Physically Active Leisure Participants Segmentation: PCM Stage-Based Investigation

Ersin Eskiler [i]
Sakarya University of Applied Sciences

Abstract

Recent recreation and sports marketing research demonstrates that involvement can be used as a new segmentation strategy and offers potential opportunities for better understanding of leisure participants. In the current study, the three-step the Psychological Continuum Model (PCM) segmentation procedure was performed for participant segmentation by using physically active leisure involvement profiles. This study consisted of 561 (n_{male}=321 and n_{female}=240) physically active leisure participants and three involvement facets of hedonic value, centrality and symbolic value were conducted to segment participants. Confirmatory factor analysis, the Pearson correlation coefficient and multivariate analysis of variance were used for data analysis. Our findings showed that a significant majority of the participants were allocated to the attraction stage (n = 306, 54.5%) and awareness (n = 106, 18.9%), attachment (n = 104, 18.5%) and allegiance (n = 45, 8%), respectively. Consequently, the segmentation revealed that differences in attitudes from awareness to attraction, attachment and allegiance stages, become strengthened among physically active leisure participants. Thus, this information can be used to better understand the leisure activity participation habits of students for marketers-practitioners.

Keywords: Campus recreation, Segmentation, PCM stage, Leisure activity

DOI: 10.29329/ijpe.2019.193.12

---

[i] **Ersin Eskiler**, Assist. Prof. Dr., Sakarya University of Applied Sciences.

Correspondence: eeskiler@gmail.com

INTRODUCTION

Increasing the level of participation in physically active leisure is among the most important targets of the institutions and organizations that are responsible for providing active recreation services / opportunities in the community (Beaton & Funk, 2008). Many non-governmental organizations, especially governments and health organizations, highlight the importance of being physically active and the health problems caused by being inactive (Gobster, 2005; Jackson, Howes, Gupta, Doyle, & Waters, 2005; Priest, Armstrong, Doyle, & Waters, 2008). The World Health Organization (WHO) European Ministerial Conference on Counteracting Obesity was held on November 2016 in Turkey and Turkish Healthy Nutrition and Active Life Programme has been introduced by the General Directorate of Primary Health Care Services of Ministry of Health (Atasever, 2018). Similarly, although wide levels of attention have been increased physical activity levels across various settings and communities, leisure physical activity is declining while physical inactivity is rising (Howes, Doyle, Jackson, & Waters, 2003; Van Sluijs et al., 2005). Research indicates that more than half of the world's population does not have sufficient physical activity to benefit their health (WHO, 2003). Reducing the levels of activity required in daily life (working / work and home life), especially due to technological developments and modernization (Bulut, 2013), increases the importance of participation in physically active leisure. On the other hand, it is stated that participation in passive recreation activities is relatively higher in societies that do not have sufficient knowledge, skills and cultural level about how free time can be evaluated positively and effectively (Karaküçük, 1999). A research has been carried on leisure habits of the secondary education and university students in Turkey shows that more students interest in a passive activity (Kahraman, Çolak, Bayazıt & Yılmaz, 2017; Kuş Şahin, Akten, & Erol, 2009). Therefore, the capacity to understand and increase participation in physically active leisure is one of the main tasks of higher education institutions, which are responsible for protecting public interest as well as sports and recreation managers (Beaton, Funk & Alexandris, 2009).

