


## Article

# The Effect of Costs on Durable Benefits and Leisure Identity in Korean Badminton Participants by Level of Serious Leisure

Mi-Lyang Kim 

Department of Sport, Leisure, & Recreation, Soonchunhyang University, Asan-si 31538, Chungcheong-do, Korea; mlkim@sch.ac.kr

**Abstract:** We determined the effects of perseverance and personal effort costs on durable benefits and leisure identity at various levels of serious leisure. The subjects of the study were participants in badminton clubs in Korea. In Korea, badminton has more players than any other club sport. A total of 204 responses were analyzed using SPSS 22.0. The analysis included confirmatory factor analysis, reliability analysis, k-means cluster analysis, and multiple regression analysis. Subjects were categorized according to three levels of participation in serious leisure: Core Devotee, Moderate Devotee, or Participant. Analyzing the effects of perseverance and personal effort on durable benefits and leisure identity for each level of serious leisure indicated that individual effort had a statistically significant effect in the Core Devotee group and perseverance had a significant effect in the Participant group. However, neither factor had a significant effect in the Moderate Devotee group. This study demonstrated that the effects of cost on badminton participants vary by serious leisure level. Our results are meaningful in that they suggest that different leisure-promotion factors are needed for each level of serious leisure. This study provides a foundation for follow-up studies on leisure costs.

**Keywords:** leisure activity; sports and leisure; serious leisure; leisure cost; durable benefits; leisure identity; badminton club



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## 1. Introduction

Leisure is a right that anyone can enjoy. Leisure enriches lives and has become a valuable route to self-realization in modern society. As leisure activities become more important, studies are being conducted to help people understand their leisure activities and achieve greater satisfaction and personal attainment in leisure.

As the COVID-19 pandemic continues into the indefinite future, participation in activities that can boost immunity and maintain health has become paramount [1]. Among these activities is badminton, a popular sport that can be enjoyed anywhere with relatively simple equipment. According to the 2021 National Living Sports Survey by Ministry of Culture, Sports, and Tourism, badminton has the third largest number of members after golf and soccer, accounting for 8.4% of sports club members as of 2021 [2].

Amateur participants in sport maintain involvement because they are attracted to the pursuit of high levels of skill and performance. Those who involve themselves in competition and strive to improve their skills can be defined as participants in serious leisure [3]. Serious leisure was defined by Stebbins as “the systematic pursuing of leisure activities by amateurs, hobbyists, and volunteers, discovering their interest and value in activities, accumulating career, knowledge, and experience in leisure activities they participate in, and giving personal and social rewards” [3,4]. Serious leisure participants need to persevere in their chosen activities, develop leisure careers, and work to gain skill, knowledge, and a variety of special benefits. They exhibit six common characteristics, including the realization of various special benefits, a unique ethos and social world, and an attractive personal and social leisure identity [5]. Reliable verifications of leisure level and empirical studies of

leisure level remain insufficient, despite a classification system that divides players into levels A–D on the basis of performance level and competition experience.

Recent studies of serious leisure have used a classification system to describe levels of participation in serious leisure and have sought to describe the characteristics of participants at each level [6,7]. In one study [3], participants were classified as Core Devotees, Moderate Devotees, and Participants based on level of participation in serious leisure (high, medium, and low, respectively). This classification was based on Stebbins' serious leisure theory. This made it possible to describe the characteristics of each participant group, allowing participants in serious leisure to understand themselves better. However, the researchers observed that the standard for the level of serious leisure is not absolute, necessitating additional empirical studies on level of participation in serious leisure [8].

It should also be noted that participants in serious leisure incur various costs. These include psychological, temporal, social, and personal costs [9,10]. Thurnell-Read [11] explored the economic, temporal, and social costs of serious leisure through in-depth interviews with participants. Rachel [12] explored social costs to serious leisure participants, such as negative views of external observers. Kim and Hwang [13] defined the cost of serious leisure as 'negative areas arising from serious leisure participation,' deviating from the comprehensive meaning of serious leisure. However, it is not appropriate to view costs negatively given that serious leisure participants are willing to pay them.

Stebbins [4] argued that costs such as disappointment, dissent, and tension appear in the majority of serious leisure participants and can motivate participants to offset costs by persevering and striving to obtain continuous benefits. This was called the 'profit hypothesis.' The importance of costs, durable benefits, and leisure identity is reflected in the fact that they are defined as a result of participation in leisure activities [3]. In other words, among the six characteristics of serious leisure, the costs of perseverance and personal effort are rewarded by durable benefits and leisure identity. Therefore, it is valuable to understand how perseverance and personal effort influence durable benefits and leisure identity at various levels of serious leisure. However, there are not yet any studies of costs and rewards by level of serious leisure.

