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The Stage-Based Development of Physically Active Leisure: A Recreational Golf Context

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Abstract

The current study tested the validity of the Psychological Continuum Model and its usefulness in understanding the progressive nature of participation in recreational golf. Attitudinal and behavioral characteristics that underpin each of the framework's four different stages of increased participation were examined. Surveys were collected from recreational golfers and non-golfers (N=1224) in southern Queensland Australia. A three-step staging procedure classified respondents into one of four stages: Awareness, Attraction, Attachment and Allegiance. MANOVA comparisons supported the distinct nature of progressive stages of participation and revealed consistent, positive links between each level's attitudinal and behavioral indicators. Evidence supports the framework's ability to distinguish distinct stages of physically active leisure and practical insights are offered on how recreation professionals can promote and maintain activity levels in adults.

KEYWORDS: Involvement, Activity Engagement, Stage-Based Participation, Segmentation

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Physical inactivity among adults has emerged as a significant social issue. For example, over 50% of adults in the United States fail to participate in enough physical activity to yield health benefits (Sapkota, Bowles, & Ham, 2006). Globally, physical inactivity and unhealthy diets constitute two of the main risk factors behind major chronic illnesses such as cardiovascular disease, cancer, and diabetes (World Health Organization, 2010). Overcoming low rates of participation in physical activity constitutes a major challenge to the recreation industry. Remedies must be sought to promote engagement, primarily as the adoption of recreational pursuits through effective program delivery can enable people to establish healthier lifestyles.

Results from laboratory studies, clinical trials, and epidemic disease investigators provides evidence that increasing one's level of physical activity produces important health and social benefits (Harrison, McElduff, & Edwards, 2006). Unfortunately, physical activity is a relatively complex phenomenon and evidence that explains the breadth and depth of behavior in general populations remains vital (Burton, Oldenburg, Sallis & Turrell, 2007; Kraushaar & Kramer, 2009). Sport and recreation participation has the capacity to produce health and social benefits, but sound theoretical frameworks for guiding such research require further development and empirical verification (Jackson et al., 2005). This calls the leisure service field's attention to a prominent research need, namely the continued development and testing of sound theoretical frameworks (Beaton & Funk, 2008).

The purpose of the current inquiry was to verify and extend the theoretical framework provided by Psychological Continuum Model (Funk & James, 2001). The PCM provides a stage-based understanding of how physically active leisure develops and employs a mechanism that places individuals into one of four levels of engagement in a leisure activity (Beaton & Funk, 2008). Data gathered in the context of recreational golf were used to (1) replicate previous findings that had confirmed the validity of the PCM's stages, and (2) to generate new empirical evidence on the discrete nature of each stage's attitudinal and behavioral make-up.

Literature Review

Research has yet to substantiate a holistic and systematic account of how individuals progress when adopting a physically active leisure pursuit. In fact, empirical work on theories that explain incremental change in recreational participation is largely deficient. Early work by Bryan (1977) proposed that participation progresses through a developmental sequence toward a heightened level of recreation specialization. Scott and Shafer (2001) have since questioned the theory's unidirectional progress toward the elite end of the specialization continuum, purporting that the framework does not account for initial adoption or the continuance of general participation (Lee & Scott, 2004). For example, committed recreational golfers may never attain an increased level of skill and the technical proficiency of a specialist, but can still enjoy the activity despite a high handicap.

An evaluation of theoretical frameworks indicated that the stage-based framework of the Psychological Continuum Model was a promising platform

to understand the development of physically actively leisure (Beaton & Funk, 2008). According to this critique, the framework accommodates proscriptive and prescriptive findings from previous research frameworks by describing the inputs, processes, and outputs of participation within four progressive stages of engagement. An added practical benefit of the PCM is its utility in designing a staging mechanism that can identify and place individuals into specific stages (Beaton, Funk, & Alexandris, 2009). Although the PCM offers help for understanding the development of physically active leisure, its sequence of progressive stages requires further validation.

Psychological Continuum Model

Funk and James (2001) first introduced the PCM to account for the psychological connection between an individual and a recreation object. Their framework characterized an individual's relationship with a recreation activity into four sequential hierarchical stages: Awareness (e.g., I know about golf), Attraction (e.g., I like golf), Attachment (e.g., I am a golfer), or Allegiance (e.g., I live to golf).

