

The influence of Pilates participants' empirical values on their emotional responses and behavioral intentions

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This study aimed to investigate the relationship between the empirical value of Pilates participants and their emotional response and behavioral intention. For this study, 286 participants who participated in Pilates classes in Seoul and Gyeonggi-do in 2019 were selected using the convenience sampling method. For data processing, frequency, exploratory factor, reliability, correlation, and multiple regression analyses were performed using PASW ver. 23.0. The empirical values of the Pilates participants had a significant effect on their emotional response and

behavioral intention. The emotional responses of the Pilates participants also had a significant effect on their behavioral intention. In summary, Pilates instructors, therefore, try to help the participants form positive experiences and emotional responses to induce participants' continuous participation.

Keywords: Pilates, Participants, Empirical value, Emotional response, Behavioral intention

INTRODUCTION

In the past, with “Faster, Higher, and Stronger” as their slogan, the public preferred to do fast exercise, which requires a muscular body. Recently, however, sports that put emphasis on slow exercise, such as yoga and Pilates, and that seek not only physical health but also mental balance, are fast gaining popularity among the public (Maguire, 2001; Roh, 2018a).


In the process of such change, Pilates is gaining public attention as a representative slow exercise. Introduced by Joseph H. Pilates of Germany in the early 1900s, Pilates emphasizes mental concentration, restrained flexibility, and mind-body harmony, and promotes motor activity of even the smaller muscles that are not used often, all without moving the body much, thereby helping one achieve a balanced posture and body shape. In addition, Pilates is a static exercise that helps contemporary people overcome their spatial constraints and relieve their stress by providing them with psychological stability, such as through meditation (Roh, 2018b). Above all, Pilates is loved by many women as it helps correct their posture, strengthen their muscles, and increase their

flexibility, thereby helping them maintain their body's harmony and beauty (Cruz-Ferreira et al., 2011; Joseph and Simona, 2004).

In addition to the positive effects of the Pilates exercises, many people pursue their own unique emotional stimulation as they consider the direct or indirect experience of Pilates very important (Nam et al., 2009). In other words, the more materially abundant a person is, the more important time and mental abundance will become for him, and the greater a person's desire to improve the quality of his life is, the more attention he will pay to his experiential consumption (Park and Sung, 2011).

In other words, the Pilates participants value experiential consumption through activities, as well as the harmonious development of their body and spirit through exercise. Experiential consumption, instead of material possession, is the main purpose of the experience itself, and the Pilates participants enjoy positive emotions like pleasure, emotional uplift, joy, and fulfillment during the experience (Jung and Lee, 2009). These feelings have a significant impact on experiential consumption and consumer behavior.

According to Lee and Lim (2002), emotion is defined as a direct experience through consumption activities, where consumption is

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defined as a concept that includes only the purchase and utilization of a product or service after its purchase. For Pilates participants, consumption can consist in a Pilates experience. Therefore, the values of Pilates participants can influence their emotions, which can be inferred to lead to their subsequent behavioral intentions.

In a study by Kirsch (1985), behavioral intention was closely related to behavior with actual experience, and this behavioral intention was highly correlated with actual behavior stemming from experience. Therefore, behavioral intention can be seen as an important predictor of a person's future behavior.

The theory of behavioral intention suggests that a consumer's direct experience is instilled in his memory and ultimately direct impacts his purchase behavior. In other words, if the value experienced by a consumer through a sports activity like Pilates is shaped by positive emotions, it can also affect the consumer's consumption behavior. The purpose of this study, therefore, was to investigate how the empirical values of Pilates participants influence their emotional and behavioral intentions. Below are the specific hypotheses that were established in this study to achieve its research purpose.

- The empirical value of the Pilates participants will affect their emotional response.
- The empirical value of the Pilates participants will affect their behavioral intention.
- The emotional response of the Pilates participants will affect their behavioral intention.

MATERIALS AND METHODS

Research subjects

For this study, 300 participants who regularly participated in Pilates classes in Seoul and Gyeonggi-do were selected using the convenience sampling method. The data of a total of 286 subjects were analyzed in the actual analysis, except for those of 14 subjects who were considered to have provided unfaithful survey responses. The demographic characteristics of the study participants are shown in Table 1.

