improvement, and 0.641 for interpersonal relationship improvement <Table 2>.

Table 2. Results of confirmatory factor and reliability analysis

Variable	Latent variable	Measurement variable	Estimate	S.E.	C.R.(t)	AVE	C.R.	CFI	TLI	RMSEA
	Respect	← a7	1.000							
		← a6	1.287	.084	15.358	.575	.902	.975	.961	.064
		← a4	1.119	.077	14.559					
		← a3	1.198	.071	16962					
		←a2	.997	.080	12.487					
Leisure attitude		←a13	1.000			.697	.860			
attitude	Identification	←a12	1.288	.071	18.196					
		←a11	1.042	.065	16.109					
		←a21	1.000			.607	.633			
	Emotional affection	←a20	1.805	.273	6.608					
	uncetion	←a15	1.920	.327	5.868					
С	Clear goal	←b17	1.000				7 .809	.978	.960	.063
		←b10	1.157	.080	14.516	.597				
		← b1	.885	.068	13.067					
	Challenge-skill balance	←b13	1.000			.535	.690			
		← b6	.598	.071	8.452					
Leisure		←b4	.764	.073	10.425					
flow	Autotelic experience	←b15	1.000			545	.815			
		←b12	1.160	.104	11.174					
		← b9	1.251	.096	13.029					
		←b7	1.335	.104	12.813					
]	Entrancement	←b18	1.000			.738	.843			
		←b2	1.009	.049	20.482					
	Self- development	← c3	1.000			.536	.776	.955	.924	.072
		← c2	.832	.063	13.200					
		← c1	.734	.060	12.260					
	Stress solution	← c7	1.000			.564	.827			
satisfaction		← c6	.739	.068	10.890					
		← c5	.824	.074	11.171.					
		← c4	1.082	.053	13.152					
		← c10	1.000				.802			

Health- development	← c9	.876	.060	14.588		
	← c8	.724	.053	13.671		
Skill- development	← c14	1.000				
	← c13	.630	.108	5.836	.554	(41
	← c12	1.076	.113	9.491		.641
	← c11	1.069	.094	11.401		
Interpersonal relationship	← c17	1.000				
	← c16	.885	.062	14.321	.644	.832
	← c15	.843	.063	13.384		

3.3 Correlations of study variables

We calculated the correlations among leisure identity, leisure flow, leisure satisfaction, and reparticipation intention (Table 3). Notably, leisure identity showed correlations with leisure flow, leisure satisfaction, and re-participate intention. And there was a positive correlation between leisure flow and leisure satisfaction and re-participate intention. In addition, there was a positive correlation between leisure satisfaction and re-participate intention <Table 3>.

Table 4. Correlation of leisure facilitation, recreation specialization, and leisure satisfaction

	1	2	4	5
1. Leisure identity	1			
2. Leisure flow	.360***	1		
3. Leisure satisfaction	.535***	.325***	1	
4. Re-participate intention	.533***	.274***	.506***	1

Note. *p<0.05

3.4 Results of the study model

To elucidate the relationships among leisure identity, leisure flow, leisure satisfaction, and reparticipate intention of outdoor sports participants, we tested a structural equation model of the hypothesis. <Table 4> presents the detailed findings including the model fit indices. Briefly, hypothesis 1 that leisure identity would have a significant effect on leisure flow, leisure satisfaction, and re-participate intention was accepted. Hypothesis 2 of a significant effect of leisure identity on leisure satisfaction, and re-participate intention was rejected. Hypothesis 3 of a significant effect of leisure satisfaction on re-participate intention was accepted.