Campus recreation services are an essential part of many university campuses. (Hurd & Forrester, 2006; Watson, Ayers, Zizzi, & Naoi, 2006). These services have positive effects on students (*mentally and physically healthy, developing healthy behaviors throughout life, socialization, clarification of social values*), as well as academic performance, organizational satisfaction and community sensation. (Belch, Gebel, & Maas, 2001; Gobster, 2005; Huesman, Brown, Lee, Kellogg, & Radcliffe, 2009; Watson et al., 2006). Despite the benefits of campus recreation activities/physical activity to individuals in especially health (Gobster, 2005), it is stated that many students do not show the desired participation in the activities (Stankowski, Trauntvein, & Hall, 2017; Young, Ross, & Barcelona, 2003). On the other hand, the main objective of the campus recreation programs is to ensure the continuity of the current participants and to acquire new customers (participants). (Kaltenbaugh, Molnar, Bonadio, Divito, & Roeder, 2011). Thus, encouraging campus recreation professionals to focus on current and potential participants' marketing agenda based on participants' needs and desires is increasingly important for the development and implementation of a sound marketing campaign (Funk & James, 2006; Kaltenbaugh et al., 2011). There is a need for a comprehensive marketing strategy to increase students' participation in campus recreation program / physically active leisure. Market segmentation is the basis of an effective marketing strategy (Kotler, 2000). It is known that all active leisure participants are not the same in terms of their interests and needs. For this reason, separating potential active leisure participants into segments that share similar characteristics and give similar reactions to marketing efforts will increase the effectiveness and efficiency of the activities that will be offered to them. (Kotler, 2000; Perreault, Cannon & McCarthy, 2012). In recent years, researchers have demonstrated that involvement as a segmention leisure participants is an important psychological variable (Alexandris, 2013; Alexandris, Douka, & Balaska, 2011; Kyle, Kerstetter, & Guadagnolo, 2002). On the other hand, the Psychological Continuum Model (PCM) by Funk & James (2001) was introduced as a conceptual framework in the classification of individuals participating in sports and various recreational activities. (Beaton et al., 2009). The PCM has been used in various sports (Beaton et al., 2009; Beaton, Funk, Ridinger & Jordan, 2011; Doyle, Kunkel, & Funk, 2013), recreation (Funk, Beaton, & Pritchard, 2011) and tourism research (Filo, Chen, King, & Funk, 2013) to understand the psychological connections that consumers develop with

various sports and leisure objects. In other words, it is theoretically accepted to understand both active and passive leisure participation. (Beaton & Funk, 2008). The PCM provides a framework for conceptualizing a person's psychological development in the process of becoming an allegiance leisure participant (de Groot, & Robinson, 2008). This model is a stage based framework that investigate cognitive, sociological and psychological processes that affect formation and change of attitudes during the four stages of awareness, attraction, attachment and allegiance (Beaton & Funk, 2008; Funk & James, 2006).

Awareness refers to any activity, the process of socialization that helps the individual to introduction. The introduction is based on personal, psychological and environmental factors throughout the life of the individual (Funk, Alexandris, & McDonald, 2008; 2016). It refers to the process by which an individual first learns about specific sports and/or leisure effects, but does not have a certain motivation for participation and seeks alternative activities (Funk & James, 2001, 2006). In this context, cognitive outcomes serve as input to the attraction stage (Doyle et al., 2013). *Attraction* consists of personal (knowledge, personality, etc.), psychological (will, respect, entertainment, etc.) and environmental inputs (marketing efforts) (Funk, et al., 2016). It is the stage in which individuals use their knowledge of the available options and develop an appreciation for a particular sport object (Doyle et al., 2013). At this stage, emotions are effective, and there is a significant interest or initial attitude to the effects of sport and/or leisure. In order to perform a certain behavior (participation in and/or monitoring of activities), the individual is ready to select or is to make a choice among alternatives (Funk & James, 2006; Funk et al., 2016).

Attachment can be defined as a subjective psychological process connected with the phenomenon of sport / leisure and is much stronger than the socio-structural and individual processes at the stage of attraction. (Beaton et al., 2011; Funk et al., 2016). In other words, the individual participating in a specific activity represents the assigning of emotional, functional and symbolic meanings into the activity rather than sociological reasons (Funk & James, 2006). In this context, it is stated that participation a concomitant transition to more stable and predictable behavior occur has gained a personalized meaning in the literature. Individuals in the attachment stage are resistant to alternative options (Doyle et al., 2013) and more likely to overcome potential barriers that prevent their participation in a particular event. (Beaton et al., 2011). *Allegiance* is the final stage of the PCM framework, which represents the highest level of psychological connectivity that can be achieved with a leisure activity. (Doyle et al., 2013). At this stage, the individual is an allegiance (or committed) fan of leisure activity. Allegiance results in effective attitudes (resistant, persistent, cognitive bias and behavior) that produce consistent and durable behavior. (Funk & James, 2001). In other words, the thoughts of the individual about a sport phenomenon and the evaluation of the information related to this phenomenon are shaped as a result of the prejudices of the individual (Funk et al., 2016).