The framework integrates some of the inherent advantages stage-based models offer (Beaton & Funk, 2008). For instance, a stage concept suggests individuals can be assigned to a distinct phase in a sequence according to certain characteristics (e.g., Byran, 1977; Buchannan, 1985; Stebbins, 1982). Furthermore, a model with differing stages gives rise to the notion that equal but different forces may be at work between the stages (Iwaski & Havitz, 2004). Finally, several researchers argue that models that categorize participation into levels can do a better job of explaining physically activity leisure (Adams, & White, 2005; Weinstein, Rothman & Sutton, 1998). Compared to dichotomous frameworks that treat subjects as either participants or non-participants, stage-based accounts seem better able to accommodate the dynamic nature of human behavior and explain how a range of activity occurs. Viewing physically active leisure as a developmental progression is instructive because once participation begins it provokes a more complex discussion of how and why activity continues (Courneya, Plotnikoff, Holtz, & Birkett, 2001; Iwasaki & Havitz, 2004). In this regard, the PCM's stages look promising but require further research to substantiate the developmental progression.

Initial work operationalized the PCM's stage-based framework with rugby league participants in Australia and recreational skiers in Greece, but needs further contextual verification. For example, Beaton et al., (2009) neglected to examine the awareness stage and focused on only one psychological outcome of resistance to change. The latter oversight failed to take stock of several key attitudinal dispositions when making stage-based distinctions (e.g., personal relevance of the activity to self concept, likelihood of future behavior, etc). Another limitation of work to date is the lack of corroboration on whether the stages themselves reflect distinct behavioral patterns of engagement (e.g., frequency and types of behavior, financial expenditures). Collectively, these factors underscore the need to replicate and clarify the PCM. Assessing attitudes and behaviors at each stage should help clarify the nature of the framework's operative processes.

Recreational Golf

The current extension focused on the PCM in a recreational golf context. The activity attracts a wide variety of participants and lends itself to exploring a range of participation patterns across an individual's lifespan. In 2009, over 1.1 million Australian adults over the age of 15 reported playing golf at least once in the previous twelve months (Australian Sport Commission, 2009). Recreational golf remains most popular in the 55-64 year old age group, closely followed by 45-54 year olds. The physical activity characteristics of golf offer a range of intensity levels from walking, to pulling a cart, to riding in a golf buggy. The average energy expended for playing an 18-hole round of golf is 4.5 MET intensities (Ainsworth et al., 2000) which suggests it can provide health-related benefits. Furthermore, the intensity of walking an 18-hole round of golf has been found to contribute to an overall daily physical activity plan (Kobriger, Smith, Hollman, & Smith, 2006). As a result, recreational golf represents a popular physical activity that provides a good context to study progressive, cross-stage attitude formation and behavior.

Attitudinal and Behavioral Engagement

The PCM framework acknowledges that each person may have a unique trajectory toward his or her level of leisure participation and that a variety of processes operate within and between levels. In general, a positive linear relationship is likely to exist between attitudinal and behavioral characteristics of engagement. This is illustrated by the placement of the four stages on Figure 1's X and Y axis. This linear perspective takes a holistic approach where participation is progressive, from initiation to continuance (Iwasaki & Havitz, 2004; Stebbins, 2005). It also captures the four stages of Bryan's (1977) continuum, yet offers a psychological and behavioral basis for discussing the nature of escalating participation. Finally, the figure considers Buchanan's (1985) view of how affective attachment and commitment escalate in participants during various stages of leisure engagement. Unfortunately, while some of this research offers accounts of the behavior and psychology behind increasing participation, work to date has not tested the congruency of these ingredients across stages.

Figure 1 presents a diagram that conceptually illustrates how attitudes and behaviors of recreational participation progressively develop through the four stages of the PCM framework. Attitudinal engagement represents the degree of attitude strength that occurs as a person becomes more involved with the activity. The strength of one's attitudinal engagement with recreational golf progresses from weak to strong and can be labeled Awareness, Attraction, Attachment, and Allegiance. The degree of behavioral engagement with recreational golf progresses from simple to complex with labels None/Trial & Exploratory, Infrequent & Evaluative, Frequent & Expressive, and Consistent & Enduring. Behavioral complexity represents the notion that as individuals become increasingly committed (Buchanan, 1985) their behavior becomes more intense (depth) and consistent (breadth). As attitudinal engagement increases the degree of behavioral engagement is also believed to increase (A-B consistency; Fazio & Zanna, 1978). This however is not always the case, as a state of ambivalence can occur when links between attitude and behavior become inert or bi-directional for one reason or another (Pritchard & Funk, 2006).

