Journal of Engineering and Applied Sciences 12 (Special Issue 8): 8371-8378, 2017
ISSN: 1816-949X

Relationship Among Fun Factor, Exercise Immersion and Exercising Continuation of Golfer Through Convergence

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Abstract: This study examined the relationship between perceived fun factor target golfer, immersive exercise and exercise continuation. Golfer course directly by the research were explained to the guests and a total of 404 responded to the survey data. The data were continuously identify the perceived fun factor of golfers participating in golf, sports commitment, lasting relationships exercise continuation. Frequency analysis, we applied factor analysis, reliability analysis, correlation analysis, stepwise regression analysis. It was obtained following the same result. The fun factor of the perception that golf participants showed a positive effect on the conduct commitment. Also, fun factor that showed a positive effect on exercise continuation. Exercise commitment that showed a positive effect on exercise continuation. This fun factor of the golf participants through exercise commitment factors were the main factors of exercise continuation. This fun factor of the golf participants through exercise commitment factors were the main factors of exercise continuation.

Key words: Convergence, golfer, fun factor, exercise immersion, exercise continuation, analysis

INTRODUCTION

Various management strategies are applied to golf industry to activate it. Of them, most apparent is grafting marketing strategy onto golf industry to satisfy user's wants as their wants are more diversified and individualized. This strategy can be defined as creating, maintaining and managing reciprocal exchanging behaviors with customers because marketing strategy is executed with customer-oriented perspective that it begins and ends from customer's wants and needs (Park, 2007).

Lim (2003) maintained that golf driving range industry can improve only when gold facilities are efficiently deployed and used and customer-oriented golf programs are developed and operated as well as when the operation and management of golf organizations advance and the demand of excellent golf leaders and experts increases through reinforced competitiveness of industries related to golf driving range.

The development of golf industry requires organization management, operation and marketing to increase its competitiveness. In addition, it is necessary to know the wants of golf exercise participants, provide them with 'enjoyment' elements and let them enjoy the sport for long.

People have recently has more spare time and interest in health and leisure activity and pay more attention to sports they can enjoy with nature rather than a sport alone. According to Lim (2003), golf is in the limelight among those sports, especially because it is aerobic exercise that provides fresh oxygen as well as whole body exercise using walking exercise and gross-motor for human basic motions. According to Jung (1997) also when people participate in leisure exercise activity such factors as intrinsic motivation, enjoyment, achievement and technological development can increase commitment to exercise and enjoyment and like this, the degree of enjoyment varies because it heavily depends on psychological factors. Therefore, said it is necessary to research regarding enjoyment elements that sport participants have.

Scanlan *et al.* (1993a, b) define sport enjoyment as positive emotional response to sports experience such general feelings as 'fun, likable and enjoyable'. The concept 'sport enjoyment' is more detailed than general positive emotion and more general than specific emotions like excitement. Therefore, this study thinks that when a research into the enjoyment factors of golf takes also such approach it is possible to analyze the enjoyment factors of golf.

Gordon (1990) expressed commitment in sport situations as an individual being confined to his own behaviors and his or her activity and belief are confined to such behaviors. Gordon (1990) reported that the clearer choice motivation is the more related information in the past is acquired the higher irreversibility is the higher arbitrariness is the extent of commitment is greater. Gordon (1990) mentioned that emotional commitment is the belief that a golf exercise participant empathizes the

purpose and value of golf exercise, being attached to and obsessed with it and injects some extent of effort. Besides, Pyo (2009) said that, although, a play has unique rules to follow it can give enjoyment because it is free from a sense of duty, uncertain, unproductive, pleasure-seeking, influenced by external goal and simple. Pyo (2009) also maintained that when a play becomes compensation itselfit allows one to exert his full potential and let him or her feel free from constraint of wants.

Maslow (1970) defined commitment as experiencing when a feeling of tension is emotionally alleviated through expressing oppressed feelings, so, catharsis is aesthetic experience that takes place when a feeling is committed and commitment is related to intrinsic self-justification and the moment of self-validation which make pains valuable. This study considers that these are the preconditions for commitment of a golf exercise participant to physical activity and can become important factors in relationship between enjoyment of and commitment to golf.

