

# A Study on the Korean equestrian participation process based on revised Psychological Continuum Model

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## Abstract

This study aimed at testing a theoretical framework applicable to equestrian participation process based on revised PCM. This study revisited and revised PCM to deal with limitations that an initial model has, and analyzed the framework in terms of equestrian activity to understand equestrian participation process as a whole. The study model was tested among equestrian participants in Korea and used survey method to collect 320 questionnaires. Total 312 questionnaires were analyzed by SPSS and AMOS, and used to conduct frequency analysis, confirmatory factor analysis, reliability analysis, correlation analysis, and structural equation modeling. The results are as follows. First, favor on a horse and achievement factors positively affected all the involvement factors, and media and promoting friendship factors positively affected self-expression and centrality factors. However, pursuit of health factor did not affect all the involvement factors. Second, attraction factor had positive effect on volitional choice factor however no effect was observed on informational complexity or position involvement factors. In addition, centrality factor did not affect all the commitment formative factors while self-expression factor positively affected all. Third, informational complexity and volitional choice factors had positive effect on resistance to change factor, however, position involvement had no effect on resistance to change factor. Fourth, resistance to change factor positively affected loyalty factor.

Key words: Psychological Continuum Model, Revised Psychological Continuum Model, Equestrian Activity, Equestrian Participation

## Introduction

Physical activity has been recognized as one of the main determinants for the improvement of life, and a legislative bill of leisure sport promotion and security suggests estimated participants in Korea are up to 40 million and employees are more than 130,000 in 15,000

fields (Bill Information, 2016). What brought the energy in prevalence of leisure industry success is the recognition of well-being and the understanding of leisure sport as a wonderful means of physical and mental health promotion (Han et al., 2010; Han et al., 2017). Many precedent studies also have confirmed the positive effect of leisure sport on individuals by improving physical and psychological health, life satisfaction, and establishment of social relationship (Chang & Chen, 2017). Especially Koreans have a significant interest in efficient use of leisure time and

quality of life it brings, and hence the Korean government considers the importance and value of leisure sport and supports the leisure related policies (Lee & Park, 2017). Since participation in leisure sport and the development of an active lifestyle is pursued by a broad spectrum of society, developing a theoretical framework applicable to leisure participation is becoming more needed to guide researchers, practitioners and policy makers (Henderson & Bialeschki, 2005). And a comparative analysis among multiple frameworks that are capable of producing middle range theories of leisure participation presented that Psychological Continuum Model (PCM) is the most sound theoretical framework (Beaton & Funk, 2008).

PCM suggested by Funk and James (2001) is the framework explaining how consumers' leisure participation progressively develops while interacting with personal, psychological and environmental factors. PCM provides the role of attitude formation to become serious leisure participant, and identifies the psychological relationship between the individual and the leisure activity (Stewart et al., 2003). PCM is capable of suggesting integrated foundation of leisure participation which would guide research assisting theory development on participation in physically active leisure (Beaton & Funk, 2008). Moreover, PCM classifies consumers into 4 different stages in a sequence according to certain characteristics, thereby being a useful tool for market segmentation (Funk et al., 2011). Stage-based framework implicates the different forces and behavior would work between the stages, and accordingly consumption level of consumers are vary (Murphey, 2014). Their responses to marketing communications or promotion may vary as well, therefore PCM would help better targeting marketing activities by analyzing current relationships and functional levels of leisure consumers (Iwasaki & Havitz, 2004).

However, there are some limitations exist in PCM that it has failed to establish constructs and identify the processes between and within stages with empirical

work (Beaton & Funk, 2008). Appropriate staging mechanism is necessary and to this end, outcomes created from each process as one moves up the hierarchy (Beaton et al., 2009; Funk & James, 2006). Empirical testing and reliability (verifiability), intelligible pattern or structure with clear significant relationships (systems) is necessary to build a theory (Hunt, 1976; Razzaque, 1998; Van Dyke, 1960). Also, the theoretical framework should be tested in different political, social, and cultural environment because the impacts on leisure participation behaviours are not identical (Beaton & Funk, 2008).

Meanwhile, among many leisure activities, equestrian activity (horse riding) is in the spotlight of the public pursuing well-being as a distinguished leisure activity. It is because equestrian activity provides experience of sympathy with horse that grant health, relax, and healing to participants (Kim & Lee, 2012). Equestrian activity not only acts as efficient mediator for utilizing leisure time, but also generates economic value added thereby contributes to the advancement of national industries (Jung et al., 2017). As the synergy creation effect of an equestrian activity became prevalent, the Korean government launched 'Horse-Industry Promotion Acts' in 2012 to invigorate equestrian market and expand the population (Han, 2017). The demand of equestrian activity has gradually grown since the early 2000s (Park, 2016), and the size of horse industry has incrementally expanded as well to 3,421 billion won. Equestrian population has extended up to 948,714 in 2017, and 49,312 participants were who rides regularly. In accordance with annually increasing population, equestrian facility reached 512 spots in 2017 with 6.9% growth rate in comparison with last year (Horsepedia, 2018).

Yet decent number of participants in the equestrian activity tends to consider it as a transient activity, and discontinuance of equestrian participation may be affected by individual psychological factors such as attitude, belief and value, and by social, environmental factors (Kim et al., 2016; Kim & Noh, 2017a). Accordingly, to deal with the rising demand of the

equestrian activity and a full understanding of the equestrian participation process, a thorough and concrete analysis of participants' psychological, social, environmental impact is necessary (Kim & Noh, 2017a). That is, for equestrian activity to be settled as a common leisure sport, investigating how equestrian participants go through the process and which factors fall under the influence of participants' behavior are needed (Park & Kim, 2014). Also, to alter a negative perception people have in equestrian activity that it is limited to noble class (Jung, 2016) and strengthen a foundation of the equestrian participation popularization, an essential and substantial analysis of equestrian participants should take first priority (Han & Kim, 2018).

The researches on equestrian participants have been done are limited to participants' individual barriers (Lee, 2010), market segmentation of participants (Lim, 2014), and participants' personal values and service quality (Cho et al., 2017). Also, researches investigating relationships among variables related to equestrian participation restrictively covered the effect of motivation, life style, or specialization on involvement, satisfaction, consumer value, purchase behavior, well-being, mental health, intention to continue, stress coping, life skill, empathy (Choi, 2017; Han, 2017; Jung, 2016; Kim, 2012; Kim, 2011; Kim, 2008; Kwon & Sin, 2018; Lee, 2017; Lee, 2015; Pyo, 2011). The precedent researches attempted at identifying participants' characteristics, a state of mind, and behavior intentions, and influences affecting participants, however, they did not provide the complex course of equestrian participation that includes psychological, social, and environmental elements.