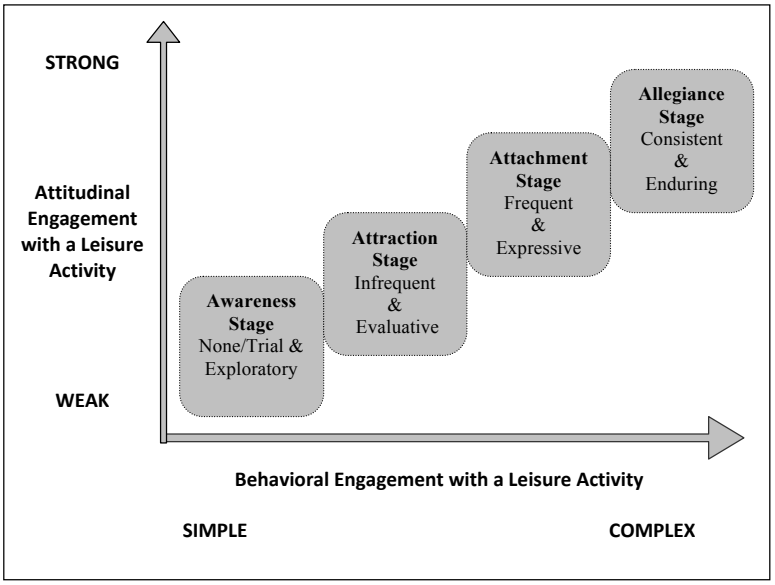

Figure 1. Stages of Attitudinal and Behavioral Engagement in the PCM Framework

Awareness Stage

The awareness stage describes the initial development of a psychological connection to recreational golf. The attitude is derived primarily through initial exposure and socialization, and produces a general knowledge and recognition of recreation golf (e.g., "I know about golf"). Socialization represents a wide range of environmental determinants such as parents, peers, family, mass media, advertising, school, church, community-based programs, and cultural beliefs that introduce and shape awareness (Courneya et al., 2001; McDonough & Crocker, 2005). The awareness stage holds that minimal attitude formation has taken place and that behavior can range from non-existent to unplanned or random. Participation in this stage is characterized by limited knowledge and minimal prior experiences with related consumption activities. Simple behavior can occur through search and trial behavior as the individual first becomes aware and explores a sport activity (Donnely & Young, 1988). Individuals may also be aware of golf but not engage, or if participation does occur it may be coerced (Stebbins, 2005).

Attraction Stage

The attraction stage describes an incremental development of the psychological connection and produces the evaluative response (e.g., "I like golf"). The evaluative

process relies to a greater extent on individual processes that stem from personal and psychological determinants. Personal determinants represent a number of factors including gender, race, cultural orientation, socio-economic status, personality and perceived and actual constraints to perform the activity that can stimulate attraction to golf (e.g., Carroll & Alexandris, 1997; Netz & Raviv, 2004; Recours, Souville & Griffet, 2004). Psychological determinants include needs and internal motives such as health related physical and mental benefits of exercise that can be realized through recreational golf (e.g., Beard & Ragheb, 1983; Markland & Ingledew, 1997). The interaction between individual processes and sociological forces activates positive perceptions of whether the individual perceives golf as satisfying needs and offering attractive benefits (Funk & James, 2001). Behavioral engagement increases in complexity through learning and evaluation. The individual begins to understand and appreciate the act of participating, rules and structures, making judgments regarding a variety of elements related to the activity and interacting with fellow participants via mutual experience (Holt, 1995).

Attachment Stage

The attachment stage describes a psychological connection to golf that has become meaningful (e.g., "I am a golfer"). Within this stage, an individual assigns emotional, functional, and symbolic meaning to golf and related experiences (Funk & James, 2006). The connection to golf now represents a strength property of collective associations generated by individuation (differentiation of self from other golfers), integration (integration of self with other golfers), and temporal orientation (self-changes from golf situation to situation) (e.g., Gibson, Willming & Holdnak, 2002; Schultz, Kleine & Kernan, 1989). Golf now assumes a deeper meaning for the individual as ideas of self-concept are link to existing core values (e.g., Wallendorf & Arnould, 1988) and represents a degree of complexity and strength in one's attitude toward golf (e.g., Krosnick et al., 1993). Behavior becomes more frequent, meaningful, and creates opportunities for self-expression and integration with others within the subculture (Schouten & McAlexander, 1995; Schultz et al., 1989). Behaviors may still fluctuate due to the traits and values a person already possesses as part of their self-concept, but generally overall behavior will conform to expectancies.