Table 5. Estimated structural relations coefficients

Hypothesis	Estimate	S.E.	C.R.			
Leisure identity → Leisure flow	.470	.085	5.511***			
Leisure identity → Leisure satisfaction	1.024	.108	9.477***			
Leisure identity → Re-participate intention	.443	.075	5.910***			
Leisure flow → Leisure satisfaction	.099	.069	1.442			
Leisure flow → Re-participate intention	.070	.037	1.891			
Leisure flow → Re-participate intention	.173	.034	5.029***			
Model fit: x ² =252.442, x ² /df=2.902, CFI=0.955, TLI=0.930, RMSEA=0.072						

Note. S.E. = standard error; C.R. = critical ratio; *p<0.05

4. Discussion

4.1 Relationship between leisure identity, leisure flow, leisure satisfaction, and re-participation intention of outdoor sports participants

COVID-19 has reminded us of the importance of health. At the same time, interest in sports activities during leisure time has increased. Among different types of activities, outdoor sports can prevent COVID-19 infection because they are performed in the open air. It appears conclusive that the leisure identity of participants in outdoor sports activities for health is perceived positively. This positive leisure identity is judged to have a positive effect on leisure immersion, as a result of clear goals and self-purpose experiences. According to a study by Park & Seo [28], individuals form a leisure identity by internalizing their role within the leisure group, which is a very important factor in both choosing and engaging in leisure activities. Furthermore, in the field of leisure sports activities, it is widely accepted that influencing social and aesthetic aspects can lead to positive leisure activities.

Among outdoor sports, it is believed that people experience a sense of identity from the perception of being at one with nature, through mountaineering activities. Due to COVID-19, people prefer outdoor leisure activities rather than indoors, leading to a new recognition of the sense of identity that can be achieved through mountain climbing. This identification is believed to have a positive effect on leisure satisfaction, such as through improving health and relieving stress. A study by Lee, Ahn & Cho [29] also showed that continuous participation in leisure activities leads to the experience of positive thoughts and feelings about the self (joy, confidence), which have a positive effect on the satisfaction inherent in leisure activities. A study by Kim, Park & Lee [30] analyzed the relationship between leisure identity, leisure persistence, and basic psychological needs among college students participating in leisure activities, and found that leisure identity had a positive effect on leisure satisfaction. In a study by Kim, Jang & Kim [31], it was found that hobbyists with a deep level of identity and experience when participating in sports showed high levels of life satisfaction through establishing a leisure identity. In addition, participation in soccer activities has been shown to have a positive effect on leisure identity, and leisure identity is formed through systematic participation in soccer clubs.

After COVID-19, the importance of leisure activities has been recognized, and it is believed that among various leisure activities, outdoor sports activities have formed a new leisure identity for us. In this study, it can be interpreted that leisure identity, such as respect, identification, and emotional attachment, are perceived positively through hiking, biking, golf, and paragliding activities and continuous participation. In particular, re-participation intention is an emotion felt by each individual, so if you lose fun or interest in particular activities, you can switch to other leisure activities. In this study, the result that the leisure identity of outdoor sports activities has a positive effect on re-participation intention is judged to be a strong will to continue participating. According to a study by Kim & Oh [32], participants with a high leisure identity place a high emphasis on leisure among various aspects of life and participate actively and continuously. In a study by Nam & Noh [33], they argued that the higher the esteem for leisure identity, the more it has a significant influence on the continuation of exercise. This implies that for participants, they try to identify with attachment and continue to participate in leisure sports out of esteem.

4.2 Relationship between leisure flow, leisure satisfaction, and re-participation intention of outdoor sports participants

In this study, the participants' leisure immersion was found to have a positive effect on leisure satisfaction. Scanlan, Russell, Klunchoo & Chow [34] define flow as an optimal psychological structure that represents the desire to continuously participate in exercise and its results. From our results we suggest that flow experiences such as clear goals, purposeful experiences, and ecstasy through outdoor sports (hiking, cycling, golf, paragliding) activities have a positive effect on leisure satisfaction such as stress relief, health promotion, and skill improvement. In the case of golf and paragliding, you need a lot of time to focus on improving your skills. Because paragliding is an activity with risks that takes place in the sky, it is also a sport that requires more concentration than many other sports. Scanlan, Carpenter, Schmidt & Simons [35] stated that flow in leisure activities plays a critical role in maintaining continuous participation and interest. According to a study by Jo [36], immersive experiences through leisure participation are linked to interest, pleasure, accomplishment, and satisfaction, affecting quality of life, and further improving the quality of life

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of participants, thus helping them lead successful lives. Jeong [8] said that people who take golf lessons are autonomous in selecting and participating in the sport, and thus have a high level of interest in it. Immersion is a state of continuous interest, and this immersion affects psychological well-being. According to a study by Cho, Kwak & Jang [37], high-level cognition and behavioral immersion in cycling leads to physical health and psychological well-being, effectively increasing an individual's life satisfaction.