Under these circumstances, evaluating the equestrian participation process based on PCM would be able to provide expanding results for equestrian participation behaviour. Because PCM is able to suggest psychological and sociological process of participation, and may be used to characterize each participant's unique trajectory towards allegiance (Funk & James, 2006). Therefore through the evaluation based on PCM,

equestrian participants' behavior patterns and factors affecting could be analyzed in detail. Moreover, PCM could be a useful tool for understanding consumption patterns of equestrian participants in different level of PCM and providing a variety of marketing communications or promotion corresponding to each segment. Testing theoretical framework of PCM would help better targeting the participants and marketing activities appropriate to each equestrian service provider and contribute to full establishment and appropriate staging mechanism of PCM framework. Therefore, the purpose of this study was to analyse the Psychological Continuum Model (PCM) framework in terms of equestrian activity to understand equestrian participation process as a whole.

## Theoretical background and hypotheses

### Psychological Continuum Model (PCM)

PCM assigns individuals in a distinct phase in a sequence according to certain characteristics, and this stage based framework is better able to explain how or why leisure activity occurs and continues compared to those treat subjects as either participants or non-participants (Funk et al., 2011). The PCM framework suggests four and describes various psychological connections in a vertical framework. In particular, it provides an understanding of how participants find out about leisure activity, what attracts them, the importance and meaning one place in it, and reasons they continue to participate over long periods of time (Murphey, 2014).

The initial floor 'Awareness' denotes when an individual first learns that certain leisure activity exist, but does not have a specific preference (Funk & James, 2001). A psychological connection to leisure activity starts developing in awareness stage, and attitude is derived primarily through initial exposure anytime in life by family, friends, or media outlets (Funk et al., 2011). The second floor 'Attraction' denotes when

distinct interest or attitude formation toward specific favourite leisure activity develops (Funk & James, 2001), however, level of connection with leisure activity is not durable or stable, therefore an participant's attraction may also change when situational factors change or alternative options are available (Funk et al., 2000; Hill & Green, 2000; Kolbe & James, 2000). The third floor 'Attachment' denotes when the individual forms a meaningful psychological connection and assigns emotional, functional, and symbolic meanings to leisure activity and related experiences (Funk & James, 2001). Finally, the fourth floor 'Allegiance' denotes when psychological connection becomes resistant and persistent and result in influential attitudes that produce consistent and durable behavior (Funk & James, 2001).

The PCM provides a useful framework for conceptualizing four different stages related to leisure activity, however, it has failed to address how participants progress between stages and how participants process create distinct outcomes as one moves up the hierarchy (Funk & James, 2006). To include processes to explain the stage based outcomes, Funk and James (2006) suggested a revised PCM. Revised PCM is a comprehensive systematic framework that shows how to explore inputs, structural processes and multi-level outcomes, thereby provides individual's unique trajectory toward allegiance (Funk & James, 2006). The framework of the whole process and the outcomes of each stage of revised PCM are as shown in <Figure 1>.

### Construct establishment and study hypotheses

#### *Attraction stage and level 2 outcomes*

When individuals consciously decide to get knowledge and realization of participation opportunities thereby have a favorite leisure activity, they have reached the attraction level. This process is resulted from the hedonic motives, dispositional needs, and

social situational factors (Funk & James, 2001; 2006). Based on PCM framework, this study assumed that knowledge and realization (level 1 outcomes) affect personal motivation, inducing an individual to process into attraction stage, and the motivation produces attitude formation (level 2 outcomes) such as involvement. This supposition was induced from research of Iwasaki and Havitz (2004), proposing motivation is a significant predictor of enduring involvement. As Bagøien and Halvari (2005) referred, the assumption that involvement in physical activities and sport is positively correlated with intrinsic motivation is prevalent, and most theorists insist that motivation leads to involvement. For example, Kyle et al. (2006) suggested that individuals gradually learn the benefits of various leisure activities and become

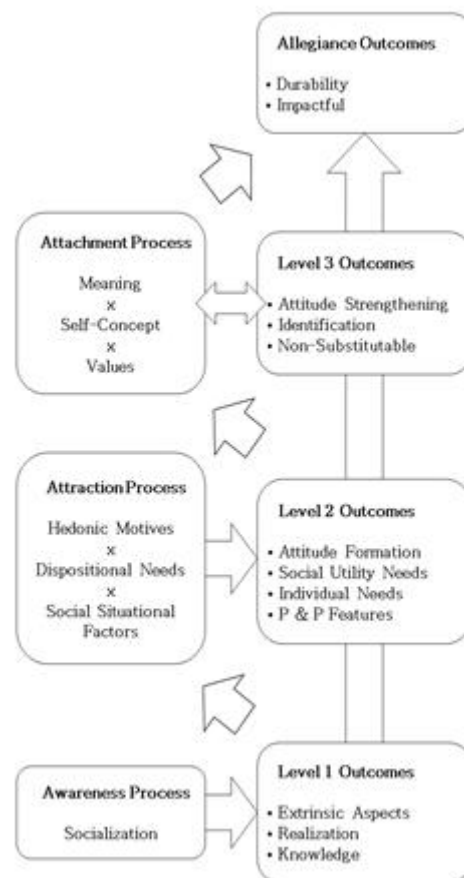


Figure 1. The revised Psychological Continuum Model (Funk & James, 2006, p.193)

indulged in those that best meet their needs, and provided an empirical support for the relationships between motivation and involvement. Other precedent literatures also have suggested the motivation and the involvement construct as the useful tools for distinguishing between attraction and attachment in PCM (Beaton & Funk, 2008; Beaton et al., 2011; Funk & James, 2001; Iwasaki & Havitz, 1998). In addition, Iwasaki and Havitz (2004) argued that involvement is a multifaceted construct including attraction, self-expression, and centrality which refers to perceived importance or interest in an activity, unspoken statements that activity conveys about the person, and central role of the activity in an individual's life respectively. Laurent and Kapferer (1985) also asserted that consumer's involvement is a multiple index, and all dimensions of involvement must be taken into account simultaneously because all dimensions contribute to the prediction of behavior and each of them has a different influence on consumer behavior. According to a basis for the motivation and involvement relationship, this study established following hypothesis.

H1. Each motivation factor will positively affect each involvement factor.