As mentioned above, PCM is a hierarchical structure to organize different academic disciplines and to explain consumer behavior in sport and/or leisure activity according to Funk & James (2001) and Funk et al., (2008). Besides, Funk & James (2001) stated that the attitudinal component of loyalty separated into three independent but related components including persistence, resistance, and cognitive processes. In this context, the purpose of the study was to evaluate the functionality of the sports involvement to segment in active leisure participants. The research problems of the current study were follows: Is there identification distinct market segments (awareness, attraction, attachment and allegiance) using active leisure participants' involvement profiles? and Is there any differences among active leisure participants segments (awareness, attraction, attachment and allegiance) in terms of attitude (persistence, resistance to change and biases in cognitive processing)?

METHODS

Participants and Procedures

The data were collected from students of Sakarya University in Turkey. In Sakarya University, the use of 1 football ground, 2 multipurpose sport hall, 2 astro pitch, 3 tennis court and 3 basketball-volleyball court are allocated to students. Additionally, different activities (hiking/trekking, etc.) are organized throughout the year by the Directorate of Health, Culture and Sport, and provide bicycles at low cost are available to students on campus. For this reason, necessary permissions were obtained from the university management. The questionnaires were distributed by a team of five pollsters on different days and hours of the week. The students who volunteered to participate in the research filled the questionnaires in the cafeteria and recreation areas at the sports facilities. In terms of demographics, more than half of the sample was allocated to attraction (54.5%) and 57.2% (n = 321) of participants were male and 42.8% (n = 240) were female belonging to the age group of 18-29 (M = 21.38 ± 1.64). Participants were educated in 9 different faculties (Table 1).

Materials Used

We used questionnaire based survey method as the descriptive research method in the present study. A questionnaire distributed to potential-respondents about their interpretation of the following items. In order to determine involvement level of participants, nine items representing the hedonic value, centrality and symbolic value facets which were adapted to Beaton et al, (2011) study and to suit physically active leisure activity (campus recreation services). Beaton et al. (2011) found that the structures had internal consistency (hedonic value $\alpha = .86$, centrality $\alpha = .82$, symbolic value $\alpha = .86$) and the correlations between facets were moderate to high, (hedonic value-centrality r = .74, symbolic value- hedonic value r = .66, centrality-symbolic value at r = .74). In the scale language adaptation process, we used translation-back translation and reverse translation methods (Brislin, 1970). The Turkish form were conducted to the scholars of scale development and to determine the most appropriate items by applying on a test group of 35. All items were measured by 7-point scales anchored with 1 = Strongly Disagree and 7 = Strongly Agree. In addition, active leisure attitudes (persistence, resistance to change, and biases in cognitive processing) of the participants were measured by three items through the literature review and expert opinions.

Statistical Analysis

All data were analyzed by SPSS 20 and confirmatory factor analysis was conducted using AMOS 20 software. The demographic characteristic of participant was analyzed by descriptive statistics (percentage, frequency, means and standard deviation). The Pearson correlation coefficient was used to determine the relationship between variables. Multivariate analysis of variance (MANOVA) was performed to determine the differences among PCM stages.

RESULTS

Confirmatory factor analysis (CFA) was performed using AMOS 20.0 by maximum likelihood estimation method to analyze the measurement specifications of the active leisure involvement facets. Reliability and convergent and discriminant validities were acceptable along with the factorial structure as summarized in Table 2 (Hair, Black, Babin, & Anderson, 2009; Noar, 2003). Additionally, model fit adequate: $\chi 2/df = 3,78$, GFI = .974, CFI = .986, NFI = .948, RMSEA = .07.