Outdoor sports activities provide more immersion experiences requiring concentration than other sports. In this study, cycling and paragliding activities were also focused on because they require constant movement, anticipation and control, on the road and in the sky. Such concentration is believed to have a positive effect on re-participation intention through immersive experiences resulting in self-purpose experiences, transformation of time, and ecstasy. And even in golf, concentration is required when swinging on the practice range or during a round. It is believed that the experience of high immersion through concentration has a positive effect on participants and induces continued participation. According to research by Park & Kang [38] and Jeon and Lee [39], flow experiences have a positive effect on leisure satisfaction and re-participation intention.

4.3 Relationship between leisure satisfaction and re-participation intention of outdoor sports participants

After participating in outdoor sports such as hiking, biking, golf, and paragliding, leisure satisfaction was high, which is believed to have a positive effect on intention to return. High leisure satisfaction with not only outdoor sports activities but also various other activities has a positive effect on life satisfaction or re-participation intention. In this study, it can be interpreted that there is a tendency to continue participating in hiking and biking because it helps improve health, and that golfers and paragliders tend to continue participating because they experience high leisure satisfaction from improving skills and relieving stress. Seo & Kim [40] reported that leisure satisfaction directly affects the intention to re-participate in marine leisure sports activities. According to a study by Oh, Jang, Oh & Heo [41], in order to enjoy water sports leisure, you need to travel to the river or sea, so the intention to re-participate needs to be high when you consider requirements such as transportation, location, cost, and program.

5. Conclusion

After COVID-19, leisure time was once again available. Among various leisure activities, the relationship between leisure identity, leisure immersion, leisure satisfaction, and re-participation intention was verified for participants in outdoor sports. The subjects of this study were adult men and women living in Seoul, Gyeonggi-do, and Chungcheong-do who participated in hiking, cycling, golf and paragliding. Frequency analysis, confirmatory factor analysis, reliability analysis, correlation analysis, and structural equation models were applied to survey results. Through the above research process, the following results were obtained: First, the leisure identity of outdoor sports participants had a positive effect on leisure immersion, leisure satisfaction, and re-participation intention. Second, the leisure immersion of outdoor sports participants did not affect leisure satisfaction and reparticipation intention. Third, outdoor sports participants' leisure satisfaction had a positive effect on their intention to re-participate.

There are many studies showings that leisure activities provide us with various benefits. Interest in health has increased even more since the worldwide experience with COVID-19. This study also found that leisure identity had a positive effect on leisure immersion, leisure satisfaction, and reparticipation intention. Therefore, we conclude that a new leisure identity has been formed from experiencing COVID-19. For continued participation in outdoor sports, various program development and leader training opportunities are necessary. This is expected to be of great help in improving the quality of our lives and improving our health.