#### *Attachment stage and level 3 outcomes*

At the level of attachment, individuals develop a stronger emotional connection to a leisure activity which is valued, protected, and linked to other important attitudes, values, goals, and self-interest. During the attachment stage, individuals begin to take on internal significance to the activity, and produce a strong and persistent relationship with the activity. This relationship reflects the formation and structure of committed attitudes that remain unchanged over time, and results in consistent and stable behaviors. Internal significance produces greater mental effort to restore consistency within the attitude network as well, thereby induces rapid restoration of consistency producing

commitment. Also, attachment process reflects preference stability towards the activity and a volition to resist alternative choices. In this context, the key difference between attachment and allegiance is the individual's commitment to the activity, resistance to change, and impact on cognitive processes and behavior (Funk & James, 2001). Based on this process in PCM framework, this study proposed involvement (level 2 outcome) influences individual's commitment through the attachment process. And when committed individuals give the meaning, self-concept, and values toward the activity through this process, relationship between the individual and the activity gets stronger inducing non-substitutable attitude (level 3 outcomes) such as resistance to change (Funk & James, 2001; 2006). Resistance to change is an underlying factor that contributes one's attitude to commitment, and this attitudinal component is conceptualized and measured as representing psychological commitment (Crosby & Taylor, 1983; Funk & James, 2001; Pritchard et al., 1999). Three recent investigations conducted by Kyle and colleagues provide some insight on this involvement and commitment relationship. First, Kyle et al. (2003) examined the relationship between involvement and place attachment among hikers and they identified that the dimensions of involvement positively influenced the dimensions of commitment. Further, Kyle et al. (2004) tested the same model using a sample of boaters, and their findings illustrated that the effect of involvement on commitment varied across the activities and settings. Finally, Kyle and Mowen (2005) suggested that enduring leisure involvement have a positive effect on agency commitment, supporting the influence of involvement has on commitment. These results may infer that leisure activity participants' involvement develops their behavioral and psychological commitment to the activity and setting.

Also, Pritchard et al. (1999) suggested that psychological commitment is best defined by a tendency to resist change, and to maximized it individuals should (1) be motivated to seek informational complexity in the

cognitive schema behind their preference, (2) identify with important self-values associated with the preference, and (3) be able to freely initiate choices that are meaningful. In other words, involvement has an impact on the psychological commitment which include three commitment's formative processes, informational complexity, position involvement, and volitional choice, and committed individual forms durable attitude to resist changing leisure activity (Kyle et al., 2004; Iwasaki & Havitz, 1998; 2004; Pritchard et al., 1999). Practical researches supports this assumption observing that each dimension of involvement influences on the different dimension of commitment formative factors and ultimately attains an individual's resistance to change (Iwasaki & havitz, 1998; Kyle et al., 2004; Pritchard et al., 1999). They suggests that it is important to pay attention not only to the relationship between involvement and psychological commitment at the global level, but also to relationships between each dimension of the two constructs. According to a basis for the involvement and psychological commitment relationship, this study established following hypotheses.

H2. Each involvement factor will positively affect each commitment formative factor.

H3. Each commitment formative factor will positively affect resistance to change factor.

### *Allegiance stage*

An individual having a specific relationship with an activity get to the allegiance stage when attitude toward the activity becomes persistent, resistant, and influences cognition and behavior (Funk & James, 2011). And these four strength-related consequences of the attitude are indicators of a strong, stable relationship and continuous commitment and dedication to the activity, which are determinants of loyalty (Funk et al., 2000). This study assumed that when individual reached the allegiance stage, continuous commitment derives resistance to change and this output again influences

the relationship between the individual and the activity, making stronger and more stable dedication at the allegiance stage producing loyal attitude. Many researchers also conceptualized resistance to change as the most important antecedent of loyalty (Bodet, 2012; Crosby & Taylor, 1983; Dick & Basu, 1994; Iwasaki & Havitz, 1998; 2004; Pritchard et al., 1999). According to a basis for the psychological commitment and loyalty relationship, this study established following hypothesis.

H4. Resistance to change factor influenced by each commitment formative factor will positively affect loyalty factor.

## Methods

### Study participants

The elaborated framework of PCM developed in this study was tested among Korean equestrian participants. Consumers at various equestrian clubs in Korea were targeted for the survey, and the researcher visited each club from May 1st to July 3rd, 2018. A total of 12 equestrian clubs were selected by convenient sampling method from various provinces in Korea, and 320 questionnaires were distributed. After excluding the incomplete questionnaires, 312 questionnaires were used to final analysis. Participants without former riding experience were excluded. Summary of the selected equestrian clubs and demographic information of study participants are as shown in <Table 1> and <Table 2>.

### Study instruments

To collect data required for verifying the relationships and moderating effect, the survey method distributing questionnaire was adopted. The survey questionnaire was configured to fifty one questions based on previous researches with modification for the purpose of this study. In detail, the questionnaire included fifteen questions from Jung (2016) to measure motivation in equestrian participation, twelve questions from Kyle and

Mowen (2005) and McIntyre (1989) to measure involvement, nine questions to measure psychological commitment formative factors and four questions to measure resistance to change from Pritchard et al. (1999), five questions from Zeithaml et al. (1996), Bennett and Rundle-Thiele (2002), and Mellens et al. (1996) to measure loyalty, and six questions to measure demographic information of participants.

Study procedure

Total 312 questionnaires collected from equestrian participants were used for data processing using SPSS and AMOS programs. First, to identify the demographic characteristics of study participants, frequency analysis was conducted. Second, to test construct validity, confirmatory factor analysis (CFA) was conducted. Third, in order to test the reliability of the variables, Cronbach's  $\alpha$  coefficient which was a measure of internal consistency between items, was calculated. Finally, to verify the structural relationship among

Table 1. Summary of the equestrian clubs

N	Equestrian club	Questionnaire (N)	
		Distributed	Collected
1	Namyangju, Kyungki	30	29
2	Sungnam, Kyungki	30	28
3	Yichun, Kyungki	20	20
4	Ahnsan, Kyungki	20	19
5	Paju, Kyungki	10	10
6	Hwasung, Kyungki	20	20
7	Sejong new administrative city	20	20
8	Sangju, Kyungbook	40	38
9	Kumi, Kyungbook	30	30
10	Yangsan, Kyungnam	20	20
11	Kwangju metropolitan	40	39
12	Jeju	40	39
	Total	320	312

motivation, involvement, psychological commitment, and loyalty factors, correlation analysis was conducted. After confirming the significant correlations and multicollinearity, model fit and path analysis using Structural Equation Modeling (SEM) were conducted. Validity tests