Vallerand (2001) reported that it is motivation that drives golf exercise participants to re-participation in golf and have intention to continue exercise. Corbin and Lindsey (1994) said that intention to continue exercise is an intrinsic motivation factor that helps make exercise a daily thing to do like knowledge, belief and confidence in physical strength and exercise. In addition, Corbin and Lindsey (1994) also reported that intention to continue exercise sport includes self-confidence, self-efficacy, safe environment and approach and can consist of self-motivation, enjoyment, balanced attitude, belief and knowledge, so, intention to continue exercise can be connected with various factors.

As examined above, it can be considered that psychological wants related to physical activity is likely to function as a factor to sustain exercise and when it is applied to golf industry it can be an important factor to improve golf. Therefore, based on the findings above this study is aimed to find, provide and analyze various psychological and social factors that can have impact on the development of golf industry and the enjoyment of golf exercise participant by analyzing those enjoyment factors, the relationship among enjoyment factors, related exercise commitment and intention to continue exercise.

MATERIALS AND METHODS

Subject of study: The target location for survey was golf driving ranges located in Gyeonggi-do Province and a questionnaire survey was given to 500 general golfers who use the golf driving ranges on regular basis. Non-probabilistic random sampling was employed as sample technique and the main researchers and assistant researchers visited in person 18 golf driving ranges, elaborated the purpose of research to the range workers and their customers and asked for cooperation. As a result, a total of 500 questionnaires were collected but 96 questionnaires had to be excluded from analysis because of their insincerity in answering or no answering. Therefore, 404 questionnaires were finally used for analysis. Missing values were replaced with other values by regression analysis which is one of missing value replacement methods provided in SPSS 18.0. Table 1 shows the demographic characteristics of the research participants.

Table 1: Subjects characteristics

Characters/Divisions	Frequencies	Rate (%)
Gender		
Man	269	66.6
Female	135	33.4
Lesson		
Presence	241	59.7
Absence	163	40.3
Age		
<30	100	24.8
30-40	89	22.0
40-50	145	35.9
50 over	70	17.3
Career		
<5 years	163	40.3
6-10	123	30.4
11-15	90	22.3
16 years over	28	6.9

The general characteristics of the participants showed that males take 66.6% (or 269) while females take 33.4% (or 135) by sex. By age, those respondents in their 30s and younger take N = 100 (24.8%), 30-40's are N = 89 (22.0%), 40-50 sec are N = 145 (35.9%) and 50's are 70 (17.3%). In addition, golf career service shows 163 respondents (or 40.3%) have 5 years or shorter year of gold career and 6-10 years (N = 123, 30.4%), 11-15 years (N = 90, 22.3%) and 16 years or longer (N = 28, 6.9%). Of them, 241 or 59.7% of the respondents have experience with taking a golf lesson.

Questionnaires: The questionnaire is composed of as follows. First, 4 questions were designed for general characteristics related to golf exercise: gender, age, career year and experience with a golf lesson. Next, to measure the characteristics of latent variables, a total of 45 question items were designed on 5-point Likert scale: 26 items for perceived enjoyment factor; 12 items for exercise commitment; 3 items for intention to continue exercise. The collected data was processed for frequency analysis and analysis of each item (mean, SD, skewness and kurtosis) to know the golfer's general characteristics and then exploratory factor analysis (maximum likelihood

Table 2: Perceived fun factor exploratory factor analysis and reliability analysis