Allegiance Stage

The allegiance stage describes the psychological connection to golf that is the strongest and most enduring (e.g., "I live to golf"). Psychological connections in this phase have become highly formed, complex, resistant to change, and capable of guiding behavior and information processing (Funk & James, 2006; Pritchard, Havitz & Howard, 1999). Allegiance is characterized by cognitive complexity, which allows individuals to resist negative information about the activity or suppress positive information about competing alternates. Such robust connections enable long-term stability and a commitment to golf that is indicative of a well formed attitude that persists, resists, and influences related cognition and behavior (Krosnick et al., 1993). The complexity of behavioral engagement at this stage is also believed to increase in both the breadth and depth of participation.

The preceeding discussion conceptually develops how attitudinal and behavioral engagement occurs within the PCM's stage-based hierarchical framework. In theory, individuals assigned to specific stages should share similar attitudinal and behavioral characteristics, whereas characteristics of engagement between stages should differ significantly. Consistent with Figure 1's depiction, stages are thought to display a positive incremental pattern. Support for this can be determined by empirically testing whether attitudinal and behavioral outcomes are theoretically consistent within and between stages. The following section offers a discussion of relevant variables for assessing the validity of the stages and provides the basis for a series of testable study hypotheses.

Attitudinal Characteristics

The measures selected to compare attitudinal characteristics between stages should capture the strength of attitude formation toward golf, the personal relevance of golf to self-concept, and the likelihood of future golf behavior. Three measures were selected for this purpose: resistance to change, enduring involvement, and future intentions. Resistance to change was selected because it is a relatively stable estimate of one's psychological connection that should progressively increase across stages (Beaton et al., 2009). Resistance to change is a good indicator of commitment to the degree that it reflects a person's willingness to depart from his/her initial attitude or opinion when faced with conflicting information or experience (Crosby & Taylor, 1983; Dick & Basu, 1995). The variable has also demonstrated both reliability and effectiveness in delineating cross-stage contrasts in other contexts (Beaton et al., 2009). This leads to the study's first hypothesis: Levels of resistance to change preference for golf will incrementally increase across stages, from Awareness to Attraction to Attachment to Allegiance.

The second attitudinal characteristic selected to compare stages is enduring involvement with golf. Enduring involvement represents a motivational state of personal relevance that reflects the degree to which an individual continues to devote him or herself to golf or associated activities (Kyle & Chick, 2002; Zaichkowsky, 1985). Enduring involvement is considered relatively stable over time and exists when individuals perceive that golf offers hedonic benefits that link to self-identity (Havitz, & Dimanche, 1999; Havitz, & Howard, 1995). Levels of enduring involvement can directly influence golf-related experiences because when golf is closely related to self-concept or ego, individuals place more importance on situation-based decisions (Stebbins, 2005). This leads to the studies second hypothesis: Levels of enduring involvement with golf will incrementally increase across stages, from Awareness to Attraction to Attachment to Allegiance.

A final attitudinal characteristic selected to assess the framework was future intentions to engage in golf related activities. Future intentions represent intentional actions and are considered an essential part of the general positive or negative feelings participants may hold towards golf (e.g., Ajzen, 1991). Future golf intent is embodied in an individual's readiness to perform specific behaviour, such as playing golf on a course in the near future or spending money on golf (e.g., Alexandris & Stodolska, 2004). As such, future intention is a good characteristic to compare stages and leads to the study's third hypothesis: Levels of future golf

intentions will incrementally increase across stages, from Awareness to Attraction to Attachment to Allegiance.

Behavioral Characteristics

The measures selected to compare behavioral characteristics between stages should capture a range of activities that demonstrate breadth, depth and frequency of participation from simple to complex. Bloch, Black, & Lichtenstein (1990) report that the consumption of sport equipment increased as participants became more involved. Theoretically, as the psychological connection progresses upward, participation should escalate as an individual engages in different modes of golf related behavior and the frequency of this behavior should increase (Buchanan, 1985; Bryan, 1997; Stebbins, 1982). This leads to the study's final hypothesis: The frequency of media use, merchandize use, yearly expenditure, participation, and length of time participating in golf will increase, from Awareness to Attraction to Attachment to Allegiance.