Content validity

In order to verify the content validity, the survey

Table 2. Demographic information of participants (N=312)

	Factor	N	%
Gender	Male	138	44.2
	Female	174	55.8
Age group	20-29	86	27.6
	30-39	75	24.0
	40-49	83	26.6
	50-59	54	17.3
	over 60	14	4.5
Level of education	high school graduate	32	10.3
	university (college) enrolled	61	19.6
	university (college) graduate	156	50.0
	graduate school	63	20.2
Occupation	student	63	20.2
	office worker	49	15.7
	independent businessman	57	18.3
	professional	66	21.2
	public official	19	6.1
	housewife	47	15.1
	others	11	3.5
Monthly income (KRW)	below 1 million	54	17.3
	1-2 million	31	9.9
	2-3 million	42	13.5
	3-4 million	35	11.2
	4-5 million	31	9.9
	over 5 million	112	35.9
Frequency in a week	no reply	7	2.2
	0-1	92	29.5
	2-3	125	40.1
	4-5	63	20.2
	over 6	32	10.3

Table 3. Results of confirmatory factor analysis and reliability analysis

Factor	Item	Estimate	S.E.	CR	AVE	$\alpha$
Favor on a horse	curiosity about a horse	.623	.591	.844	.647	.797
	exercise with a horse	.836	.185			
	sympathy with a horse	.836	.199			
Pursuit of health	exercise effectiveness	.820	.297	.784	.555	.768
	physical strength	.847	.245			
	weight loss benefit	.555	.818			
Media	horse riding in media	.607	.642	.759	.516	.754
	equestrian event/performance	.730	.549			
	information media	.814	.278			
Promoting friendship	get along with people participating in	.804	.352	.847	.649	.854
	intimacy with an acquaintance	.759	.484			
	interaction with people participating in	.884	.248			
Achievement	learn skill/movement	.850	.271	.899	.749	.876
	improvement of ability	.859	.208			
	confirm the level (skill)	.809	.230			
Attraction	very important to me	.798	.229	.922	.747	.874
	offers relaxation when pressure build up	.755	.252			
	one of the most satisfying things	.832	.173			
	enjoy equestrian participation	.804	.207			
Self-expression	says a lot about who I am	.843	.294	.876	.639	.869
	can tell a lot about a person	.699	.503			
	can really be my self	.795	.316			
	others see me as they want to see me	.817	.297			
Centrality	life is organized around participation	.896	.227	.899	.690	.908
	central role in my life	.926	.155			
	enjoy discussing participation	.730	.511			
	time is organized around participation	.823	.397			
Informational complexity	don't really know that much	.867	.202	.915	.782	.903
	consider myself an educated consumer	.832	.276			
	knowledgeable	.915	.158			
Position involvement	reflects the kind of person I am	.853	.250	.843	.729	.832
	makes me feel important	.834	.279			
	freely chosen from several alternatives	.809	.263			
Volitional choice	did not control the decision	.829	.252	.845	.649	.783
	fully responsible for the decision	.597	.404			
	preference would not change	.837	.186			
Resistance to change	difficult to change my beliefs	.860	.193	.928	.763	.901
	recommendation would not change preference	.811	.258			
	changing preference requires major rethinking	.831	.228			
	recommend to someone	.859	.192			
Loyalty	say positive things to other people	.849	.158	.930	.728	.896
	encourage friends and relatives	.805	.248			
	consider as your first choice	.747	.350			
	participate more in the next few years	.753	.258			

$\chi^2=1597.471$   $df=824$  TLI=.905 CFI=.917 RMSEA=.055



questionnaire was previewed by a professor in sport industry studies and two researchers enrolled in a doctoral program majoring in sport management and marketing field. They checked if the overall design of the questionnaire, the appropriateness of the item construction, and expression that has translated in Korean were properly designed. The words and phrases of the items they indicated were revised and adjusted to secure content validity.

*Construct validity*

To verify the construct validity of this study, Confirmatory Factor Analysis (CFA) was conducted. A series of the fit indices were considered to assess fitness of the questionnaire and the overall model fit, and Construct Reliability (CR) and Average Variance (AVE) were calculated to evaluate convergent and discriminant validity (Formell & Larcker, 1981). Standard for item elimination was value of Squared Multiple Correlations (SMC) lower than .4 (Kacmar & Carlson, 1997), and one item from position involvement factor was eliminated to improve the model without compromising the theoretical meaningfulness of the

measure. The total values of model fit were  $\chi^2=1597.471$ ,  $df=824$ , TLI and CFI were over .9 (TLI=.905, CFI=.917), and RMSEA was lower than .08 (RMSEA=.055), satisfying adequate fit (Hu & Bentler, 1999). Also, to verify the reliability of the scale, Cronbach’s coefficient alpha were used (Van de ven, &Ferry, 1980). The result of CFA and reliability analysis are as shown in <Table 3>.

Results

Correlation analysis

To analyze correlation among motivation (favor on a horse, pursuit of health, display of external condition, achievement, promoting friendship), involvement (attraction, self-expression, centrality), commitment formative (informational complexity, position involvement, volitional choice), resistant to change, and loyalty variables, Pearson’s product-moment correlation coefficient was calculated. The results of correlation analysis showed that statistically significant correlations existed and all latent variables were positively

**Table 4.** Results of correlation analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1												
2	.171**	1											
3	.123*	.296***	1										
4	.069	.227***	.413***	1									
5	.329***	.148**	.283***	.311***	1								
6	.536***	.066	.073	.153**	.435***	1							
7	.301***	.148**	.363***	.422***	.491***	.546***	1						
8	.313***	.068	.329***	.387***	.491***	.593***	.746***	1					
9	.193**	.153**	.305***	.366***	.421***	.299***	.581***	.520***	1				
10	.251***	.168**	.361***	.434***	.400***	.401***	.740***	.521***	.523***	1			
11	.398***	.055	.090	.194**	.398***	.584***	.605***	.545***	.418***	.498***	1		
12	.377***	-.016	.098	.237***	.407***	.654***	.509***	.364***	.412***	.417***	.652***	1	
13	.428***	.026	.102	.297***	.332***	.654***	.517***	.546***	.313***	.434***	.585***	.664***	1

\*\*\*p<.001, \*\*p<.01, \*p<.05

1: favor on a horse 2: pursuit of health 3: media 4: promoting friendship 5: achievement 6: attraction 7: self-expression 8: centrality 9: informational complexity 10: position involvement 11: volitional choice 12: resistant to change 13: loyalty

correlated. The values of correlation coefficient of all variables were lower than .8, proving they are free from the restriction of multicollinearity. The result of correlation analysis is as shown in <Table 4>.