In this study, we investigated the effects of perseverance and personal effort on durable benefits and leisure identity in badminton club participants in Korea at different levels of serious leisure. This study will enhance our understanding of behaviors at various levels of serious leisure in terms of cost and help promote progression to higher levels of serious leisure activities.

The hypotheses for each research question are based on serious leisure as defined by Stebbins.

**Hypothesis 1 (H1).** *The level of serious leisure will have an influence on the relationship between the cost of serious leisure and durable benefits.*

**Hypothesis 2 (H2).** *The level of serious leisure will have an influence on the relationship between the cost of serious leisure and leisure identity.*

## 2. Materials and Methods

### 2.1. Participants

This study enrolled men and women over 20 years of age who had been active in badminton clubs in City A and City C in Korea for more than a year. A total of 210 responses were completed. Six responses were excluded for insincere answers, leaving 204 responses on which to base the final analysis (Table 1). The subjects of the study were 57.8% male and 42.2% female and were evenly distributed between four age groups from 20–29 to 50+.

### 2.2. Measurement

Serious leisure was measured using the Serious Leisure Scale II (SLS II) [14]. There are a total of six sub-factors in the serious leisure scale, including perseverance, leisure career,

personal effort, durable benefits, leisure identity, and unique ethos, with each question scored using a 7-point Likert scale.

**Table 1.** Analysis of participant characteristics.

Factor	Classification	N	Percent (%)
Sex	Male	118	57.8
	female	86	42.2
Age	20–29	54	26.5
	30–39	47	23.0
	40–49	72	35.3
	50+	31	15.2
Intensity	1 h	16	7.8
	1–2 h	116	56.9
	3+ h	72	35.3
Frequency/week	1–2	67	32.8
	3–4	98	48.1
	5+	39	19.1
Period	1–2 year	124	60.8
	3–4 year	34	16.7
	5+ year	46	22.6
Total		204	100

### 2.3. Data Coding and Analysis

The data collected from the subjects were analyzed using the statistical software AMOS 22.0 and SPSS 22.0. Frequency analysis was used to describe the characteristics of study participants. CFA and reliability analysis were used to confirm the structural validity and reliability of the scale. Confirmatory factor analysis (CFA) and reliability analysis were used to confirm the structural validity and reliability of the scale. CFA was conducted on the SLS to verify the structural validity of the questionnaire. We gave extensive consideration to the criteria presented in previous studies [15,16]. CFA using the 24 questions and six sub-factors of serious leisure showed acceptable model fit ( $X^2/df = 666.80/237$ , CFI = 0.93, TLI = 0.92, RMSEA = 0.08), levels of standardized value (all standardized values greater than or equal to 0.65), and significance levels of standardized values ( $p < 0.01$  for all). In all cases, Composite Reliability (CR) was greater than Average Variance Extracted (AVE) (Table 2). AVE was greater than 0.86, so it can be judged that the convergent validity was significant. Discriminant validity was established where Maximum Shared Variance (MSV) and the Average Shared Squared Variance (ASV) were both lower than the AVE for all the constructs [17].

Cronbach's coefficient, which measures internal consistency, was calculated to verify the reliability of the scale and Cronbach's coefficients exceeded 0.7 for all variables [18]. All values of CR were 0.5 or higher, confirming the reliability of the measurement tool used in this study.

Hierarchical cluster analysis and k-means cluster analysis were used to classify badminton participants by serious leisure level. The number of clusters was determined based on the results of the dendrogram by the average linkage of hierarchical cluster analysis, and the agglomerative hierarchical method, which is sequentially grouped between subjects. Three clusters were determined based on the results of literature review. Based on this, k-means cluster analysis was used to classify participants by level of serious leisure and confirm group characteristics [19,20].

The relationships between durable benefits, leisure identity, and the costs of serious leisure were analyzed through multiple regression analysis for each group and results were compared. In the multiple regression analysis, we used stepwise selection to analyze the relative impact of costs. The significance level for all statistics was set to  $p < 0.05$ .