Table 1. Demographic profile of respondents

		PCM Stage n (%)				**Total** n (%)
		Awareness	**Attraction**	**Attachment**	**Allegiance**	
Sex	Female	49 (46.2)	126 (41.2)	43(41.3)	22 (48.9)	240 (42.8)
	Male	57 (53.8)	180 (58.8)	61 (58.7)	23 (51.1)	321 (57.2)
Age	<19	18 (17.0)	27 (8.8)	10 (9.6)	4 (8.9)	59 (10.5)
	20	18 (17.0)	69 (22.5)	25 (24.0)	10 (22.2)	122 (21.7)
	21	30 (28.3)	74 (24.2)	27 (26.0)	11 (24.4)	142 (25.3)
	22	18 (17.0)	68 (22.2)	19 (18.3)	7 (15.6)	112 (20.09)
	23	14 (13.2)	33 (10.8)	12 (11.5)	5 (11.1)	64 (11.4)
	24	5 (4.7)	14 (4.6)	3 (2.9)	4 (8.9)	26 (4.6)
	>25	3 (2.8)	21 (6.9)	8 (7.7)	4 (8.9)	36 (6.4)
Faculty of …	Engineering	24 (22.6)	71 (23.2)	24 (23.1)	6 (13.3)	125 (22.3)
	Science and Literature	20 (18.9)	57 (18.6)	25 (24.0)	8 (17.8)	110 (19.6)
	Political Sciences	14 (13.2)	51 (16.7)	11 (10.6)	9 (20.0)	85 (15.2)
	Technology	11 (10.4)	23 (7.5)	9 (8.7)	4 (8.9)	47 (8.4)
	Law	9 (8.5)	22 (7.2)	4 (3.8)	-	35 (6.2)
	Computer and Information Sciences	9 (8.5)	20 (6.5)	7 (6.7)	8 (17.8)	44 (7.8)
	Sports Sciences	8 (7.5)	18 (5.9)	8 (7.7)	3 (6.7)	37 (6.6)
	Management	8 (7.5)	31 (10.1)	9 (8.7)	5 (11.1)	53 (9.4)
	Communication	3 (2.8)	13 (4.2)	7 (6.7)	2 (4.4)	25 (4.5)

The scale items were evaluated according to the reliability and validity criterion to ensure accurately capture the items what they wanted to measure (Hair et al., 2009) and then the three-step segmentation procedure developed by Beaton et al. (2009; 2011) was used to place participants into the four PCM stages.

The PCM three-step staging procedure was used to segment participants according to Funk and James (2001), Beaton et al. (2009; 2011) studies. Detailed information on the PCM three-step staging procedure can be investigated as defined in Beaton et al. (2011) study. According to this procedure, we found that 306, 106, 104 and 45 respondents were allocated into attraction, awareness, attachment and allegiance, respectively (Table 3). Afterwards, MANOVA was used to determine the differences among active leisure involvement in terms of hedonic value, centrality and symbolic value. As a result, MANOVA revealed significant differences ($p<.01$) for all levels of active leisure involvement in PCM stages. Post hoc analysis showed that there was no statistically significant difference between attraction and attachment in terms of hedonic value ($p > .05$). On the other hand, there was a statistically significant difference between all stages (awareness, attraction, attachment and allegiance) and all facets (hedonic value, centrality and symbolic value) in terms of averages ($p <.01$).

Table 2. Confirmatory factor analysis results for physically active leisure involvement facets

	M	SD	CR	α	AVE	MSV	ASV	Centrality	Hedonic value	Symbolic value
Centrality	3.06	1.63	0.88	0.90	0.71	0.62	0.38	0.84		
Hedonic value	5.47	1.42	0.86	0.94	0.68	0.15	0.13	0.39	0.82	
Symbolic value	2.97	1.72	0.92	0.96	0.81	0.62	0.36	0.78	0.32	0.90
Reliability	CR > .70 and α = .70									
Convergent validity	CR > AVE and AVE > .50									
Discriminant validity	ASV < MSV < AVE									

The bolded figures represent the square roots of the AVE of the corresponding constructs.
CR = Composite Reliability, AVE = Average Variance Extracted, MSV = Maximum Shared Variance, ASV = Average Shared Variance.

