

## EFFECTS OF SIMULATION GOLF PARTICIPATION ON LEISURE ATTITUDE, LEISURE FACILITATION AND RECREATION SPECIALISATION

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### ABSTRACT

*The aim of this study was to analyse the recreational specialisation changes that occur among simulation golf participants when they participate in simulation golf. In addition, the effect of leisure facilitation on recreation specialisation and the mediating effect between leisure attitude and recreation specialisation on simulation golf participation, at the time due to participation in various leisure activities were determined and compared to past values. In total, 475 subjects who had participated in simulation golf (Seoul, Incheon, Gyeonggi-do, Chungcheong-do and Kyungsang-do in Korea) were selected for this study. For data processing, SPSS 18.0 and AMOS 18.0 programs were used for frequency and reliability determination, confirmatory analysis, correlation analysis and structural equation modelling. The results indicate that the leisure attitude of simulation golf participants had no influence on leisure facilitation. The leisure attitude of simulation golf participants had a significant influence on recreation specialisation. The leisure facilitator of simulation golf participants had a positive influence on recreation specialisation. These results suggest that the infrastructure of simulation golf has become essential to building recreational specialisation in leisure activity.*

**Keywords:** Leisure attitude, Leisure facilitation, Recreation specialisation, Simulation golf participants.

### INTRODUCTION

In modern society, individuals tend to increase the values of their families through leisure activities to improve their individual quality of life (Brajša *et al.* (2010). Shortened working hours and increased leisure time with a five-day workweek system facilitate this (Ahn & Chon, 2018). According to the Korea Culture and Tourism Research Institute (Kim & Ahn, 2015), Korean people are participating in leisure activities at an increasing rate every year. It can be said that the trend of the leisure activity of people is changing into new energy production through leisure. In Korea, people are active and engaged in various leisure activities, including static and unproductive leisure activities.

Golf is a popular sport in South Korea. In 2015, simulation golf profits accounted for 32%

of profits from one golf course, well above the profits of the outdoor driving range and the indoor driving range (Kim, 2017). Simulation golf, a fusion of virtual reality and sports, is becoming popular, as it addresses the space-time constraints of modern society while satisfying the internal motivation of experiential sports. Simulation golf is becoming increasingly popular in Korea because it can overcome many obstacles (time, cost, members and climate) to enjoy golf. In this context, this study aims to investigate the relationship between leisure attitude and leisure facilitation among simulation golf participants and to identify changes in leisure culture and leisure activities. This study also attempted to clarify the relationship between these changes and recreational specialisation, because leisure activities offer various benefits. In addition, the leisure culture is changing in Korea.

Teixeira and Freire (2012) defined leisure attitude as the attitude or state of mind that people have regarding leisure. Some authors have described the change in the interest in and awareness of leisure, based on leisure attitude at the present time where participants enjoy leisure activities. Previous studies have shown that leisure activity is positively related to leisure attitude and that leisure behaviour is an external expression of leisure attitude (Ragheb, 1980; Ragheb & Tate, 2006). If an individual has a more positive leisure attitude, that individual is more likely to participate regularly in the activity (Ha & Won, 1996).

Firstly, leisure attitude is an important factor in determining leisure activities. Research into the attitudes of leisure participants aims to analyse leisure activities and identify the relationship or cause of participation. This suggests that the attitude towards leisure can be changed in the right direction (Lee *et al.*, 2006).

Secondly, leisure facilitation can reduce constraints and increase participation in leisure activities by providing an environment in which various leisure activities can be selected for participation. Leisure facilitation is initiated by a critical awareness of leisure research. The theory of leisure facilitation is developed based on the leisure constraint theory. It can be defined as a factor to induce or strengthen participation by forming or promoting a leisure preference situation (Raymore, 2002). Raymore (2002) questioned those who did not participate in leisure activities in cases when leisure constraints were reduced or even eliminated. He also found that these constraints could not sufficiently explain a lack of participation in leisure activities.