**Table 2.** Confirmatory factor analysis of the serious leisure scale.

Factor	Items	B	SE	CR	AVE
Perseverance	When facing a certain problem for participating in badminton, I never give up participating badminton.	0.799	0.069	0.980	0.923
	When feeling physical risk, I never give up participating badminton.	0.863	0.063		
	When falling in some trouble, I will make an effort to overcome it.	0.913	0.045		
	When the condition keeps me from participation, I will try to find other way to participate in badminton.	0.826	0.065		
Leisure career	I have special knowledge on badminton.	0.820	0.075	0.962	0.865
	I have the required skill to stay at a high level of badminton.	0.761	0.084		
	I have experienced a contingent event to develop professionalism in badminton.	0.649	0.129		
	Others acknowledge my badminton career.	0.823	0.079		
Personal effort	I do my best to develop my badminton skills continuously.	0.848	0.047	0.980	0.926
	I make an effort to acquire advanced knowledge of badminton.	0.731	0.085		
	I am making an effort continuously to achieve my goals in badminton.	0.892	0.043		
	I am making an effort continuously to get recognition in badminton from others.	0.861	0.049		
Durable benefits	Badminton makes my life affluent.	0.833	0.057	0.978	0.919
	Badminton is a way to express myself.	0.852	0.061		
	Participation in badminton gives me a deep sense of accomplishment.	0.819	0.051		
	When participating in badminton, my image is improved.	0.761	0.067		
Leisure identity	Participating in badminton is the center of my life.	0.857	0.047	0.984	0.940
	I feel self-identification through participating in badminton.	0.876	0.045		
	When introducing myself, I always mention badminton.	0.866	0.053		
	Participating in badminton is my typical characteristic.	0.885	0.048		
Unique ethos	I can understand why others participate in badminton impassionedly.	0.882	0.040	0.986	0.947
	I feel identification with others who participate in badminton impassionedly.	0.906	0.032		
	I know the unique ethos of others who participate in badminton impassionedly.	0.873	0.048		
	I have the same belief with others participating in badminton together.	0.850	0.052		
Model Fit Indices: $X^2/df = 666.80/237$ , CFI = 0.93, TLI = 0.92, RMSEA = 0.08					

### 3. Results

#### 3.1. Serious Leisure Level Analysis

Our analysis of serious leisure level in Korean badminton participants resulted in the classification shown in Table 3. Participants were grouped into high, intermediate, and low levels of serious leisure.

Table 3 shows the results of one-way ANOVA comparing the difference in the level of serious leisure costs according to the serious leisure level of badminton club member. According to Table 3, the differences between the three groups were significant in persistence ( $F = 47.199$ ,  $p < 0.001$ ) and personal effort ( $F = 169.101$ ,  $p < 0.001$ ). In order to determine the sources of the differences, the Scheffe Test, one of the complementary post hoc analyses, was performed. As a result of post-hoc testing for the two factors, the highest value was found in the Core Devotee and the lowest value in the Participant.

#### 3.2. Effect of Costs on Durable Benefits

We analyzed the effects of costs on durable benefits by level of serious leisure. The result shows that personal effort ( $\beta = 0.393$ ,  $p < 0.001$ ) was significantly associated with durable benefits in the Core Devotee group (Table 4). However, perseverance ( $\beta = 0.143$ ,  $p > 0.05$ ) did not have a significant influence. In the Moderate Devotees group, neither perseverance ( $\beta = 0.142$ ,  $p > 0.05$ ) nor personal effort ( $\beta = -0.070$ ,  $p > 0.05$ ) affected durable benefits. In the Participant group, perseverance ( $\beta = 0.628$ ,  $p < 0.001$ ) had a significant effect on durable benefits, while personal effort ( $\beta = 0.109$ ,  $p > 0.05$ ) did not have a significant influence.

**Table 3.** Cluster analysis and one-way ANOVA test results for serious leisure scores.

		N	Mean	SD	F	Post-hoc <sup>1</sup>
Perseverance	① Core Devotee	75	3.86	0.71	47.199 ***	① > ② > ③
	② Moderate Devotee	99	3.31	0.63		
	③ Participant	29	2.47	0.65		
Leisure career	① Core Devotee	75	3.74	0.63	138.688 ***	① > ② > ③
	② Moderate Devotee	99	2.65	0.60		
	③ Participant	29	1.77	0.42		
Personal effort	① Core Devotee	75	4.11	0.47	169.101 ***	① > ② > ③
	② Moderate Devotee	99	3.13	0.55		
	③ Participant	29	2.14	0.52		
Durable benefits	① Core Devotee	75	4.15	0.54	132.891 ***	① > ② > ③
	② Moderate Devotee	99	3.33	0.43		
	③ Participant	29	2.43	0.57		
Leisure identity	① Core Devotee	75	4.13	0.51	201.017 ***	① > ② > ③
	② Moderate Devotee	99	3.11	0.50		
	③ Participant	29	2.05	0.48		
Unique ethos	① Core Devotee	75	4.16	0.58	114.477 ***	① > ② > ③
	② Moderate Devotee	99	3.39	0.47		
	③ Participant	29	2.47	0.58		

\*\*\*  $p < 0.001$ . <sup>1</sup> Scheffe test.**Table 4.** Results of hierarchical regression analysis of durable benefits.