Table 3. Physically active leisure involvement facets by stage of PCM

PCM STAGE (n)	Hedonic value		Centrality		Symbolic value	
	M	*SD*	*M*	*SD*	*M*	*SD*
Awareness (106)	3,36 [a]	,98	1,82 [a]	,99	1,82 [a]	,99
Attraction (306)	5,90 [b]	,77	2,56 [a]	1,04	2,32 [a]	1,11
Attachment (104)	5,78 [b]	1,51	4,48 [a]	1,29	4,64 [a]	1,19
Allegiance (45)	6,76 [a]	,35	6,15 [a]	,59	6,18 [a]	,76
	$F_{(3, 557)}$=217.95		$F_{(3, 557)}$=264.60		$F_{(3, 557)}$=292.31	

Wilks' λ= .166; F= 163.61; p< .001; η^2= .450
[a]: Post hoc tests revealed significant difference from all other stages at p < .01.
[b]: Post hoc tests revealed no significant difference at p>0.05

After PCM staging, correlation analysis was performed to determine which analysis could be used to assess differences between stages (Table 4). In this context, MANOVA was used to investigate the differences among persistence, resistance to change and biases in cognitive processing variables in terms of hedonic value, centrality and symbolic value (Pallant, 2015). The correlation analysis demonstrated that biases in cognitive processing, persistence and resistance to change showed strong to moderately positive relationships. Symbolic value and centrality had the strong correlation persistence followed by resistance to change and biases in cognitive processing. Additionally, hedonic value indicated moderately correlation biases in cognitive processing with its weakest correlation with persistence and resistance to change.

Table 4. Construct Correlations

		(1)	(2)	(3)	Hedonic value	Centrality	Symbolic value
Biases in cognitive processing (1)	r	1	.680**	.679**	.459**	.597**	.621**
Persistence (2)	r		1	.751**	.291**	.693**	.749**
Resistance to change (3)	r			1	.288**	.610**	.652**

**p < .01, N = 561

Finally, MANOVA was used to reveal significant differences among persistence, resistance to change and biases in cognitive processing variables by the stage of PCM as shown in Table 5. Post hoc tests were next performed to determine significant differences across the PCM stages of the dependent variables. According to the variation in sample sizes across the PCM stages, homogeneity of variance assumption was not satisfied. All means significantly increased from awareness to attraction to attachment to allegiance according to PCM stages: biases in cognitive processing, $F_{(3, 557)}$ = 94.87, p < .01, partial η^2 = .335; persistence, $F_{(3, 557)}$ = 138.80, p < .01, partial η^2 = .425; and resistance to change, $F_{(3, 557)}$ = 84.73, p < .01, partial η^2 = .31.

Table 5. Descriptive statistics for constructs by stage of PCM

PCM STAGE (n)		Biases in cognitive processing		Persistence		Resistance to change	
		M	*SD*	*M*	*SD*	*M*	*SD*
Awareness	(106)	2.14 [a]	1.26	1.74 [a]	1.12	1.87 [a]	1.31
Attraction	(306)	3.49 [a]	1.78	2.17 [a]	1.41	2.67 [a]	1.71
Attachment	(104)	5.11 [a]	1.60	4.07 [a]	1.70	4.51 [a]	1.87
Allegiance	(45)	6.13 [a]	1.06	5.87 [a]	1.29	5.58 [a]	1.53
		$F_{(3, 557)}$=94.87		$F_{(3, 557)}$=138.80		$F_{(3, 557)}$=84.73	

Wilks' λ= .506; F= 48.43; p< .001; η^2= .203

[a]: Post hoc tests revealed significant difference from all other stages at p < .01.

DISCUSSION AND CONCLUSION

The purpose of current study was to categorize students who benefited from campus recreation services (physically active leisure) as a significant part of the university campus by using PCM and to examine them by attitude variables (persistence, resistance to change and biases in cognitive processing). In this context, firstly active leisure involvement profiles which will be used to identify the different market segments of the participants were constituted. Confirmatory factor analysis supported the three-dimensional (hedonic value, centrality, and symbolic value) independent structure of active leisure involvement to provide discrete information (Beaton et al., 2011; Havitz & Dimache, 1997; Kyle & Mowen, 2005). In other words, the obtained results demonstrated that leisure involvement was a multi-dimensional structure that provided a hedonic and symbolic value as well as a central component of person's life. According to Beaton et al. (2011), leisure involvement represent a multi-dimensional attitude structure that encompasses total participation beyond person's physical participation, rather than only representing perceived personal interest of an activity. PCM has been introduced by Beaton et al. (2009) as a staging mechanism that can be implemented by both practitioners and academics within the framework of research-practice relations, facilitating qualified and quantified academic challenges. The results of the study indicated that the structure of involvement was a useful psychographic segmentation variable supporting the studies of Beaton et al. (2009), Beaton et al. (2011), Doyle et al., (2013), Funk et al., (2011) and Filo et al. (2013) carried out in different cultures and activities.