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References

- 1. Kim, B.; You, I.; Kim, J. Leader's Knowledge Structure Principle for Field Leisure Sports. *Korean Soci. for The Study of Physical Educ.*, **2004**, 9(3), 55-67.
- 2. Park. Y.-J. Effect of Leisure Experience and Identity Salience. Ph.D dissertation, Chung-Ang University, Seoul, Korea, 2002.
- 3. Lee, M. Leisure identity and subjective well-being according to leisure resource and leisure acidity types among university students. Master dissertation, Sungshin Women's University. Seoul. **2004.**
- 4. Csikszentmihalyi, M. Beyond boredom and anxiety: Experiencing flow in work and play. San Francisco/Washington/London. 1975.
- 5. Tinsley, H.-E. Tinsley, D.-J. A theory of the attributes, benefits, and causes of leisure experience. *Leisure Scie.*, **1986**, 8(1), 1-45.
- 6. Jung, Y. The influence of sport participation motivation, arousal seeking and affects on the behavior of sport commitment. Ph.D. dissertation, Pusan National University, Korean. 1997.
- 7. Han, G.; Kim, K. Possible Correlations among Mountaineering Experiences, Leisure Identity and Psychologic Well-being. *J. of Sport and Leisure Studies*, 2008, 34(2), 1515-1527, 10.51979/KSSLS.2008.11.34.1515
- 8. Jeong, K. A Study on the Relationship between Social Self Perception, Psychological Happiness, and Leisure Flow of Golf Lesson Participants. *The Korean J. of Sport*, **2021**, 19(3), pp. 97-106. https://doi.org/10.46669/kss.2021.19.3.009
- 9. Beard, J.-G.; Ragheb, M.-G. Measuring leisure satisfaction, *J. of Leisure Res.* **1980**, 12, 20-33. https://doi.org/10.1080/00222216.1980.11969416
- 10. Lee Y.; Hwang, S. The Moderating Effect of Serious Leisure on the Relationship between Leisure Satisfaction and Quality of Life in Cultural Volunteer Participating College Students. *J. of Leisure Studies*, **2021**, 19(3), 109-123.
- 11. Park, B.; Woo, S.; Ju, H. Economic Impact of a Convention Industry in Busan: The 2002 Busan International Machine Tool Show. *J. of Tourism and Leisure Research*, **2003**, 15(1), 31-46.
- 12. Han, J.; Jeong, D.; Lee, J. An Empirical Study on Satisfaction of Public Leisure Facilities and Leisure Life: Mediating Effect of Leisure Policy Satisfaction. *J. of Tourism and Leisure Research*, **2019**, 17(2), 64-85.
- 13. Seo, H. *A study on the impact of perceived value by custormer's involvement in casino on satisfaction and revisit intention.* Ph.D, dissertation, Kyunghee University, Gyeounggi, Korea, **2006**.
- 14. Bae, Y. An influence on a satisfaction and behavior after exercise by psychological needs and exercise constraint of the golfers, *J. of the Korean Data Analysis Society*, **2016**, 18, (6B), 3293-3302.
- 15. Cho, S., & Kim D. Effect of snowboard participant's achievement goal orientation on leisure satisfaction and re-participation intention. *Korean Journal of Leisure, Recreation & Park*, **2022**, 46, 4, 1-12.
- 16. Callero, P. L. Role-identity salience. Social Psychology Quarterly, 1985, 48, 203-213.
- 17. Laverie, D. A. The Influences of Identity Related Consumption, Appraisals, and Emotions on Identity Salience: A Multi-method Approach. Dissertation, Arizona State University. 1995.
- 18. Lee, J. A Study on the relationship between Leisure Flow and Leisure Benefit of billiard participants. Ph.D, dissertation, Yonsei University, Seoul, Korea. 2006.
- 19. Jackson, S.-A.; Marsh, H.-W. Development and validation of a scale to measure optimal experience: The Flow State Scale. *J. of sport and exercise psychology*, **1996**, 18(1), 17-35.
- 20. Ahn, B. *The development of leisure satisfaction scale for Korean adults*. Ph.D, dissertation, Yonsei University, Seoul, Korea, **2009**.
- 21. Park, S. The influence that yogi's satisfaction service quality has on the re-participation and intention of recommendation. Mater dissertation, Kyunghee University, Gyeonggi, Korea. 2008.
- 22. Hong, S. Theory and Application of Structural Equation Models, p55, *Yonsei University Advanced Research Methodology Workshop Book*, 32-33, **2007**.
- 23. Bentler, P.-M.; Bonett, D.- G. Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 1980 88(3), 588-606. DOI: https://psycnet.apa.org/doi/10.1037/0033-2909, 88.3.588
- 24. Bentler, P.-M. Comparative fit indices in structural models. *Psychological Bulletin*, **1990**, 107, 238-246. https://escholarship.org/uc/item/2mk8r49v
- 25. Steiger, J.-H.; Lind, J.-C. *Statistically-based tests for the number of common factors*. Paper presented at the Annual Spring Meeting of the Psychometric Society. Iowa City, **1980**.
- 26. Hong, S. The criteria for selecting appropriate fit indices in structural equation modeling and their rationales. *Korean J. of Clinical Psychology*, **2000**, 19(1), 161-177.
- 27. Bagozzi, R.-P.; Yi, Y. On the evaluation of structural equation models. *J. of the Academy of Marketing Science*, **1988**, 16, 74-94.
- 28. Park, S.; Seo, Y. The relationship analysis between leisure satisfaction and physical self-efficacy through University students Walking Exercise. *The Korean Soci, of Sports Scie.*, **2017**, 25(4), 297-304.