### Hypotheses testing

To analyze hypothesized relationships of motivation, involvement, psychological commitment, and loyalty, structural model analysis was conducted. The results of the proposed structure model test were  $\chi^2=1690.569$ ,  $df=859$ , TLI and CFI were over .9 (TLI=.902, CFI=.911), and RMSEA was less than .08 (RMSEA=.056), showing a reasonable fit (Hu & Bentler, 1999; Steiger, 1990).

The first hypothesis examined the relationship between motivation factors and involvement factors. The hypothesis were partially supported, assuming that four motivation factors of equestrian participation positively affected each involvement factor. To be specific, favor on a horse and achievement positively affected attraction, self-expression, and centrality factors of involvement, however, pursuit of health did not affected all involvement factors and media and promoting friendship only affected self-expression and centrality.

The second hypothesis examined the relationship between involvement factors and commitment formative factors. The hypothesis were partially supported, assuming that two factors of involvement positively affected each commitment formative factor. To be specific, self-expression positively affected informational complexity, position involvement, and volitional choice factors of commitment formative, however, centrality did not affected all commitment formative factors and attraction only affected volitional choice.

The third hypothesis examined the relationship between commitment formative factors and resistance to change factor. The hypothesis were partially supported, assuming that two factors of commitment formative factors positively affected resistance to

change factor. To be specific, informational complexity and volitional choice positively affected resistance to change, however, position involvement negatively affected resistance to change.

The fourth hypothesis examined the relationship between resistance to change factor and loyalty factor. The hypothesis was supported, assuming that resistance to change factor positively affected loyalty.

The results of the hypothesis testing is as shown in <Table 5>.

## Discussion

### Discussion on the relationship between motivation and involvement

This study assumed that each motivation factor will positively affect each involvement factor, and hypothesis was partially supported. First, favor on a horse and achievement factors positively affected all the involvement factors. In other words, equestrian participants who participate due to curiosity about a horse, sympathy with a horse, and skill development consider the participation very important. They take pleasure in horse riding and believe that riding displays who I am. Moreover, they tend to center equestrian participation in their lives and spend much time in riding. Pyo (2011) explained this phenomenon in equestrian participation by peculiarity of equestrian activity. When exercising with horse creatures, participants starts to treat them not as exerciser but as the other self. And the longer the participants had been emotionalized this sentiment, the higher respect and identification with oneself toward horses are sensed. These involved participants recognize the riding as the attractive part of their lives. Kim and Park (2015) also supported the discussion about attraction by contending that equestrian participants seemed to have high level of flow that is related to pleasure, satisfaction, and enthusiasm when they sense self-confidence, needs, and achievement from riding experience. Meanwhile, Kim and Noh (2017b) observed that peculiarity of a horse

and achievement or effort to improve equestrian skill promote leisure identity and pivot of life. Here, leisure identity implies that equestrian participation is represented as myself (self-expression) and pivot of life signifies that my life focuses on equestrian participation (centrality). Also, Kim et al. (2016) insisted that equestrian activity exhibit higher flow than other sports because it is the only sport that interact with an animal and creates a harmony with a horse. In addition, they insisted that attainment of equestrian technique increases flow and contentment with this flow again raises self-consciousness which provides more elevated flow. When participation is maintained and participants' skills get superior, the novice's fear about a horse and height diminishes and will to have interaction with

horses and sense of achievement is strengthened (Kim, 2015).

Second, media and promoting friendship factors positively affected the two involvement factors, self-expression and centrality. In other words, people who participate in equestrian activity due to media or social exchanges believe that horse riding may express one's own self and become means of the way others look one self. And equestrian participation plays a central role in their lives and times. Lee (2013) observed that edutainment motivation and social motivation reveal participants' self-image and self-realization when people participate in serious leisure. Here, edutainment motivation implies to the motive from mass media, and social motivation implies to the motive related to other

**Table 5.** Results of hypothesized direct pathways

Structural relationships	Estimate	S.E	<i>t</i>	<i>p</i>	Hypothesis testing
Favor on a horse → Attraction	.565	.078	7.385	.000	supported
Favor on a horse → Self-expression	.234	.083	3.889	.000	supported
Favor on a horse → Centrality	.237	.098	3.764	.000	supported
Pursuit of health → Attraction	-.069	.046	-1.212	.226	rejected
Pursuit of health → Self-expression	-.068	.059	-1.267	.205	rejected
Pursuit of health → Centrality	-.137	.072	-2.368	.018	rejected
Media → Attraction	-.101	.071	-1.458	.145	rejected
Media → Self-expression	.207	.092	3.061	.002	supported
Media → Centrality	.219	.111	3.046	.002	supported
Promoting friendship → Attraction	.067	.051	1.032	.302	rejected
Promoting friendship → Self-expression	.284	.067	4.529	.000	supported
Promoting friendship → Centrality	.189	.079	2.876	.004	supported
Achievement → Attraction	.286	.053	4.458	.000	supported
Achievement → Self-expression	.325	.067	5.357	.000	supported
Achievement → Centrality	.326	.080	5.082	.000	supported
Attraction → Informational complexity	-.147	.090	-2.017	.044	rejected
Attraction → Position involvement	-.055	.086	-.816	.415	rejected
Attraction → Volitional choice	.509	.070	6.988	.000	supported
Self-expression → Informational complexity	.698	.102	6.273	.000	supported
Self-expression → Position involvement	1.415	.124	10.909	.000	supported
Self-expression → Volitional choice	.470	.077	4.365	.000	supported
Centrality → Informational complexity	.070	.090	.632	.527	rejected
Centrality → Position involvement	-.557	.098	-4.799	.000	rejected
Centrality → Volitional choice	.022	.059	.236	.813	rejected
Informational complexity → Resistance to change	.112	.047	2.034	.042	supported
Position involvement → Resistance to change	-.311	.077	-3.289	.001	rejected
Volitional choice → Resistance to change	1.044	.122	9.330	.000	supported
Resistance to change → Loyalty	.688	.066	11.964	.000	supported