	Factors						
Items	1	2	3	4	5	h^2	α
Hopefully recognized by people around stars and friends	0.96	0.26	0.36	0.35	0.40	0.35	0.71
Nicely visible to others	0.75	0.27	0.34	0.36	0.35	0.40	
It will be equal to the upward mobility	0.69	0.21	0.32	0.31	0.28	0.52	
Good health to be helpful	0.29	0.83	0.20	0.32	0.35	0.46	0.77
Body gaeunham	0.21	0.80	0.19	0.24	0.21	0.50	
This condition feel jotahjin	0.22	0.79	0.13	0.30	0.17	0.59	
Good worldly thoughts are eliminated	0.20	0.76	0.11	0.22	0.21	0.67	
A good many opportunities to challenge	0.47	0.22	0.90	0.21	0.42	0.85	0.81
In many a fight with fun self	0.45	0.27	0.84	0.21	0.41	0.74	
I found myself	0.45	0.07	0.81	0.25	0.22	0.57	
In the complex issue can not forget	0.44	0.18	0.72	0.36	0.19	0.65	
Liberation from everyday life	0.38	0.36	0.25	0.73	0.45	0.71	0.73
Euphoria	0.40	0.29	0.23	0.71	0.27	0.63	
Has mental strain relaxation	0.32	0.28	0.24	0.70	0.37	0.58	
When I get a good record than usual	0.25	0.16	0.19	0.57	0.30	0.33	
When I hit the ball well rounded thrill of pleasure	0.36	0.28	0.32	0.29	0.71	0.57	0.70
Feel the fun you get the expected score	0.33	0.23	0.30	0.35	0.67	0.53	
Sence of fun	0.36	0.19	0.25	0.33	0.62	0.50	
When escape from a difficult situation pleasure	0.25	0.17	0.19	0.35	0.58	0.93	
Correlation							
Social recognition	-	-	-	-	-	-	
Physical health	0.27	1.0	-	-	-	-	
Self-development	0.51	0.19	1.0	-	-	-	
Relieve stress	0.43	0.32	0.28	1.0	-	-	
Improve record	0.41	0.28	0.33	0.41	1.0	-	
Eigen	3.97	3.43	3.95	3.35	3.33	-	

estimation and oblique rotation) and reliability coefficient were employed to verify the structural validity and reliability of the questionnaire.

Perceived enjoymentfactor: For perceived enjoyment factors, this study invited golf enjoyment factor questionnaire developed by Lee and Cho (2010). This scale consists of a total of 26 questions in 5 sub-categories: 6 questions of physical health, 6 questions of performance improvement, 5 questions of stress relief, 4 questions of social recognition and 5 questions of self-development.

Table 2 shows that the results of exploratory factor analysis conducted to verify validity. Perceived enjoyment factors turned to be structured with 5 sub-factors. Here, the correlation of the sub-factors was 0.19-0.51 and reliability of items that structure each sub-factor ranges from 0.71-0.81.

Table 3: Exercise Commitment exploratory factor analysis and reliability results

	Factors			
Items	Commit act	Cognitive	h^2	α
It seems that through this exercise	0.90	0.04	0.81	0.81
Often try to imagine that this nice movement	0.84	0.14	0.73	
If the priority is seeing an article in a newspaper or magazine or relay	0.74	0.09	0.56	
The effort trying to get information about the technology and how to exercise	0.58	0.30	0.43	
The idea to continue this exercise in the future	0.09	0.701	0.50	0.82
If only I want more hours of exercise	0.08	0.68	0.48	
This exercise proud	0.10	0.67	0.46	
I feel a lot of happiness in this exercise	0.17	0.63	0.43	
This movement time piece is always being patient	0.19	0.59	0.38	
Correlation				
Cognitive engagement	0.37	1		
Eigen	3.22	3.67		

Exercise commitment: For exercise commitment, sport commitment behavior scale of 12 questions by Gag (2004) was employed. Table 3 shows the results of exploratory factor analysis and reliability analysis. Exercise commitment was structured with 2 sub-factors of behavioral commitment and cognitive commitment and the correlation of two sub-factors was 0.37. The reliability of those sub-factors ranged from 0.81-0.82.

Exercise continuation: Questions for intention to continue participation in golf exercise were composed of ones that ask respondents whether they have intention to keep participating in the exercise they are current in. The 3 questions by Yang (2004) were borrowed: 'I intend to keep participating in this activity', 'I intend to participate in this activity on regular basis' and 'I will try to keep participating in this activity'. Single dimensional analysis showed that factor loads ranged from 0.60-0.73 and reliability was 0.68.

Data analysis: The data collected in this study were analyzed for research purpose with SPSS 18.0. First,

frequency analysis was carried out to know the general characteristics of research participants and their normality was tested with mean, standard deviation, skewness and kurtosis of each questions. Missing values in the data were replaced through regression model.