- 29. Lee. S.; Ahn, B.; Cho, E. The Influence of Relationship Leisure Identity between of Self-Efficacy and Leisure Satisfaction among Physical Activities Class for University Students, *J. of the Korea Academia-Industrial cooperation Soci.*, **2021**, 22(7), 205-21. https://doi.org/10.5762/KAIS.2021.22.7.205
- 30. Kim, B.; Park, J.; Lee, S. The Relationship between Basic Psychological Needs in Leisure Activity, Leisure Identity, and Leisure Adherence Intention among University Students, *The Korea J. of Sports Scie.*, **2016**, 25(3), pp.43-53.
- 31. Kim, J.; Jang, S.; Kim, K. The Experience of Leisure Activities with Soccer-affect Psychological Well-Being, *The Korean J. of Sport*, **2020**, 18(1), 267-278.
- 32. Kim, N.; Oh, C. The Effects of Recreation Specialization, Leisure Identity and Negotiation Efficacy on Continuous Participating Intention: Focused on Bicycle Riders. *Korean J. of Leisure, Recreation & Park*, **2018**, 42(1), 39~51. http://dx.doi.org/10.26446/kjlrp.2018.3.42.1.39
- 33. Nam, I.; Roh, M. The Effect of Sport Commitment Experience on Leisure Identity and Exercise Adherence of Health Exercise Participants. *Korean J. of Sports Scie.*, **2010**, 19(3), 353-364.
- 34. Scanlan, T.-K.; Russell, D.-G.; Scanlan, L.-A.; Klunchoo, T.-J.; Chow, G.-M. Project on Elite Athlete Commitment (PEAK): IV. Identification of new candidate commitment sources in the Sport Commitment Model. *J. of Sport & Exercise Psychology*, **2013**, 35(5), 525–535. DOI:10.1123/jsep.35.5.525
- 35. Scanlan, T.-K.; Carpenter, P.-J.; Simons, J.-P.; Schmidt, G.-W.; Keeler, B. The sport commitment model: Measurement development for the youth-sport domain. *J. of Sport and Exer. Psychology*, **1993**, 15(1), 16-38.
- 36. Jo, S. The relationship between leisure flow, self-elasticity, and quality of life of the senior participating in health promotion program. *The J. of Humanities and Soci. Scie.* 21, **2022**, 13(1), 3001-3012.
- 37. Cho, S.; Kwak, H.; Chang, M. Relationship among Leisure Competence, Leisure Flow and Life Satisfaction of Participants in Cycle, *J. of Convergence Consilience*, **2021**, 4(3), 72-86. https://doi.org/10.33090/SFCC.4.3.6
- 38. Park, K.; Kang, H. An Analysis of Structural Relationships of Leisure Flow on Leisure Competence, Leisure Satisfaction by Participation Experience of the MTB Participants. *Korean J. of Sports Sciei*, **2017**, 26(1), 313-325, 10.35159/kjss.2017.02.26.1.313
- 39. Jeon, H.; Yi, B. A study on the relationship among participation motivation, exercise commitment, and exercise continuation intention of adult Taekwondo participants. *Korean Alliance for Health, Physical Education, Recreation and Dance*, **2016**, 55(1), 273-284. UCI: I410-ECN-0102-2021-600-000196534
- 40. Seo, J.; Kim, J. The relationship among leisure satisfaction, college life satisfaction, re-participation with the ocean leisure sports. *Korean Soci. for The Study of Physical Educ.*, **2010**, 15(2), 37-48.
- 41. Oh, C.; Jang, D.; Oh, K.; Hur, S. The effects of the exercise commitment of university water sport participants on leisure satisfaction and Re-participation intentions. *Korean J. of Leisure, Recreation & Park*, **2020**, 44(4), 131-141.

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