Thirdly, there are not enough programmes, facilities or leaders for leisure activities in South Korea (Ahn & Chon, 2018). Research is needed in how leisure facilitation affects participants when they are involved in simulation golf, as well as the effects of the perceptions of leisure and changes in culture. Kim (2015) investigated the relationship between sport value and leisure facilitation in college students and found that personal values help promote intrinsic leisure. Choi (2016) reported that personal facilitation, structural facilitation and interpersonal facilitation factors have positive effects on friends and control ability. Oh and Kim (2014) found that leisure facilitation motion has a significant effect on leisure constraint negotiation and serious leisure. The results of these preceding studies confirm that leisure activities were limited.

Third, recreational specialisation depends on the level of equipment use or the participant (Scott, 2012). Leisure, including leisure time, leisure activity and leisure consumption, is becoming an increasingly large part of our lives. It is necessary to clarify the effect of change in leisure on the recreation specialisation of leisure activity participants. Recreation specialisation refers to a process of continuous change that occurs through various stages of development, from beginners to experts, who participate in leisure activities (Oh & Ditton, 2008). Thus, a participant needs to participate in leisure activities and enjoy the fun, interest,

and satisfaction associated with those activities so that his or her level of recreational specialisation can be improved through continuous participation.

In previous studies, Lee *et al.* (2016) reported that a higher value of recreation specialisation indicates more environmental friendliness. Kim and Hwang (2010) stated that recreation specialisation has a positive effect on leisure satisfaction and quality of life. Leisure activities can have a positive impact on the lives of people. Leisure attitude and leisure facilitation can affect the recreation specialisation of simulation golf participants. Therefore, the objective of this study was to analyse the relationships among leisure attitude, leisure facilitation and recreation specialisation of simulation golf participants.

## PURPOSE OF STUDY

The purpose of this study is to analyse recreational specialisation changes in simulation golf participants when they participate in simulation golf. In addition, the effect of leisure facilitation on recreation specialisation and the mediating effect between leisure attitude and recreation specialisation of simulation golf participation at that time. When they participate in various leisure activities are determined by and compared to the past values. The results of this study could serve as basic data to offer more active participation in leisure activities and establish an infrastructure of various leisure activities to allow individuals to participate in many leisure activities.

## METHODOLOGY

### Participants

The subjects of this study were 500 adult men and women who participate in simulation golf and who live in Seoul, Incheon, Gyeonggi-do, Chungcheong-do, and Kyung-sang-do. The sampling method was composed of 500 people (100 persons per region from five regions) selected by using the allocation sampling method. In total, 475 copies of the questionnaire were ultimately used in actual analysis after excluding 25 questionnaires that had questionable responses or no response. Of the study subjects, 262 (55.15%) were men and 213 (44.85%) were women. Regarding their age groups, 89 (18.74%) were under the age of 20, 135 (28.42%) were in their 30s, 155 (36.3%) were in their 40s and 96 (20.21%) were in their 50s. In terms of the region, 98 (20.6%) people were from Seoul, 93 (19.6%) from Incheon, 97 (20.4%) from Gyeonggi province, 92 (19.4%) from Chungcheong province, and 95 (20.00%) from Kyung-sang province were enrolled.

### Measurements

Questionnaires served as measurement tools to determine leisure attitude, facilitation and recreation specialisation. Firstly, questionnaire items used were described by Lee (2006) based on the leisure attitude scale developed by Ragheb and Beard (1982) to measure leisure attitude factors. Responses to the leisure attitudes statements were measured using a 5-point Likert scale, ranging from 'very unlikely' (1 point) to 'very agreeable' (5 points). Examples of the items included 'energy of life' (cognitive), 'simulation golf is good' (emotional), 'time and effort is spent' (dependent), and 'purchase of simulation golf goods' (behaviour). Secondly, the research questionnaire items compiled used Raymore's (2002) *Facilitators to Leisure Study* to assess leisure facilitation variables, as well as adapted items used by Kim and Lee (2011) to suit the

purpose of this study. Leisure facilitation items were responded to by using a 5-point Likert scale ranging from 'very unlikely' (1 point) to 'very agreeable' (5 points). Examples of the questions included 'simulation golf is pleasant' (intrinsic), 'there are people to guide' (interpersonal) and 'there is information about simulation golf' (structural). Thirdly, items used in the recreational specialisation scale developed by Lee *et al.* (2011) were revised to meet the purpose of this study. Recreation specialisation items were responded to within a range of the 5-point Likert Scale of 'very much' (5 points) to 'very unlikely' (1 point). Examples of the questions included 'knowledge of simulation golf' (cognitive), 'participation in simulation golf for a long time' (behavioural) and 'enjoyment of simulation golf in particular' (emotional).