people such as family or friends. And self-image is related to the conscious that other people view oneself, corresponding to self-expression factor, and self-realization is considered as centrality. However, media and promoting friendship factors had no effect on attraction factor, and this result may be explained by two facets that involvement factor has - cognitive and behavioral. Cognitive involvement refers to the level of preference, needs, and perception, and behavioral involvement refers to the level of interest about information and action of behavior (Pyo, 2011). Among the involvement factors this study suggested, attraction applies to the cognitive involvement while self-expression and centrality apply to the behavioral involvement. From this point of view, precedent researches supported the result that media and promoting friendship increased the level of behavioral involvement, however are not related to the cognitive involvement. Jung (2016) observed that favor on a horse and achievement positively affected cognitive involvement however media prevented equestrian participants from cognitive involvement. The research interprets this result by restrictive information of equestrian activity the mass media provides, because people perceive a biased image of horse riding that it is limited to a specific class. Therefore equestrian participants with media motivation seemed to be involved in external expression or concentration, however seemed to not feel pleasure or satisfaction from riding. In addition, Lee (2015) focused on the trait of equestrian activity that it is an individual and private activity thus did not affect cognitive involvement. In other words, equestrian participants with promoting friendship motivation would be involved in the way others evaluate oneself or social interaction, however not consider riding important or divert oneself in riding.

Third, pursuit of health factor did not affect all the involvement factors. In other words, equestrian participants who expect exercise effect, physical improvement, or weight loss tend to involve less than other motivations. In this regard, Kim (2011) also

suggested the same result with equestrian participants. The research investigated which motivation would affect cognitive and behavioral involvement respectively, and observed that health motivation had no effect on both involvement factors in contrast with other motivations. Pyo (2011) explained that involvement is a meaningful source to promote leisure participation sustainability, and participants tend to involve more deeply when involvement is more related to intrinsic motivation such as pleasure. It is because involvement experience occurs when activity itself is the objective of motivation, regardless of any external compensations. The more and more time spending with horses make participant share more sympathy and rapport, thereby regard the internal motivations the most important. Therefore, people participate in equestrian activity with health or physical compensations seem to focus on effectiveness produced from riding thus do not experience involvement. Moreover, many of the equestrian participants are professionals, self-employed, or free-lancers with higher incomes, and they schedule frequency unvarying and are able to keep regular habits (Pyo, 2011). Health pursuit participants tend to regard horse riding as a mean of continued health and ride habitually (Kim, 2008), thus they seem to not be attracted enough to be involved by riding.

### Discussion on the relationship between involvement and commitment formative

This study assumed that each involvement factor will positively affect each commitment formative factor, and hypothesis was partially supported. First, self-expression factor positively affected all the commitment formative factors. To be specific, equestrian participants who express self by riding long for knowledge and information, take responsible for the choice, and identify with riding by positioning self in it. Cognitive development theory (Thelen & Smith, 1994) supports participants' commitment to informational complexity, suggesting that as

participants' involvement with specific activities increases, their knowledge related to the activity also increases (Kyle & Mowen, 2005). Also, Pyo (2011) discussed that equestrian participants seem to enjoy others asking about expert knowledge because it is considered to get others' recognition. Accordingly participants with high level of self-expression tend to desire information to fulfill others' expectation as a master. Lee (2013) revealed that many equestrian participants identify the image of equestrian activity with themselves and try to command attention of others about the optimal leisure life style they have never found previously. In the perspective of volitional choice, self-expression may be explained by Greenwald's (1982) impression management and ego involvement. To leisure participants who desire perceptions of self to an activity, the presentation of activity related contents reflects their own choice (Kyle & Chick, 2002). It also may be explained by social judgment perspective, which asserts that involvement and self-concept are related constructs. If individuals are highly involved with an activity and their self-value is based upon it, they tend to hold more intense attitude about it (Chang & Gibson, 2011; Sherif et al., 1973). High involved people with self-value are more strongly motivated to protect their beliefs and attitudes related to activity, because activity related experience grants not only awareness of alternative choice but also leads to judge the consequence more definitive (Kyle & Mowen, 2005). Havitz and Dimanche (1990) also insisted that involved participants who are aware of more service alternatives tend to have more distinct service preferences. Self-expression value of consumption behavior is also an important part of position involvement, because participation in an activity can be a motivator for an individual to attain one's desired value and self-image through position involvement (Crosby & Taylor, 1983; Pritchard et al., 1992).

Second, attraction factor had positive effect on volitional choice factor however no effect on informational complexity or position involvement

factor. In other words, when participants recognize the importance of equestrian activity from enjoyment and satisfaction they receive, they seem to exert freedom of choice and often desire to maintain that volitional choice. People who experience enjoyment from leisure activity carefully scrutinize decision-making process, and involve in an activity they never experienced (Iwasaki & Havitz, 1998). However, the result of this study indicated that among the commitment factors informational complexity and position involvement were not predicted by attraction involvement in equestrian activity. With regard to this consequence, Nam and Kim (2011) inferred that equestrian participants who take pleasure in riding sense satisfaction and achievement by participation itself, therefore they are not motivated from displaying of external conditions and boasting of riding. Therefore, equestrian participants with the high level of attraction involvement make a decision based on a person's free choice, however they unlikely to perceive a complex cognitive structure and in-depth insight into riding or to evaluate that self-images of riding perceived in public association are consistent with personal self (Iwasaki & Havitz, 2004). Participants' affective responses such as enjoy, fun, and excitement are sometimes independent from the activities, programs, and their personal motivation. And the responses may be affected by other elements such as the environment of the club or the behavior of the staff (Alexandris et al., 2002). For equestrian participants involved in riding with importance and pleasure, their needs and expectation when perceive enjoyment should be identified to derive commitment and appropriate and effective relationship marketing program to build communication should be designed.

Third, centrality factor did not affected all the commitment formative factors. Centrality of equestrian participation refers to an participants' total lifestyle that are associated with a riding (Kyle et al, 2003), and even though the riding includes centrality to some individuals, it does not attract participants' commitment

to riding significantly. Kyle and Chick (2002) supports this result by observing that Fair participants who score high on centrality dimension look forward to the Fair each year, however they invest little else of their life in the event thereby are more difficult to maintain their commitment. Kyle and Chick (2002) explained this phenomenon with social ties that are a part of the centrality dimension. They claimed that leisure is most often a social rather than individual experience, and suggested that investigators using scales to measure centrality might need to consider separating the two components as to centrality to lifestyle and social contexts. Chen et al. (2013) also stressed the social aspect of centrality that is expressed by the importance of the leisure activity for an individual's family, friends, and meaningful acquaintances. Centrality is under the influence of social contents because high involvement does not always translate directly to high psychological commitment in part due to moderate effects of social-situational factors that involvement have on psychological commitment (Iwasaki & Havits, 1998). Funk et al. (2004) also found the origins related to centrality stemmed from the opportunity to bond with friends, interaction with others, and whom share the activity preference. Because centrality of involvement provides the opportunity to cultivate social contacts, and social opportunities created through leisure activity influence individuals' preference that encompasses one's lifestyle orientation. Therefore, when consider the relationship between centrality facet and psychological commitment, social components should be reflected, however, trait of equestrian activity is more of an individual and private than social (Lee, 2015). For equestrian participants, intrapersonal restrictions rather than interpersonal restrictions should be conquered to be committed to riding.