Questionnaire

The survey tool that was used was a questionnaire. The questionnaire consisted of 34 items: four on the respondent's demographic characteristics, 12 on empirical value, 10 on emotional response, and eight on behavioral intention. For empirical value, the questionnaire developed by Kulviwat et al. (2007) was modified and supplemented for the purpose of this study. In this study, a

Table 1. Pilates participants' characteristics

Characteristic	No. (%)
Sex	
Male	47 (16.4)
Female	239 (83.6)
Age (yr)	
<30	139 (48.6)
30–40	89 (31.1)
≥40	58 (20.3)
Pilates participation period (yr)	
<1	71 (24.8)
1–3	90 (31.5)
3–5	78 (27.3)
≥5	47 (16.4)
Education level	
High school graduate	33 (11.5)
University student	88 (30.8)
University graduate	132 (46.2)
Graduate school degree	33 (11.5)

questionnaire consisting of three items on consumer usefulness, three items on aesthetic value, three items on service excellence, and three items on playfulness value was used. For the questions on emotional response, the emotional response scale used by George et al. (2015) was modified and supplemented for the purpose of this study. The subvariables were pleasure (four questions), arousal (three questions), and domination emotion (three questions). For the questions on behavioral intention, the scale that was used in the work of Donovan and Rossiter (1982) was modified and complemented to serve the purpose of this study. The subvariables were exploration intention (three items), word-of-mouth intention (three items), and re-experience intention (two items). Each question was designed to be answered based on a 5-point Likert scale.

Validity and reliability of the questionnaire

Exploratory factor analysis was conducted to determine the validity and reliability of the questionnaire, and the Cronbach α value was calculated to secure the reliability of the scale.

Four factors were extracted as a result of the 12-question factor analysis on empirical value. The factor load of consumer usefulness was 0.754–0.826, that of aesthetic value was 0.689–0.878, that of service excellence was 0.596–0.851, and that of fun value was 0.577–0.713. They are all considered valid measurements, and the results are presented in Table 2. In addition, the Cronbach α value of experience value was 0.874–0.843, suggesting that it was

Table 2. Exploratory factor analysis of empirical value

Item	Consumer usefulness	Aesthetic value	Service excellence	Playfulness value
1	0.826	0.213	0.015	0.007
2	0.754	-0.085	0.156	0.250
3	0.803	0.214	-0.112	0.164
4	0.231	0.689	0.265	0.285
5	0.083	0.878	0.228	0.131
6	0.054	0.798	0.032	0.231
7	0.245	0.098	0.111	0.577
8	0.116	0.126	0.212	0.613
9	0.154	0.175	0.078	0.713
10	0.284	0.201	0.596	0.352
11	0.154	0.123	0.851	0.078
12	0.265	0.214	0.772	0.031
Eigenvalues	2.226	2.138	1.899	1.589
Variance (%)	22.260	21.380	18.990	15.890
Accumulation (%)	22.260	43.640	62.630	78.520
Cronbach α	0.812	0.802	0.843	0.794

above the reliable level.

Three factors were extracted as a result of the factor analysis of the 10 items on emotional response. The factor load of pleasure was 0.779–0.932, that of the arousal factor was 0.784–0.881, and that of the domination emotion was 0.559–0.875. They are all considered valid measurements, and the results are presented in Table 3. In addition, the Cronbach α value of experience value was 0.720–0.821, suggesting that it was above the reliable level.

Three factors were extracted as a result of the 8-factor factor analysis on behavioral intention. The factor load of exploration intention was 0.858–0.923, that of word-of-mouth intention was 0.726–0.816, and that of re-experience intention was 0.791–0.886. They are all considered valid measurements, and the results are presented in Table 4. In addition, the Cronbach α value of experience value was 0.770–0.883, suggesting that it was above the reliable level.

Data analysis

To achieve the purpose of this study, data processing was performed as follows, using the IBM SPSS Statistics ver. 23.0 (IBM Co., Armonk, NY, USA). First, frequency, reliability, and correlation analyses were performed using IBM SPSS ver. 23.0 to investigate the demographic characteristics of the survey subjects and to verify the questionnaire errors. Second, multiple regression analysis was performed using the same program (IBM SPSS ver. 23.0) to verify the research model and hypotheses that were established

Table 3. Exploratory factor analysis of emotional response

Item	Pleasure	Arousal	Domination emotion
1	0.932	0.125	0.212
2	0.815	0.088	0.271
3	0.821	0.079	0.234
4	0.779	0.035	0.261
5	0.123	0.784	0.151
6	0.064	0.881	0.068
7	0.055	0.821	0.103
8	0.191	0.154	0.654
9	0.233	0.068	0.559
10	0.168	0.081	0.875
Eigenvalues	2.954	2.131	1.785
Variance (%)	29.540	21.310	17.850
Cumulative (%)	29.540	50.850	68.700
Cronbach α	0.771	0.720	0.821