### Validity

The validity of the research tools were determined through confirmatory factor analysis (CFA). CFA is a procedure for confirming the inherent factor dimension and hypothesis based on researcher knowledge (Kim, 2011). The fitness indices used in this study were  $\chi^2/df$ , CFI (Comparative Fit Index), TLI (Tucker-Lewis Index) and RMSEA (Root Mean Square Error of Approximation). Firstly, the standard  $\chi^2/df$  exponent was 3.0 for the fitness standard published by Carmines and McIver (1981). The CFI index was published by Bentler (1990). The TLI index was proposed by Bentler and Bonett (1980) and the fit criterion between the CFI index and the TLI index was 0.90 or higher. The RMSEA index was published by Steiger and Lind (1980) and the fit criterion was set at 0.08 or less (Hong, 2000). The CFA results, including  $\chi^2/df$ , CFI and RMSEA as fitness indices describing the factor structure of each research tool, are presented in Table 1. The results of the fitness indices of leisure attitude were  $\chi^2/df=2.975$ ; CFI=0.950; TLI=0.934; and RMSEA=0.065. The fitness indices of leisure facilitation were  $\chi^2/df=2.748$ ; CFI=0.938; TLI=0.916; and RMSEA=0.061. The fitness indices of recreation specialisation were  $\chi^2/df=2.775$ ; CFI=0.964; TLI=0.956; and RMSEA=0.061. The fit of the research variable was found to be appropriate for each criterion (Table 1)

**Table 1. FIT INDICES FOR CONFIRMATORY FACTOR ANALYSIS**

Variables	$\chi^2/df$	TLI	CFI	RMSEA
Leisure attitude	2.975	0.934	0.950	0.065
Leisure facilitation	2.748	0.916	0.938	0.061
Recreation specialisation	2.775	0.956	0.964	0.061

TLI=Tucker-Lewis Index CFI=Comparative Fit Index RMSEA=Root Mean Square Error of Approximation

### Reliability

Chronbach's coefficients were calculated to verify the reliability of the measurement tools. The reliability coefficients of the sub-factors of leisure attitude were 0.871, emotional 0.891, 0.690 and behavioural 0.743. The overall reliability of the leisure attitude questionnaire was 0.918. The reliability coefficients for the sub-factors of leisure facilitation were 0.683, 0.710, and 0.807, respectively. The overall reliability of the leisure facilitation questionnaire was 0.837. The reliability coefficients for the sub-factors of recreation specialisation were 0.909, behavioural 0.933 and emotional 0.923. The overall reliability of the questionnaire for recreation specialisation was 0.964 (Table 2).

**Table 2. INTERNAL CONSISTENCY**

Factor	Cronbach's $\alpha$
Leisure attitude	0.918
Leisure facilitation	0.837
Recreation specialisation	0.964

### Data processing and analysis

SPSS 18.0 and AMOS 18.0 programmes were used for data processing in this study. The SPSS 18.0 program was used to analyse the frequency of socio-demographic characteristics, reliability, and the correlation of subject variables to verify the relationships among leisure attitude, leisure facilitation, and recreational specialisation. The analysis of the structural equation model for CFA and research hypothesis testing was conducted using the AMOS 18.0 programme.

### Ethical clearance

All study procedures were reviewed and approved by the Institutional Ethics Review Board of the Sports Research Ethics Committee and conducted according to the principles expressed in the Declaration of Helsinki. After explaining the purposes and length of this research study, participants provided consent to participate in this study. They understood that they could refuse to participate in this research study at any time. All participants agreed to allow researchers to use their personal information obtained from questionnaires for the purposes of this study.