### Discussion on the relationship between commitment formative and resistance to change

This study assumed that each commitment formative

factor will positively affect resistance to change factor, and hypothesis was partially supported. First, informational complexity and volitional choice factor had positive effect on resistance to change factor. Bodet (2012) supported the finding that a relationship between the informational processes and resistance to change exists. Iwasaki & Havitz (2004) also suggested that information process forms cognitive structures and when more reasons, beliefs, knowledge or complex cognitive structure toward a particular attitude is generated, it is more difficult to change that attitude. It is because individuals who resist to change in certain activity will actively increase their skills in order to be more involved in the activity and will persist in their preferences (Teng, 2011). When participants continuously involved in the activity and become psychologically committed to it, they would not be willing to change their preference and concentrate on the balance skill and challenges. In other words, they will try to obtain related knowledge and experience in order to upgrade their skills that is needed to overcome challenges they face, and persist in their activities. (Cheng et al., 2016). Moreover, Bloemer and Odekerken-Schröder (2003) explained that when complex informational schema is based on participants' commitment, changing their mind becomes more difficult because accommodating different cognition involves more challenge. When complex cognitive structure supports the attitude, deviation from an attitude involves higher psychological costs (Salancik, 1977).

The result may be explained by side bet theory suggested by Becker (1960) who described commitment as a tendency to engage in consistent lines of activity as a result of the accumulation of 'side bets' that would be lost if the activity were discontinued. Meyer and Allen (1984) interpreted the term side bet in general that it refers to anything of value the individual has invested such as time, effort, and money. The research asserted that the more individuals achieve side bets, the more expensive the consequence of inconsistency would be because side bets would be lost or worthless when

commitment is discontinued. Scanlan et al. (1993) hold the same view, found personal investments and sport commitment were correlated indicating that expenditures of time and effort are associated with greater commitment to participation. Funk et al. (2004) also agreed that individuals who have made a financial and psychological investment are more capable of carrying out psychological risk to their commitment formation. In short, equestrian participants become committed to riding because the invested cost related to riding are high enough to continuously build the psychological relationship. Lee (2013) observed that equestrian participants attempt to reinforce their professionalism by many scholarly activity such as learning theories, viewing video clips, and asking coaches. This tendency to gather information is evident among serious equestrian participants who had been participated some period of time and often, and is done by self-endeavor rather than others' recommendation. Moreover, when participants choose equestrian activity from wide range of leisure activities, they tend to grant greater meaning in that selection. Because when people sense they are acting freely in choosing something, they attribute meaning toward the decision that has been taken out of free choice and involve freedom from constraints. (Bem, 1967; Bloemer & Odekerken-Schröder, 2003).

Second, however, position involvement had no effect on resistance to change. As Iwasaki and Havitz (1998) mentioned, high psychological commitment does not always linearly result in a high degree of resistance to change because each facet of psychological commitment of individual are unlikely to fluctuate in tandem. In case of equestrian activity, participants' psychological commitment that reflect their self-value may change their preference for the participation. Kyle et al. (2004) also presented the same result among recreationists, insisting that position involvement had non-significant t-value on activity resistance. The research concluded that this specificity may be due to level difference related to psychological commitment construct scale.

Psychological commitment measurement provided by Pritchard et al. (1999) includes two forms of level; commitment to the leisure activity (product level) and commitment to the service provider (brand level), and they suggested that when measuring with brand commitment seemed to be more appropriate in leisure activity setting. Freedman (1964) also described position involvement as "self-values perceived by the consumer in their commitment to a particular brand of product or service" making reference to brand level commitment. Based on precedent researches, this study assumed that the negative relationship between position involvement and resistance to change is derived because the equestrian participants recognized the scale as the product level, that is psychological commitment to equestrian service itself. If they evaluated their internal views of self-values are consistent with the service provider, the result may had been different. Bloemer and Odekerken-Schröder (2003) are in the same vein in the perspective of identification process. Identification process refers to the question whether customers identify themselves with the values embodied by a particular service provider, and position involvement is considered to be an important construct representing the identification process. The more strongly customers identify themselves with the service provider, the stronger their commitment towards the service provider is expected. The research also supports in the perspective of relationship with the involvement factor, centrality. They asserted that position involvement would be built when image of the service provider comes close to the lifestyle of the customer. Since centrality facet did not created position involvement among equestrian participants, it may come to the result that resistance to change to other activities was negatively followed by position involvement.

#### Discussion on the relationship between resistance to change and loyalty

This study assumed that resistance to change factor

will positively affect loyalty factor, and hypothesis was supported. Participants' psychological commitment resulted in their resistance to change to other activities, and it included two facets which are preference stability and resistance to counter persuasion (Buchanan, 1985; Crosby & Taylor, 1983; Iwasaki & Havitz 1998). Preference stability is maintained by two mechanisms, selective perception to protect preference and biased post-decision evaluative process to defend prior decisions (Crosby & Taylor, 1983; Pritchard et al., 1996). Resistance to counter persuasion blocks persuasive communication which provides information about alternative choice (Dick & Basu, 1994). Resistance to change is the most critical factor involved in psychological commitment, thus when participants pass through two processes and practice a certain behavior for a period of time, commitment continues to work (Cheng et al., 2016). Besides higher level of psychological commitment develops loyalty as a progressive process, and again resistance to change functions as a key precursor to loyalty development process (Iwasaki & Havitz, 2004; Pritchard et al., 1999). Kyle et al. (2004) provided the empirical evidence through their research observing setting resistance and activity resistance positively influenced loyalty, which produce participants' psychological dependence on the activity and their reluctance to alter their activity preferences. Bodet (2012) also presented the result that resistance to change significantly influenced behavioral intentions which is the attitudinal dimension of loyalty.