		B	SE	$\beta$	t	p
Core Devotee	Constant	2.304	0.509		4.528	<0.001
	Perseverance	0.110	0.082	0.143	1.333	0.187
	Personal effort	0.449	0.123	0.393	3.650 ***	<0.001
	F(p), R <sup>2</sup>		13.320 ***, 0.154			
Moderate Devotee	Constant	3.178	0.344		9.234	<0.001
	Perseverance	0.096	0.068	0.142	1.412	0.160
	Personal effort	0.055	0.078	−0.070	−0.698	0.487
	F(p), R <sup>2</sup>		8.820 **, 0.358			
Participant	Constant	1.123	0.335		3.356	0.002
	Perseverance	0.550	0.131	0.628	4.197 ***	<0.001
	Personal effort	0.120	0.188	0.109	0.640	0.528
	F(p), R <sup>2</sup>		17.615 ***, 0.372			

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ .

### 3.3. Effect of Costs on Leisure Identity

We analyzed the effects of costs on leisure identity by level of serious leisure. The results show that personal effort ( $\beta = 0.456$ ,  $p < 0.001$ ) was significantly associated with leisure identity in the Core Devotee group (Table 5). However, perseverance ( $\beta = 0.097$ ,  $p > 0.05$ ) did not have a significant influence. In the Moderate Devotees group, neither perseverance ( $\beta = 0.013$ ,  $p > 0.05$ ) nor personal effort ( $\beta = -1.682$ ,  $p > 0.05$ ) affected leisure identity. In the Participant group, perseverance ( $\beta = 0.436$ ,  $p < 0.05$ ) had a significant effect on leisure identity, while personal effort ( $\beta = -0.039$ ,  $p > 0.05$ ) did not have a significant influence.

**Table 5.** Results of hierarchical regression analysis of leisure identity.

		B	SE	$\beta$	t	p
Core Devotee	Constant	2.120	0.462		4.586	<0.001
	Perseverance	0.069	0.075	0.097	0.923	0.359
	Personal effort	0.489	0.112	0.456	4.374 ***	<0.001
	F(p), R <sup>2</sup>		19.142 ***, 0.208			
Moderate Devotee	Constant	3.564	0.400		8.908	<0.001
	Perseverance	0.010	0.079	0.013	0.125	0.900
	Personal effort	−0.153	0.091	−0.169	−1.682	0.096
	F(p), R <sup>2</sup>		0.242, 0.009			
Participant	Constant	1.252	0.328		3.817	0.001
	Perseverance	0.323	0.128	0.436	2.517 *	0.018
	Personal effort	−0.037	0.186	−0.039	−0.199	0.844
	F(p), R <sup>2</sup>		6.337 *, 0.190			

\*\*\*  $p < 0.001$ , \*  $p < 0.05$ .

#### 4. Discussion

The concept of serious leisure is very useful for understanding leisure activities in modern society. Because it is necessary to incur costs to participate in serious leisure, it is important to understand the relationship between costs and personal benefits such as leisure identity. This understanding can enhance efforts to promote high levels of participation in serious leisure. To this end, we investigated the effects of personal effort and perseverance (cost factors) on durable benefits and leisure identity in participants at various levels of serious leisure.

This study resulted in badminton club members being classified into three groups based on level of serious leisure: Core Devotee, Moderate Devotee, and Participant. We observed differences in all sub-factors. This result is consistent with a previous three-level classification of serious leisure and the group characteristics reported for each level [6]. The results of one-way ANOVA showed that there is significant difference in the level of serious leisure costs according to the serious leisure level of badminton club member.