## RESULTS

### Correlation of study variables

The relationships among leisure attitude, leisure facilitation, and recreation specialisation of simulation golf participants are listed in Table 3. Notably, leisure attitude showed no correlation with recreation specialisation. There was a positive correlation between leisure facilitation and recreation specialisation (Table 3).

**Table 3. INTERCORRELATION BETWEEN LEISURE ATTITUDE, LEISURE FACILITATION, RECREATION SPECIALISATION**

Variables	Leisure attitude	Leisure facilitation	Recreation specialisation
Leisure attitude	1		
Leisure facilitation	0.070	1	
Recreation specialisation	0.108*	0.111*	1

\*p<0.05

### Results of the study model

To elucidate the relationships among leisure attitude, leisure facilitation and recreation specialisation of simulation golf participants, the following are the results of the structural equation model test. The first hypothesis, that the leisure attitude had a significant effect on leisure facilitation ( $\beta=0.034$ ,  $t=1.568$ ,  $p>0.05$ ) was rejected. The second hypothesis, that the leisure attitude had a significant effect on recreational specialisation ( $\beta=0.158$ ,  $t=2.304$ ,  $p<0.01$ ) was supported. The third hypothesis, that leisure facilitation had a significant effect on recreational specialisation ( $\beta=0.129$ ,  $t=2.141$ ,  $p<0.05$ ) was also supported (Table 4)

**Table 4. ESTIMATED STRUCTURAL RELATIONS COEFFICIENTS**

Hypothesised relationships	Estimate	SE	CR
Leisure attitude → Leisure facilitation	0.034	0.085	1.568
Leisure attitude → Recreation specialisation	0.158	0.069	2.304**
Leisure facilitation → Recreation specialisation	0.129	0.039	2.141**
Model fit: $\chi^2=79.430$ ; $\chi^2/df=2.482$ ; TLI=0.967; CFI=0.977; RMSEA=0.056			

SE=Standard Error

CR=Critical Ratio

\* $p<0.01$

### DISCUSSION

Actual participation in leisure had a positive impact on the lives of the participants. As leisure culture changes, so do attitudes towards leisure and the environment in which leisure activities practised and recreational specialisation. Among active leisure activities, simulated golf participants are continuously increasing in number, as simulation golf is an alternative to real golf, which has various constraints (time, cost, members and climate). Based on the results of analysing the relationships among leisure attitude, leisure facilitation and recreational specialisation, implications could be derived.

Firstly, the leisure attitude of simulation golf participants did not affect leisure facilitation. The purpose of participation in leisure activities is clear, since the attitude towards golf is clear. Golf is an outdoor activity with many constraints in Korea. For example, it has somewhat unreasonable time, space and cost requirements. In terms of time and money, it is easier to participate in simulated golf than field golf. People can participate in simulation golf in spite of many leisure constraints, such as weather, cost and friends (Han *et al.*, 2020). As an individual age, their perception, importance and various benefits change as well. Further, although simulation golf is popular in Korea, it seems that facilitation has not occurred in the leisure activities of participants. Ahn (2017) showed that leisure facilitation does not affect leisure satisfaction or re-participation intention as a result of studying leisure facilitation, leisure satisfaction and re-participation intention. He insisted that leisure facilitation did not affect leisure satisfaction because participants participated in live physical activities by themselves.

Secondly, the leisure attitude of simulation golf participants influenced recreational specialisation. At this time, where people can participate in many more leisure activities than they could in the past, the perception of leisure has changed, and they can actively participate in leisure activities. At present, individuals can participate in more leisure activities than they

could in the past. However, the perception of leisure can change. Golf is one of the hardest sports (Ahn *et al.*, 2008). Despite its difficulty, the number of participants in simulated golf is steadily increasing. Simulated golf activities can lead to fun, improve skills through the use of various clubs, and promote health through sports. Continuously participating in simulated golf enriches one's knowledge of simulated golf activities. With continuous participation, one's level of specialisation in that leisure activity is improving.