Second, to verify the validity and reliability of measuring instrument, exploratory factor analysis was conducted and internal consistency α coefficient was acquired. Maximum likelihood estimation was employed for exploratory factor analysis and correlation between factors was tolerated.

Third, to know the relationship among perceived enjoyment factors, exercise commitment and intention to continue participation in golf exercise, correlation analysis was carried out and regression analysis was conducted to find out the extent of relationship based on the findings from correlation analysis. Significance level was set to $\alpha = 0.05$.

RESULTS AND DISCUSSION

Correlation of perceived enjoyment factors, exercise commitment and intention to continue exercise: Descriptive statistics and correlation analysis were conducted on the sub-factors of each variable to know the causality of perceived enjoyment, exercise commitment and intention to continue participation in golf exercise. First of all, the descriptive statistics of the sub factors of each variable showed that mean is 3.18-4.22 and SD is 0.69 min to 0.97 max. Next, correlation analysis of the sub factors demonstrated that they are all positively and significantly (+) correlated to each other (Table 4).

Regression analysis: Step-wise regression analysis was executed to verify the casuality of perceived enjoyment factors, exercise commitment and exercise continuance of the regular participants in golf exercise. The results are as follows.

Perceived enjoyment factors and exercise commitment: This study set behavioral commitment and cognitive commitment which are the sub-factors of exercise commitment as dependent variables to verify the relationship between perceived enjoyment factors and exercise commitment. Table 5 and 6 show the results of the verification. First, the regression analysis model with 5 sub-factors (social recognition, physical health, self-development, stress relief and performance improvement) of perceived enjoyment as independent variable and with behavioral commitment as dependent variable showed that only 4 sub-factors significantly explained behavioral commitment: self-development ($\beta = 0.307$), stress relief ($\beta = 0.166$), performance improvement ($\beta = 0.160$) and physical health ($\beta = 0.133$). Therefore, social recognition was excluded from the model. Here, the explanatory power of the model was $R^2 = 0.320$; variance was $F(4) = 121.326$, $p = 0.001$. Second, the regression analysis model with 5 sub-factors (social recognition, physical health, self-development, stress relief and performance improvement) of perceived enjoyment as independent variable and with cognitive commitment as dependent variable verified that 4 sub-factors significantly explained cognitive commitment: performance improvement ($\beta = 0.216$), physical health ($\beta = 0.168$), self-development ($\beta = 0.259$) and stress relief

Table 4: Basic statistics and correlation matrix of the sub-factors

Variables	1	2	3	4	5	6	7	8
Social recognition	1							
Physical health	0.312**	1						
Self-development	0.463**	0.374**	1					
Relieve stress	0.371**	0.440**	0.241**	1				
Improve record	0.561**	0.461**	0.571**	0.371**	1			
Commitment act	0.310**	0.375**	0.481**	0.349**	0.499**	1		
Cognitive engagement	0.411**	0.471**	0.498**	0.399**	0.519**	0.499**	1	
Continuance	0.357**	0.643**	0.322**	0.269**	0.399**	0.312**	0.356**	1
M	3.22	3.18	3.02	3.62	3.42	3.33	3.39	4.22
SD	0.89	0.97	0.92	0.98	0.97	0.97	0.94	0.69

*0.05, **0.01

Table 5: Fun factor and action commitment

Models (independent)	Non-standardized coefficients (B)	Standardized coefficients (β)	SE	t-values	p-values
In variables					
Self-development	0.324	0.054	0.307	6.043	0.000
Relieve stress	0.164	0.047	0.166	3.524	0.000
Improve record	0.160	0.054	0.160	2.947	0.003
Physical Health	0.113	0.050	0.113	2.281	0.023
Except variables					
Social recognition			-0.030	-0.575	0.565