The results of the segmentation procedure using the staging algorithm (Beaton et al. 2009; 2011) within the framework of the PCM, revealed four distinct participation segments which significantly differed in all dimensions of involvement (Table 5). The findings indicated that a significant majority of the participants were allocated to the attraction stage (n = 306, 54.5%) and awareness (n = 106, 18.9%), attachment (n = 104, 18.5%) and allegiance (n = 45, 8%), respectively. The results of the study conducted by Filo et al. (2013) in the sample of sports tourists were consistent with the findings of this study. On the other hand, Beaton et al. (2011) reported that the participants were mostly allocated to the attachment and allegiance stages. The discrepancy between the findings may be due to the fact that marathon activities are an activity that requires more earnestness, sincerity, importance, and carefulness than on campus leisure activities in the framework of Stebbins (1982) 's serious leisure classification. In this context, both in theory and practice, there is evidence that active leisure participants on campus can demonstrate different levels of leisure involvement through the application of the PCM framework and staging mechanism. Furthermore, PCM has been developed for application to a wide range of sports and leisure objects, but thus far has been mainly tested on sports, physical activities, tourism (Chen & Funk, 2010; Filo et al., 2013). However, this study was performed on a different culture and physically active leisure experience on campus. This study provided empirical support for its predictive abilities in the context of leisure activities on campus and opened new ways to use this theoretical framework.

According to Funk & James (2006), "the PCM suggests that physically active leisure participation follows a developmental progression across hierarchical stages of attraction, attachment and attachment". Furthermore, Funk & James (2001) propose that commitment to a sport phenomenon

reflects an attitude that persists over time, resists knowledge of the attitude, prevents biases cognitive processing and leads behaviors. Therefore, MANOVA analysis was used to determine the differences in persistence, resistance to change and biases in cognitive processing during PCM stages (Table 6). The results demonstrated that the stages increased from awareness to attraction to attachment to allegiance in persistence, resistance to change and biases cognitive processing according to PCM hierarchy and this increase was statistically significant. Indeed, the results indicated that attitudes from awareness to attraction, attachment and allegiance stages, become strengthened (Doyle et al., 2013). This findings were consistent with previous research with leisure participants (eg Beaton et al., 2009; 2011; Doyle, et al., 2013; Funk et al., 2011).

In summary, different market segments (awareness, attraction, attachment and allegiance) can be defined by using profiles of active leisure involvement and there are inter-segmental attitudes differences in the present study. The obtained results provide useful information for campus recreation services managers. Indeed, Kaltenbaugh et al. (2011) stated that campus recreation has the ability to undertake activities that directly affecting students' attitudes, abilities and quality of life. Besides, active recreation was found to be positively related to the satisfaction of the institution and the awakening of community feeling (Huesman et al., 2009; Beaton et al., 2011). It can be stated that campus recreation professionals are obliged to strengthen/fruitful marketing efforts to allocate more participants from awareness to allegiance. For this reason, PCM stages can be utilized in the systematic and consistent of the marketing strategies and applications. Furthermore, different marketing practices for the participants in each segment can be implemented. In this respect, Funk & James (2001) state that the relationship marketing approach will be useful. Similarly, Kuh, Buckley and Kinzie (2007:79) report that marketing applications are one direct way to influence participation is by "*intentionally designing programs and practices that channel behavior into purposeful activities*".