Core Devotees scored significantly higher than Participants in perseverance. This shows that the participants in the Core Devotee group had a higher level of perseverance to participate in the serious leisure activity until the end by enduring the difficulties, dangers, embarrassment, and difficult situations that occur in the process of continuing serious leisure activities. Participants showed the lowest score among the three groups in perseverance. However, perseverance is the item with the highest score among all subfactors for Participant group. This means that people in the Participant group place a higher value on perseverance compared to other subfactors. Low-level serious leisure participants valued perseverance more than durable benefits or other rewards gained from participating in the serious leisure activity. Therefore, it is necessary to motivate participants at a low level of serious leisure to advance by overcoming challenges through perseverance.

The characteristics of subjects in our study differ in some respects from those of subjects participating in other sports activities. A study of participants in horseback riding found that it was difficult to earn certifications and competition experience when engaging in horseback riding as serious leisure [21]. As a result, the Core Devotee and Participant groups had the highest scores in personal effort and the Moderate Devotee group had high scores in unique ethos. In other words, the characteristics of participants at various levels of serious leisure differ by sport. In badminton, participants value a distinct culture.

On the other hand, subjects in the Participant group combined a low level of serious leisure with relatively high scores in perseverance factors. This suggests that people at the



Participant level place a higher value on perseverance relative to other factors. Low-level serious leisure participants valued perseverance more than identity or other rewards gained from participating in the activity. Therefore, it is necessary to motivate participants at a low level of serious leisure to advance by overcoming challenges through perseverance.

Our analysis of the effects of cost characteristics of serious leisure (namely, perseverance and personal effort) on durable benefits and leisure identity yielded interesting results. For the Core Devotee group, personal effort had a significant effect on durable benefits and leisure identity. However, in the Participant group, perseverance had a significant effect on durable benefits and leisure identity. These results demonstrate that different strategies are needed to increase or sustain leisure participation at various levels of serious leisure. Participants at a low level of serious leisure need a strategy that leverages the value placed on perseverance. Seibert suggested that identifying self-confidence is a good strategy to increase perseverance and it can be developed through intentional assignment [22]. For participants who are already at a high level of serious leisure, it is necessary to provide a variety of programs that reward individual effort. Examples include opportunities to take high-level lessons, obtain certifications, or hold seminars.

These results support previous studies on leisure cost and identity. One study reported that identity offsets cost, and this identity balances continuous commitment [23]. In another study, football fans endured costs because of the reward of identity, even when their team exhibited poor performance [24]. Therefore, identity is a very important factor in understanding continuous participation in serious leisure. On the other hand, for the Moderate Devotee group, the relationship between perseverance or personal effort and durable benefit and the relationship between perseverance or personal effort and leisure identity were not significant. These results can be explained as follows for the Moderate Devotee group. It is possible for the Moderate Devotee group to be at a stage where perseverance and personal effort are no longer a cost issue. The Moderate Devotee enters into a higher state of serious leisure, in which people are deeply immersed in the activity, so the cost of engaging in serious leisure activities is not taken into account.

## 5. Conclusions

In this study, we analyzed whether badminton club members were divided into clusters, and then whether serious leisure level had an effect on the relationship between the cost of serious leisure and durable benefit, and then again, whether serious leisure level had an effect on the relationship between the cost of serious leisure and leisure identity.

First of all, as a result of cluster analysis of badminton club members, they were divided into three groups: Core Devotee, Moderate Devotee, and Participant. As a result of one-way ANOVA, there was a difference between the three groups. The Scheffe Test found the highest values in the Core Devotee and the lowest values in the Participants.

Second, we analyzed the effects of costs on durable benefits by level of serious leisure. The results of multiple regression analysis show that, in the Core Devotee group, personal effort was significantly associated with durable benefits. However, perseverance did not have a significant influence. In the Moderate Devotee group, neither perseverance nor personal effort affected durable benefits. In the Participant group, perseverance had a significant effect on durable benefits and personal effort did not have a significant influence. Therefore, Hypothesis 1 is adopted.

Third, we analyzed the effects of costs on leisure identity by level of serious leisure. The results of multiple regression analysis show that, in the Core Devotee group, personal effort was significantly associated with leisure identity. However, perseverance did not have a significant influence. In the Moderate Devotee group, neither perseverance nor personal effort affected leisure identity. In the Participant group, perseverance had a significant effect on leisure identity and personal effort did not have a significant influence. Therefore, Hypothesis 2 is adopted.

Since this study has been conducted with Korean badminton club members, the results may not be generalizable to other countries or other sports. However, this study

is meaningful in that it is the first to study the relationship between serious leisure cost and durable benefits and between serious cost and leisure identity according to the level of serious leisure.

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