Table 4. Exploratory factor analysis of behavior intention

Item	Exploration intention	Word-of-mouth intention	Re-experience intention
1	0.923	0.069	0.244
2	0.902	0.159	0.148
3	0.858	0.224	0.236
4	0.104	0.751	0.225
5	0.115	0.726	0.208
6	0.195	0.816	0.174
7	0.232	0.226	0.886
8	0.326	0.209	0.791
Eigenvalues	2.624	1.932	1.672
Variance (%)	26.240	19.320	16.720
Cumulative (%)	26.240	45.560	62.280
Cronbach's α	0.826	0.883	0.770

in this study.

RESULTS

Correlation analysis

The Pearson correlation coefficient was calculated before analyzing the effects of the empirical value of the Pilates participants on their emotional response and behavioral intention based on the results of the factor analysis, to confirm the degree of satisfaction of the discriminant validity between the factors for the one-dimensionality identified factors shown in Table 5. The correlation coefficient was less than 0.800 (0.099–0.581), which is the reference coefficient of multicollinearity.

Table 5. Correlation analyses among the variables

Variable	1	2	3	4	5	6	7	8	9	10
CU	1									
AV	0.435**	1								
SE	0.375**	0.374**	1							
PV	0.435**	0.387**	0.554**	1						
Pleasure	0.569**	0.294**	0.246**	0.459**	1					
Arousal	0.103	0.157*	0.198**	0.283**	0.228**	1				
DE	0.249**	0.147*	0.228**	0.267**	0.241**	0.464**	1			
EI	0.146*	0.106	0.188**	0.197**	0.099	0.325**	0.581**	1		
WMI	0.201**	0.209**	0.241**	0.378**	0.233**	0.558**	0.449**	0.466**	1	
REI	0.231**	0.264**	0.229**	0.351**	0.289**	0.441**	0.367**	0.337**	0.544**	1

CU, consumer usefulness; AV, aesthetic value; SE, service excellence; PV, playfulness value; DE, dominance emotion; EI, exploration intention; WMI, word-of-mouth intention; REI, re-experience intention.

* $P < 0.05$. ** $P < 0.01$.

Table 6. Multiple regression between the Pilates participants' experience value and emotional response

Variable	Pleasure		Arousal		Domination	
	Beta	t-value	Beta	t-value	Beta	t-value
CU	0.513	9.325***	-0.077	-1.021	0.152	2.078*
AV	-0.098	-0.413	0.042	0.559	-0.031	-0.521
SE	0.141	2.412**	0.039	0.496	0.084	1.091
PV	0.336	5.558***	0.291	3.681***	1.131	1.844
R^2	0.442		0.085		0.081	

CU, consumer usefulness; AV, aesthetic value; SE, service excellence; PV, playfulness value.

* $P < 0.05$. ** $P < 0.01$. *** $P < 0.001$.

Effect of the empirical value of the Pilates participants on their emotional response

Multiple regression analysis was performed to investigate the effect of the empirical value of the Pilates participants on their emotional response. Table 6 shows that the empirical value of the Pilates participants influence their pleasure, breathability, and dominance, which are subvariables of emotional response. Specifically, the explanatory power for the fluctuation of pleasure, a subvariable of emotional response, was 44.2%; that for the fluctuation of ventilation was 8.5%; and that for the fluctuation of control was 8.1%. To investigate the relationship between empirical value and emotional response, multiple regression analysis was performed.

Effect of the empirical value of the Pilates participants on their behavioral intention

The results of the multiple regression analysis designed to investigate the effect of the empirical values of the Pilates participants

Table 7. Multiple regression analysis of the Pilates participants' experience value and behavioral response

Variable	EI		WMI		REI	
	Beta	t-value	Beta	t-value	Beta	t-value
CU	0.043	0.568	0.031	0.397	0.031	0.452
AV	0.021	0.260	0.048	0.551	1.121	1.778
SE	0.082	1.098	0.024	0.311	0.024	0.362
PV	0.079	1.008	0.284	3.741***	2.412	3.121**
R^2	0.2		0.107		0.101	

CU, consumer usefulness; AV, aesthetic value; SE, service excellence; PV, playfulness value EI, exploration intention; WMI, word-of-mouth intention; REI, re-experience intention.

** $P < 0.01$. *** $P < 0.001$.

on their behavioral intention are shown in Table 7. The empirical value of the Pilates participants did not appear to have affected their intention, which are subvariables of behavioral intention, accounting for only 2.1% of the variance. Their empirical values, however, influenced their word-of-mouth and re-experience intentions.