Finally, this study has some possible limitations which should be pointed out. First of all, data were collected from a university in Turkey with a relatively small sample. Therefore, the results of this study should be verified the validation of the data in larger samples and tested data from samples in different cultures. Additionally, the determination of motivational levels, constraints (Beaton et al., 2009), expected benefits and personality characteristics of participants (Alexandris, 2013) at different stages of PCM can contribute to the field.

REFERENCES

Alexandris, K. (2013). Segmenting recreational tennis players according to their involvement level: a psychographic profile based on constraints and motivation. *Managing Leisure,* 18(3), 179-193.

Alexandris, K., Douka, S., & Balaska, P. (2011). Involvement with active leisure participation: Does service quality have a role? *Managing Leisure: An International Journal*, 17(1), 54–67.

Atasever, M. (2018). *Sağlık Almanak 2003-2017: Türkiye Sağlık Sisteminde Yaşanan Gelişmeler 2003 -2017*. e-Book.

Beaton, A. A., & Funk, D. C. (2008) An Evaluation of theoretical frameworks for studying physically active leisure. *Leisure Sciences*, 30(1), 53-70.

Beaton, A. A., Funk, D. C., & Alexandris, K. (2009). Operationalizing a theory of participation in physically active leisure. *Journal of Leisure Research*, 41(2), 175-203.

Beaton, A.A., Funk, D.C., Ridinger, L. & Jordan, J. (2011). Sport involvement: A conceptual and empirical analysis. *Sport Management Review,* 14, 126-140.

Belch, H. A., Gebel, M., & Maas, G. M. (2001). Relationship between student recreation complex use, academic performance, and persistence of first-time freshmen. *NASPA Journal*, *38*(2), 254-268.

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of cross-cultural psychology*, 1(3), 185-216.

Bulut, S. (2013). A social determinants of health, physical activity. *Turkish Bulletin of Hygiene & Experimental Biology*, *70*(4), 205-214.

de Groot M., & Robinson T. (2008). Sport fan attachment and the psychological continuum model: A case study of an Australian football league fan. *Leisure/Loisir,* 32(1), 117-138.

Doyle, J.P., Kunkel, T., & Funk, D.C. (2013). Sports spectator segmentation: Examining the differing psychological connections among spectators of leagues and teams. *International Journal of Sports Marketing and Sponsorship*, 14(2), 20-36.

Filo, K., Chen, N., King, C., & Funk, D. C. (2013). Sport tourists' involvement with a destination: A stage-based examination. *Journal of Hospitality & Tourism Research,* 37(1), 100-124.

Funk, D. C., & James, J. (2001). The psychological continuum model: A conceptual framework for understanding an individual's psychological connection to sport. *Sport management review*, 4(2), 119-150.

Funk, D. C., & James, J. D. (2006). Consumer loyalty: The meaning of attachment in the development of sport team allegiance. *Journal of Sport Management,* 20(2), 189-217.

Funk, D. C., Alexandris, K., & McDonald, H. (2016). *Sport Consumer Behaviour: Marketing Strategies.* New York, NY: Routledge.

Funk, D., Alexandris, K., & McDonald, H. (2008). *Consumer behaviour in sport and events*. London: Routledge.

Funk, D.C., Beaton, A.A. & Pritchard, M.P. (2011) The stage-based development of physically active leisure: A recreational golf context. *Journal of Leisure Research,* 43, 268-289.

Gobster, P.H. (2005). Recreation and leisure research from an active living perspective: Taking a second look at urban trail use data. *Leisure Sciences,* 27(5), 367–383.

Hair, J., Black, W., Babin, B., & Anderson, R. (2009). *Multivariate Data Analysis* (7th edition). Upper Saddle River, N.J.: Prentice Hall.

Havitz, M. E., & Dimanche, F. (1997). Leisure involvement revisited: Conceptual conundrums and measurement advances. *Journal of leisure research,* 29(3), 245-278.

Howes, F. S., Doyle, J. L., Jackson, N. W., & Waters, E. (2003). *Interventions implemented through sporting organisations for increasing participation in sport.* Cochrane Database of Systematic Reviews, available at https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD004812/epdf/full. (accessed on 20.November.2018).