However, if there is some inconvenience in dealing with simulated golf equipment or if there is a large difference between simulated golf and actual golf, the acceptance of simulated golf may be lowered. Therefore, it is necessary to recognise the basic knowledge of using simulated golf equipment to induce continuous participation sufficiently. Hwang and Lee (2009) have stated that serious leisure has a positive effect on recreational specialisation. In addition, Kim and Kim (2004) have stated that leisure activity is a very important part of life experience when participants are continuously active and experiencing achievement in their activities.

Thirdly, the leisure facilitation of simulation golf participants was shown to have an influence on recreational specialisation. These results show that when participants actively engage in simulation golf activity, leisure facilitation can affect the recreation specialisation process. In general, one cannot play golf if he/she is not a member of the golf course, and it may also be difficult to participate in golf due to weather restrictions. However, one can participate in simulation golf regardless of their course membership or the weather. It is also easy and economical to access simulation golf relative to non-simulated golf. Moreover, simulation golf is not limited by time, place or cost. Therefore, continuous participation in golf simulation can have a positive effect on recreation specialisation. This means that the level of specialisation for specific simulation golf activities is formed by participating continuously in leisure activities.

Many scholars have argued that recreation specialisation is one of the unique characteristics of people who actively and continuously participate in leisure activities (Song, 2010; Lee, 2012; Kang *et al.*, 2013; Lee, 2017). Active participants in sports leisure, such as badminton, ski, swimming, are more likely to engage in the process of recreation specialisation to improve their quality of life. There is strong evidence that leisure facilitation influences recreation specialisation. In particular, Lee (2017) reported that leisure facilitation had a positive influence on recreational specialisation. In addition, if leisure facilities and programmes are diverse with a lot of room in terms of time, simulation golf activity could be considered very valuable in one's personal life. It may even be considered as a priority.

People tend to invest actively in the economic costs necessary for simulation golf activity in South Korea. Lee (2012) has stated that elementary school teachers have a substantial influence on the specialisation of recreation due to family support and the leisure environment of the participation environment for leisure activities. According to Kang *et al.* (2013), personal facilitation and structural facilitation among leisure facilitation factors can have a significant effect on past experiences of recreation specialisation, life orientation and economic investment. Their results are consistent with the results of the present study. They are also consistent with the recreation specialisation process model conceptually presented by Song (2010).

The perception of leisure and interest in health has led to the popularity of active leisure activities rather than passive leisure activities. Therefore, it can be concluded that leisure attitude, which is a perception of leisure activities and leisure facilitation factors that can lead to participation in leisure activities, are important.

## CONCLUSION

This study investigated the relationships among leisure attitude, leisure facilitation and recreation specialisation for leisure activity participants. The study subjects were 475 adult male and female residents living in Seoul, Incheon, Gyeonggi-do, Chungcheongnam-do, and Gyeongsang-do who were participating in simulation golf activity. The data processing methods used include frequency analysis, reliability analysis, CFA, correlation analysis, and structural equation modeling.

The following research results were derived through the above-mentioned research process. Firstly, the leisure attitude of the leisure participants did not affect leisure facilitation. Secondly, the leisure attitude of the leisure activity participants influenced recreation specialisation. Thirdly, the leisure facilitation of the leisure activity participants influenced recreational specialisation. The results of this study could be used as basic data to induce more active participation and establish the infrastructure of various simulation golf activities so that participation in simulation golf could be continuous.

## PRACTICAL APPLICATION

For policy-makers and leisure managers, the current study provides some pragmatic implications, such as how to improve recreation specialisation in golf. For simulation golf, continuous participation can improve the level of recreational specialisation, which contributes to an improvement in the quality of life of an individual. Thus, from a leisure policy standpoint, it is important to provide policy support to build infrastructures (facilities, programmes and leaders) that allow citizens to participate in various leisure activities.

## LIMITATIONS AND FUTURE RESEARCH

There are some limitations in the current study. As the research tool was developed in foreign countries, it is necessary to develop a research tool that is directly suitable within Korean culture and emotion to derive more accurate results. In addition, variables such as leisure attitude and leisure facilitation might differ for each participant. It is necessary to perform a qualitative study rather than a quantitative research questionnaire and to study new sub-factors through in-depth interviews and observation of participation. Regression analysis results for the causal relationship between sub-factors might be needed to obtain a more detailed causal relationship.

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