Effect of the emotional response of the Pilates participants on their behavioral intention

The results of the multiple regression analysis performed to investigate the influence of the emotional response of the Pilates participants on their behavioral intention are shown in Table 8. Specifically, the emotional response of the Pilates participants was found to have had a significant effect on their exploration, word-of-mouth, and re-experience intentions, which are subvariables of behavioral intention. The explanatory power for search intention was 40.7%, that for word-of-mouth intention was 42.9%, and that for re-experience intention was 29.1%.

Table 8. Multiple regression between the Pilates participants' emotional response and behavioral intention

Variable	EI		WMI		REI	
	beta	t-value	beta	t-value	beta	t-value
Pleasure	-0.051	-0.099	0.088	1.711	0.151	2.746**
Arousal	0.096	1.679	0.466	8.361***	0.374	5.889***
Domination	0.612	10.512***	0.285	4.774***	0.171	2.849**
R ²	0.407		0.429		0.281	

EI, exploration intention; WMI, word-of-mouth intention; REI, re-experience intention.

** $P < 0.01$. *** $P < 0.001$.

DISCUSSION

The purpose of this study was to investigate the relationships among the empirical value, emotional response, and behavioral intention of Pilates participants. To achieve this goal, the data from 286 people who regularly participated in Pilates classes in Seoul and Gyeonggi-do were analyzed. For data processing, frequency, exploratory factor, reliability, correlation, and multiple regression analyses were performed using IBM SPSS ver. 23.0. In this chapter, the previously presented study results will be discussed in greater detail.

First, the empirical value of the Pilates participants was found to have had a significant effect on their emotional response. In relation to these findings, Jeong et al. (2008) suggested a relationship between empirical value and emotional response. The subvariables of empirical value, aesthetics, and entertainment had a significant effect on ventilation. In addition, the study of Jung and Lee (2009) also showed a significant effect on the relationship between the value of consumption and pleasure in experiential consumption. Ahn and Lee (2011) also found that the empirical value factors of visual appeal, entertainment, and daily escape had a significant effect on emotional response. Therefore, the results of this study support the results of the aforementioned previous studies, suggesting that Pilates participants are primarily concerned with the Pilates experience itself, and can be seen as consumers of experiential consumption. They also seek to enjoy and benefit from their experiences, and to enjoy their own emotions stemming from their Pilates experience.

Second, the empirical value of the Pilates participants was found to have had a significant effect on behavioral intention. In relation to this finding, Parasuraman and Grewal (2000) found in their study on the structural model of value, satisfaction, and behavioral intention that value is not only the choice behavior of the prepurchase customers but is also the postpurchase satisfaction, intention,

and recommendation. In addition, the studies by Jung and Lee (2009) and Chang and Ahn (2016) have shown that empirical values have a significant effect not only on behavioral intention but also on loyalty. Therefore, the results of this study support the results of these previous studies. Taken together, the results show that Pilates helps its participants obtain unique experiences through education, and that if values of satisfaction beyond the experience are formed, a favorable attitude towards Pilates will be developed, and the continuous participation in and re-experience of Pilates will be increased.

Third, the emotional response of the Pilates participants was found to have had a significant effect on their behavioral intention. In relation to this finding, Bagozzi et al. (1999) found that positive emotions have a significant effect on the behavioral intentions of positive word-of-mouth, willingness to pay, and transitional behavior. Feelings can be seen as an important variable in the participants' later behavior. In other words, if Pilates participants have positive feelings about their Pilates activities, they will continue to search for Pilates, encourage others to follow their lead, or develop the intention of re-experiencing it. Pilates leaders, therefore, are advised not only to ensure accurate and thorough education but also to try to help the participants form positive feelings after their perceived experiences to induce their continuous participation.

Research was conducted according to the purpose of this study, using appropriate research methods to identify the relationships among the variables. Below are the limitations of this study and the suggestions for subsequent studies.

First, no interviews or observations were conducted to identify the social and psychological characteristics of the participants because the questionnaire was used to investigate the purpose of this study. Therefore, it is suggested that combined qualitative-quantitative research be conducted in the follow-up studies to address the limitation of quantitative research.

Second, the subjects of this study were limited to the Pilates participants in the Seoul-Gyeonggi area. Therefore, the results of this study cannot be generalized or applied to all Pilates participants. In the follow-up study, it is suggested that a greater variety of study subjects be selected.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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