*$R^2 = 0.320$, $p = 0.023$

Table 6: Fun factor and cognitive engagement

Models (independent)	Non-standardized coefficients (B)	Standardized coefficients (β)	SE	t-values	p-values
In variables					
Improve record	0.210	0.049	0.216	4.261	0.000
Physical health	0.194	0.045	0.200	4.298	0.000
Self-development	0.265	0.049	0.259	5.431	0.000
Relieve stress	0.161	0.042	0.168	3.814	0.000
Except variables					
Social recognition			0.072	1.466	0.143

*R^2 = 0.403, p = 0.001

Table 7: Lasting fun factor and exercise

Models (independent)	Non-standardized coefficients (B)	Standardized coefficients (β)	SE	t-values	p-values
In variables					
Physical health	0.419	0.028	0.589	14.980	0.000
Social recognition	0.134	0.030	0.173	4.407	0.000
Except variables					
Self-development			0.030	0.675	0.500
Relieve stress			-0.073	-1.691	0.092
Improve record			0.051	1.052	0.293

*R^2 = 0.441, p = 0.001

Table 8: Exercise duration commitment

Models (independent)	Non-standardized coefficients (B)	Standardized coefficients (β)	SE	t-values	p-values
In variables					
Cognitive	0.196	0.039	0.267	5.023	0.000
Commitment	0.127	0.038	0.179	3.369	0.001

*R^2 = 0.151, p = 0.001

(β = 0.166). Therefore, social recognition was excluded from the model. Here, the explanatory power of the model was R^2 = 0.403, variance was F(4) = 121.326, p = 0.001.

Perceived enjoyment factors and intention to continue exercise: Table 7 shows the results of regression analysis conducted to know the relationship between perceived enjoyment factors and intention to continue exercise. The regression analysis model with 5-sub factors (social recognition, physical health, self-development, stress relief and performance improvement) of perceived enjoyment as independent variable and with intention to continue exercise showed that only physical health (β = 0.589) and social recognition (β = 0.173) significantly explained intention to continue exercise. As a result, self-development, stress relief and performance improvement were excluded from the model. Here, the explanatory power of the model was R^2 = 0.441 and variance was F(2) = 84.526, p = 0.001.

Exercise commitment and intention to continue exercise: In Table 8, the results of regression analysis carried out on the sub-factors of exercise commitment and intention to continue exercise to know their relationship. The regression analysis model with 2 sub-factors (cognitive commitment, behavioral commitment of exercise commitment) independent variable and with intention to continue exercise as dependent variable showed that cognitive commitment (β = 0.267) and intrinsic (β = 0.179) significantly explained intention to continue exercise. Here, the explanatory power of the model was R^2 = 0.151 and variance was F(2) = 28.929, p = 0.001.

Besides, this study tried to know the relationship among enjoyment factors, exercise commitment and intention to continue exercise of golf exercise participants in an effort to contribute to improving golf industry. To attain the objective, this study carried out a survey with general participants in golf exercise and will unfold discussion with the findings from the survey.

Of late, 'enjoyment or fun' is the talk of town throughout the society and one of the most distinctions in sports activity. The social and psychological aspect of the concept is considered as an important factor in most of daily life and certain activities. In particular, young generations express 'enjoyment' is the main reason for activity (Wankel and Kreisel, 1985). It indicates that sports activity have to offer users pleasant experience, so, it can lead to good performance, regardless of sports games (Ryu, 2012).

According to Ryu (2012), enjoyment factors are not different by gender and affect and are affected by motivation of participation. Therefore, it reported that if enjoyment fails to give proper impact it can also affect the motivation of golf exercise participants.

Moon (2010) demonstrated that recognition, health and socializing under enjoyment in golf exercise had impact on exercise commitment in this order but not excitement. This result partially agrees with the result of this study where enjoyment factors were divided into behavioral factors and cognitive factors for analysis and it found that the sub factors of enjoyment expect social recognition gave a significant impact on exercise commitment. It is considered significant that this study found out that enjoyment gives a signifiant impact on exercise commitment and meaningful to see that flow (commitment) experience with sports take places when task difficulty is well harmonized in sports situations like agreement of thinking and action; harmony with activity, the extent of mental immersion, loss of time sense (Csikszentmihalyi, 1975; Csikszentmihalyi and LeFevre, 1989).