In summary, the conceptual understanding for how attitudinal and behavioral characteristics differ across four stages of the PCM (as per Figure 1) has led to the development of four hypotheses. Testing these hypotheses will both replicate previous findings and extend the framework, by testing its validity in a new physically active leisure context. Empirical findings from the study should serve to broaden understandings of the four stages, and report whether specific attitudinal and behavioral contrasts support stage-based depictions of increased participation.

Methodology

Participants

Surveys collected from 1,224 respondents were obtained in two separate phases. The survey group for Phase 1 was comprised of golf club members in southern Queensland, Australia. Eight hundred surveys were distributed and 530 were completed and returned, a response rate of 66%. The survey group for Phase 2 was comprised of non-golf club members in southern Queensland, Australia. Eight hundred surveys were distributed and 694 were completed and returned, a response rate of 87%. The combined total sample used in the study was predominantly white and male (62%) between the ages of 25-44 (33%) and 45-64 (30%) with an after tax weekly income of $400-999 AUD (44%) and $1000 AUD plus (35%). Approximately 49% of respondents had children. The reported number of days golf was played per month was 3.79, with a median value of 2.0. The length of time playing golf ranged from 0-1 years (30%), 2-4 years (23%), 5-9 years (20%) and 10-20 years (17%).

Materials Used

A two-page, multi-attribute survey was distributed. The survey included attitudinal and behavioral measures to examine characteristics of engagement along with involvement facets to operationalize the PCM framework. See Table 1 for items.

Table 1

Individual Scale Items and Factor Loadings (n = 1224)

Psychological Engagement	**Factor Loadings**
Enduring Involvement (EI)	α = .92
Mundane - Fascinating	.81
Valuable - Worthless	.86
Not needed - Needed	.83
Involving - Not involving	.80
Important - Not Important	.85
Resistance To Change (RTC)	α = .93
My preference for golf would not willingly change.	.95
Even if close friends recommended playing another sport, I would not stop playing golf.	.86
It would be difficult for me to change my beliefs about playing golf.	.90
Future Intention (FI)	α = .94
Probability that I would play golf in the next month is…?	.94
Odds of me playing golf at a golf course in the future is…?	.92
Probability of me spending money on golf rather than another type of recreational activity is…?.	90
Behavioral Engagement	
Media Use (MED)	α = .86
I read about golf in the newspaper.	.84
I read about golf in magazine.	.77
I watch golf on television.	.88
Golf Merchandise Use (GMU)	α = .90
I wear clothing that is related to golf.	.89
I bought golf-related merchandise.	.91
Involvement Facets	
Pleasure (PLE)	α =.93
Pleasant – Unpleasant	.93
Favorable – Unfavorable	.90
Devoted – Opposed	.87
Sign (SIG)	α = .91
Playing golf say a lot about who I am.	.85
When I play golf, I can really be myself.	.92
You can tell a lot about a person by seeing him/her playing golf.	.87
Centrality (CEN)	α = .92
I find a lot of my life organized around playing golf.	.90
Playing golf has a central role in my life.	.90
A lot of my time is organized around playing golf.	.87

Attitudinal measures. Attitudinal engagement measures included: (a) five semantic differential items on seven point scales to measure Enduring Involvement with recreational golf were developed from McQuarrie and Munson's (1987) modified version of Zaichkowsky's (1985) Personal Involvement Inventory (PII), (b) three question on seven point Likert scales assessed participant's resistance to change their preference for golf as an activity (Pritchard, et al. 1999), and c) three questions on seven point Likert scales captured intentions to continue playing golf in the future.

Behavioral measures. Behavioral engagement measures included: a) three questions on seven-point Likert scales to measure frequency of golf-related media use, b) two questions on seven-point Likert scales to measure self-reported frequency of golf merchandise use, c) one-opened question to measure self-reported golf expenditure data, d) one question to estimate the average number of golf rounds played per month and (e) one question to measure length of time (in years) playing golf consistently.