## Conclusion and recommendation

As participants at the attraction stage have not yet developed a stable perception of riding and psychological connection to it, many of them may drop out (Alexandris et al., 2017; Funk & James, 2001). Alexandris et al. (2017) provided an evidence that constraints influence an individual's decision to participate in a leisure activity in the preference for participation. In other words, individuals at the

attraction stage of PCM may express a favorable attitude towards an activity, however not be motivated enough to overcome perceived constraints. The research insisted that individuals with strong motivation tend to negotiate leisure constraints successfully and outcome of this negotiation process determines the participation. On the other hand, when the perception of constraints is so strong that one is not able to completely overcome them, participation may be blocked because of the lack of a possible stable perception and psychological connection with the activity. Therefore, in the attraction stage, interaction among personal motivation and positive experience of participating should be reinforced to develop positive attitude towards the activity and overcome the constraints (Alexandris et al., 2017; Beaton et al., 2009). Murphey (2014) insisted that participants in attraction stage are most interested in hedonic value, and among equestrian participants 'horse' is a key hedonic value to raise favor on a horse and achievement. Consequently, to induce equestrian participants' involvement, it may be more effectual to emphasize on distinct characteristics of riding using horse and potential for skill betterment rather than stress the exercise effect. To attract participants to sustain in riding, marketing materials emphasizing the fun and enjoyment associated with the horse would be the most effective. Furthermore, mass media should prepare a countermeasure to escape from restrictive image that equestrian activity is an exclusive sport to the rich. By providing various and ordinary information, media should motive the general public and map out a specific plan to continue participants' attraction. In terms of equestrian club owners, they should provide sufficient space for participants to socialize and interact thereby be able to increase social motivation. This space should not only perform as means of socialization, but also as means of stress relief and pleasure. If we examine the related contents of promotion of equestrian activities up to now, majority of them are focusing on physical improvement or losing weights. Most of the promotion are fragmentarily reporting exercise of the body or



calories burned up when riding, however, to induce equestrian participation involvement effectively horse and skill point of view should be presented and stressed much more.

The participants at the attachment level have emotional, functional, and symbolic meanings to equestrian activity and increased stability of individual-activity connection than in the attraction stage (Beaton et al., 2011; Funk & James, 2006). As participation continues and the psychological connection becomes more stable, restriction to participation begins to diminish and influence of environmental factors over participation decrease. The outcome of the attachment process is more complex, thus participants in the attachment are better able to inhibit alternatives and are less sensitive to changes than people in attraction (Funk & James, 2001). Sport Commitment Model (SCM) suggested by Scanlan et al. (1993) hold the similar view of attachment stage of PCM. The research defines sport commitment as “psychological construct representing the desire and resolve to continue sport participation, and individual psychological state of attachment to their participation”. They suggested attachment reflects a motivational force to continue to involve and consequently reflects psychological base of persistence.

To bring participants at the attraction stage to attachment level, self-identity and positive valuing of that identity is important (Shamir, 1988) as self-expression led to psychological commitment formative factors. Also, to maximize participants’ psychological commitment, participants should be motivated by a need to maintain consistent relationships between a freely chosen preference and conspicuous perspectives of complex cognitive structure (Gahwiler & Havitz, 1998). The more information the individual commits, the more difficult it is to change the mind due to greater cost (Pritchard et al., 1997). And participants eventually realize that the ordinary routines of behavior were side bets and they understand what they will lose when change the line of behavior (Meyer

& Allen, 1984). In addition, the tendency to resist to change preference toward equestrian activity may face conflicting information, thus relationship between participant and riding should involve substantial knowledge about participant's volitional choice (Shamir, 1988). Moreover, because position involvement does not refer to the equestrian activity itself but to the service provider, establishing brand identity strategies fit for each target participant may enhance participant’s psychological commitment toward equestrian service providers (Cheng et al., 2016). As Alexandris et al. (2017) noted, strengthened psychological relationship guard against other negative influences, constraints, and consideration of alternative activities. And successful negotiation with these negative effects may be a source of motivation to participate or understanding the benefits of participation. Meyer and Allen (1984) conjectured that conscious decisions that form commitment do not always result in consistent lines of behavior, because only decisions with sizable side bets will produce consistent behavior. Decisions, as well as one’s intention to position the self-value, would lack staying power if side bets do not support the decisions and are not based on more than one kind of side bets.

The final stage of allegiance is reached when the individual has been involved and committed thereby the activity becomes representative of individual core value, beliefs, and preference (Funk & James, 2006). Equestrian participants at the allegiance stage have developed enduring psychological connection with the riding, which is stable, persistent and resistant to change. The strength and complexity of this psychological connection protects participants from other negative influences, evaluations, and consideration of alternative activities (Alexandris et al., 2017; Funk & James, 2001; 2006). Furthermore, Searle (1991) insisted that while participants sustain in the same leisure activity, decision to change service providers is more complicated than switching product brand. Individuals tend to attribute their decision to the quality and value of one brand compared with another when

change product brand. However, changing of service providers involves not only the quality and value but also the further considerations about fit between the individual and the particular service provider and about the fit between the activity selected and the needs of the individual. Therefore, loyal customers could be a valuable asset to the service providers, and consequently marketing efforts should focus on engendering loyal equestrian participants to the service providers (Kyle et al., 2004).

This study provided an operational theoretical framework for building practically relevant revised PCM in equestrian participation. This progress would help understanding equestrian participation behavior process and consumption patterns of different levels of PCM. Appropriate marketing strategies suitable for each target participant may bring about efficient resource management and effective marketing communication. And these important managerial implications and efforts would strengthen psychological connection which may lead to participants' satisfaction and durable attitude as PCM suggested.

There are limitations in present study that should be addressed by future research. First, the data in this study represent a cross-sectional snapshot of a time-based phenomenon, thereby failed to provide evidence of progression through stages by individual participants. Longitudinal studies using repeated measures would be required to establish stage-based progression and to investigate specific trajectories through the stages. Second, this study did not examine the awareness process or its outcomes. However, since socialization into sport would provide additional information of preference, it may be equally instructive to attraction process. Finally, equestrian participation may be influenced by various factors. Once constructs and staging algorithms have been developed, research should investigate the different impacts of participation on determinants across and between stages (Beaton & Funk, 2008). Since it is impossible to expect that the involvement-loyalty relationship is identical for all

individuals, researchers need to consider the role of personal or social-situational factors (Iwasaki & Havitz, 1998). Further research should take moderating effects of each factor into account in order to understand the equestrian participation process as a whole. Moreover, investigating the factors moderate the transition from stage to stage would help understanding the dynamic empirical results of PCM. Mixed methods may also be taken into account for future researches to provide rich and in-depth explanation of processes within PCM framework.

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