When looking into intention to continue exercise along with enjoyment factors as Weissinger and Bandalos (1995) said exercise continuance is the same concept as continuance of physical activity; a certain individual joins an exercise in person and performs the activity on regular basis it means persistent rate of exercise participation including the degree of exercise as well as obsession with continuance of and affection for exercise. According to Park (2015), the extent to which a golf player feel enjoyment with golf plays an important factor to sustain exercise continuance and also high level of trust in exercise ability leads to exercise continuance. Judging from these aspects this study included social recognition of enjoyment factors which was excluded for exercise commitment and excluded some factors that gave impact on exercise commitment. This indicates that enjoyment factors have impact on exercise commitment and intention to continue exercise and the level of social recognition and physical health among enjoyment factors have a positive impact on intention to continue exercise. Therefore, enjoyment factors have a significant impact on intention to continue exercise but the level of significant impact varies by sub-variables.

Regarding the relationship between the flow (commitment) experience and exercise continuance of golf exercise participants, Kelly (1983) observed that the higher flow experience is highly correlated with the possibility of participation in exercise continuance. Also, in the study of Kim (2011a), exercise commitment has partial impact on intention to continue exercise. These results indicate that flow experience can induce continuous participation in exercise through positive psychological state during sports activity and it is necessary to find some ways to attract commitment before, during and after golf exercise. According to the study of Kim (2011b) exercise commitment has a positive impact on ecstasy and distorted sense of time of tendency factors; ecstasy, distorted sense of time, clear goal and control sense of probability factors; ecstasy and distorted sense of time of reinforcing factors.

Therefore, the study supported the relationship between exercise commitment and exercise continuance. Yoon (2014) maintained that exercise commitment is a predictor of the attributes of exercise continuance and reported that although the sub-factors of exercise continuance showed difference, ultimately exercise commitment was closely related with exercise continuance.

In this study, exercise commitment was analyzed as a sub factor of behavioral commitment and cognitive commitment and the result showed that both behavioral commitment and exercise commitment have a positive impact on intention to continue exercise, so, this study agrees with previous studies that reported exercise commitment has impact on intention to continue exercise. Judging from these findings in the overall context of research it was demonstrated that the enjoyment factors of golf exercise participants are major influential variables. Therefore, a variety of methods are required to increase the enjoyment factors of golf exercise participants. In addition because exercise commitment variable is also affected by enjoyment factors it can be considered that the level of exercise commitment will increase when that of enjoyment factors increases. Because the exercise commitment of golf exercise participants gives a positive impact on intention to continue exercise, continuous participation of golf exercise participants will increase when the level of golf exercise participant's commitment increases. Therefore, various approaches to increasing golf exercise participant's commitment are also required. Eventually because golf enjoyment factors and exercise commitment have a positive impact on intention to continue exercise, we need multi-faceted consideration to materialize the finding.

CONCLUSION

To find out the relationship among perceived enjoyment factors, exercise commitment and intention to continue exercise, the present study conducted a survey with the regular participants in golf exercise in the golf driving ranges located in Gyeonggi-do Province. The researcher and his assistant researchers visited the gold

rangers, explained the purpose of the study to the users in person and collected a total of 404 questionnaires for statistical analysis. With the collected data, it was attempted to know the relationship among the perceived enjoyment factors, exercise commitment and intention to continue exercise of the regular golf exercisers through frequency analysis, factor analysis, reliability analysis, correlation analysis and step-wise regression analysis. As a result, this study acquired the findings as follows.

First, among the perceived enjoyment factors of golf exercise participants it was known that their behavioral commitment is affected by self-development, stress relief, performance improvement and physical health in this order. In addition, it was proved that cognitive commitment is affected by self-development, performance improvement, physical health and stress relief in this order.

Second, the analysis on the impact of perceived enjoyment factors on intention to continue participation in golf exercise revealed that only physical health and social recognition affect the intention and self-development, stress relief and performance improvement didn't show a significant impact on the intention.

Third, two sub-factors of exercise commitment of regular golf ranger users ranger (cognitive commitment and behavioral commitment) turned out to have a significant impact on intention to continue exercise.

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