Involvement measures. Per the staging algorithm developed by Beaton et al., (2009), involvement facets were used to operationalize the PCM framework and place individuals into one of the four stages. The facet measures included: a) three questions measured Centrality, how central golf is to an individual's lifestyle, on seven-point Likert scales, b) three questions assessed Sign, the degree to which golf acted as a symbolic vehicle with self expressive value, on seven point Likert scales, and c) three semantic differential scales reported Pleasure, the positive affect elicited by golfing, on seven-point scales (Funk & James, 2006). This estimate provided an overall assessment of the enjoyment, satisfaction and interest participants gleaned from the activity. Demographic questions were included on the final page of the survey and collected information on the age, gender, household income, children status, and golf membership status of participants.

Procedure

Data collection for Phase 1 involved two research assistants distributing surveys at thirteen public and semi-private golf courses from October to November. The research assistants approached individuals in the course clubhouse and those individuals who indicated being club members received an informed consent letter and the 2-page survey. Participants completing the surveys were entered into a drawing to win a golf package for four people at an exclusive golf resort in Southern Queensland. In addition, winners would be entered into a golf invitation tournament with professional golfers. Total prize package was valued at $800.

Data collection for Phase 2 involved eight students enrolled in an upper division marketing class at a university in Southern Queensland distributing surveys at eleven locations. Students were trained via a two-hour seminar to distribute the two-page survey in applied settings using a convenience intercept procedure. Students worked in pairs and approached individuals at a football and rugby league sporting event, three sport retail stores, two golf retail stores, two shopping centers, public train, and public library. Individuals who indicated having played golf previously or were familiar with golf but not club members were asked to complete the survey. Participants at the sporting event were approached in the

parking lot prior to the game. For sport and golf retail stores, participants were approached during purchase of merchandise at the check-out counter. For the shopping center, participants were approached in the food court. For the public train and library, participants were approached in various cars and stalls. As in Phase 1, individuals were given a letter of consent and those that completed the survey and contact details were entered into the lottery draw.

Analyses. Data from the completed questionnaires were entered into a database and analyzed using SPSS for Windows and AMOS 7.0 (Arbuckle, 2005). Confirmatory Factor Analysis (CFA) was conducted to assess construct and discriminant validity of multiple-attribute survey items that are used to create the attitudinal and behavioral characteristic measures (Hair, et al., 2006). MANOVA was next conducted to assess whether individuals placed within as specific PCM stage shared similar attitudinal and behavioral characteristics and whether individuals placed in the other three stages significantly differed in terms of these characteristics. The means, standard deviations and correlations for the constructs are reported in Table 2. The means for each construct ranged from M = 3.18 to M = 4.77. The internal consistency measures reported in Table 2 for each construct ranged from $\alpha = .86$ to $\alpha = .94$, above recommended values (Nunnally & Bernstein, 1994). The correlation matrix revealed moderate to strong correlations between constructs prompting the need for testing the psychometric properties of the measurements.

Measurement details. A covariance matrix taken from respondents employing maximum likelihood discrepancy was used as the input data. The CFA examined the relationships between the 25 observed variables and eight first order latent variables: Enduring Involvement (EI), Resistance to Change (RTC), Future Intention (FI), Pleasure (PLE), Sign (SIG), Centrality (CEN), Media Use (MED), and Golf-Merchandise Use (GMU). All latent constructs were measured with 3-items with the exception of EI which was measured with 5-items.

The CFA analysis revealed acceptable fit for each sample. Study 1 Club Members: ($\chi^2 = 744.14$, *df* 247), RMSEA = .06; SRMR = .05; GFI = .90; NFI = .93 and CFI = .95. Study 2 Non Club Members ($\chi^2 = 792.14$, *df* = 247), RMSEA = .06; SRMR = .04; GFI = .92; NFI = .94 and CFI = .97. The analysis revealed individual scale items, factor loadings, path coefficients and fit statistics were similar in the two groups. Based on the observed similarities, the two samples were combined (N = 1224) to test the four hypotheses. The fit statistics for the overall sample indicated a good fit for the data RMSEA = .06; SRMR = .04; GFI = .92; NFI = .96 and CFI = .97 (Browne & Cudeck, 1993; Hair et al., 2006; Hu & Bentler's 1999). Table 1 presents the individual scale items, factor loadings, path coefficients and average variance extracted for the combined sample.