Huesman Jr, R., Brown, A. K., Lee, G., Kellogg, J. P., & Radcliffe, P. M. (2009). Gym bags and mortarboards: Is use of campus recreation facilities related to student success?. *NASPA Journal*, 46(1), 50-71.

Hurd, A. R., & Forrester, S. A. (2006). Constraints to participation in campus recreational services. *Physical & Health Education Journal,* 72(3), 18-21.

Jackson, N. W., Howes, F. S., Gupta, S., Doyle, J., & Waters, E. (2005). *Interventions implemented through sporting organizations for increasing participation in sport.* Cochrane Database of Systematic Reviews, (2), available at https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD004812.pub2/epdf/full(accessed on 20.November.2018).

Kahraman, G., Çolak, E., Bayazıt, B., & Yılmaz, O. (2017). The examination of factors affecting high school students to participate in recreational activities. *İstanbul Üniversitesi Spor Bilimleri Dergisi*, 7(1), 28-40.

Kaltenbaugh, L. P., Molnar, J. C., Bonadio, W. N., Divito, K., & Roeder, J. (2011). Impact of marketing strategies on campus recreational sports departments. *Recreational Sports Journal*, 35(2), 86-94.

Karaküçük, S. (1999). *Rekreasyon-Boş Zamanları Değerlendirme.* Ankara: Gazi Kitabevi.

Kotler, P. (2000). *Marketing Management Millenium Edition*, Tenth Edition. NJ: Prentice-Hall, Inc.

Kuh, G. D., Buckley, J. A., & Kinzie, J. (2007). *Piecing together the student success puzzle: Research, propositions, and recommendations.* ASHE Higher Education Report, 32(5), 1-182.

Kuş Şahin, C., Akten, S., & Erol, U. E. (2009). A study to determine recreational participation tendency of the eğirdir vocational school students. *Artvin Çoruh University Faculty of Forestry Journal*, 10(1), 62-71.

Kyle, G. T., & Mowen, A. J. (2005). An examination of the leisure involvement-Agency commitment relationship. *Journal of Leisure Research,* 37(3), 342-363.

Kyle, G. T., Kerstetter, D. L., & Guadagnolo, F. B. (2002). Market segmentation using participant involvement profiles. *Journal of Park & Recreation Administration, 20*(1), 1-21.

Noar, S. M. (2003). The role of structural equation modeling in scale development. *Structural Equation Modeling*, 10(4), 622-647.

Pallant, J. (2015). *SPSS survival manual.* (6th Edition). NY: McGraw Hill.

Perreault Jr. W.D., Cannon J.P. & McCarthy E.J. (2012). *Essentials of marketing: A marketing strategy planning approach* (13th ed.). New York NY. McGraw Hill.

Priest, N., Armstrong, R., Doyle, J., & Waters, E. (2008). *Interventions implemented through sporting organisations for increasing participation in sport.* Cochrane Database of Systematic Reviews, (3), available at https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD004812.pub3/epdf/full(accessed on 20.November.2018).

Stankowski, C. L., Trauntvein, N. E., & Hall, S. L. (2017). I use the student recreation center, but I would use it more if: Understanding male and female constraints to student recreation center use. *Recreational Sports Journal*, 41(1), 55-66.

Stebbins, R.A. (1982), Serious leisure: A conceptual statement. *The Pacific Sociological Review,* 25(2), 251-272.

van Sluijs, E. M., van Poppel, M. N., Twisk, J. W., Chin A Paw, M. J., Calfas, K. J., & Van Mechelen, W. (2005). Effect of a tailored physical activity intervention delivered in general practice settings: results of a randomized controlled trial. *American Journal of Public Health*, 95(10), 1825-1831.

Watson, J. C., Ayers, S. F., Zizzi, S., & Naoi, A. (2006). Student recreation centers: A comparison of users and non-users on psychosocial variables. *Recreational Sports Journal*, 30(1), 9-19.

WHO, The World Health Report: 2003-Shaping the future. World Health Organization, Geneva 2003, 3-40.

Young, S. J., Ross, C. M., & Barcelona, R. J. (2003). Perceived constraints by college students to participation in campus recreational sports programs. *Recreational Sports Journal*, 27(2), 47-62.