The parameter estimates and accompanying t tests substantiated connections between scale items and their respective constructs as significant ($p < .01$). The items used to measure each of the eight constructs revealed average variance extracted ranging from .69 (EI) to .84 (FI), indicating all construct were above the .50 benchmark (Bagozzi & Yi, 1988). See the diagonals in Table 2 for average variance extracted. Fornell and Larkner's (1981) test of discriminate validity was

Table 2

Means, Standard Deviations, Correlations and Average Variance Extracted for Psychological and Behavioral Variables and Involvement Facets (n = 1224)

	EI	RTC	FI	MED	GMU	PLE	SIG	CEN	M	SD
EI	**.69**								4.68	1.45
RTC	.71	**.82**							3.70	1.84
FI	.67	.77	**.84**						4.56	2.06
MED	.61	.74	.65	**.69**					3.18	1.62
GMU	.59	.74	.69	.78	**.81**				3.21	1.87
PLE	.66	.60	.57	.48	.48	**.81**			4.77	1.54
SIG	.52	.60	.49	.59	.56	.40	**.77**		3.25	1.52
CEN	.71	.84	.74	.67	.66	.59	.55	**.79**	4.01	1.72

Note: AVG = average variance extracted by items for each construct is reported in bold across the diagonal

Abbreviations:
EI = Enduring Involvement
RTC= Resistant To Change
FI = Future Intention
MED = Media Behavior
GMU = Golf Merchandise Use
PLE = Pleasure
SIG = Sign
CEN = Centrality

conducted and revealed that the average variance extracted by each of the items representing a construct exceeded the squared correlation between each construct.

The placement mechanism. A three step procedure validated by Beaton et al., (2009) was undertaken to segment participants into stages of Awareness, Attraction, Attachment and Allegiance. First, mean scores are calculated for the involvement facets of Pleasure, Centrality, and Sign. Second, each of the mean facet scores are rated as being low (L), medium (M), or high (H), creating involvement profiles for each subject. In the final step, participants are stage matched based on their involvement profile. See Beaton et al., (2009) for a detailed description of the procedure and profiles. Applying this procedure showed the following distribution of participants across the stages of the PCM: Allegiance (N = 123); Attachment (N = 467); Attraction (N = 261) and Awareness (N = 373).

Comparing stages of engagement. The discrete nature of attitudinal and behavioral characteristics for the four stages of the PCM was tested using a MANOVA. See Tables 3 and 4 for results. In checking sample assumptions for this test, homogeneity of variance was not assumed. Hence, Tamhane's post hoc analysis was relied on to determine if significant differences were actually present across stages. Analysis for attitudinal constructs EI, SOM and FI revealed significant differences across Awareness, Attraction, Attachment and Allegiance stages $F(3, 1218) = 109.77$; $p < .01$. The means scores for enduring involvement increased from AwarenessM = 2.84 to AttractionM = 4.65 to AttachmentM = 4.94 to AllegianceM = 6.29; $p < .01$. The means scores for enduring involvement

increased from AwarenessM = 2.84 to AttractionM = 4.65 to AttachmentM = 4.94 to AllegianceM = 6.29; $p < .01$. The mean scores for future intentions to participate in golf increased from AwarenessM = 1.91 to AttractionM = 4.20 to AttachmentM = 5.12 to AllegianceM = 6.55; $p < .01$. This pattern was also observed for behavioral measures MED, GMU, Rounds Played per Month, Expenditure and Years Played as significant differences between the four stages were observed $F(5, 1214) = 56.45$; $p < .01$.

Discussion

The current research advances knowledge on physically active leisure by responding to a need for testing theoretical frameworks on the matter (Jackson et al., 2005). Theoretically and intuitively, an individual's initial adoption and subsequent continuance with a recreational activity should develop through a series of stages (Iwasaki & Havitz, 2004; Stebbins, 1982). Empirical tests from this study verified the nature and sequence of progressive stages of participation. Data collected in the context of recreational golf replicate and extend previous work with support for the four stages of the PCM (Beaton & Funk, 2008; Funk & James, 2001). Results substantiated the predictive value of the progressive

Table 3

Cross-Stage Multivariate Analysis of Variance of Psychological Engagement (n = 1224)

PCM Stages	**Characteristics of Attitudinal Engagement [a]**		
	EI	**RTC**	**FI**
Allegiance	6.29	6.01	6.55
(SD)	(.98)	(.84)	(.93)
n = 123			
Attachment	4.94	4.78	5.12
(SD)	(1.17)	(1.66)	(1.80)
n = 467			
Attraction	4.65	3.02	4.20
(SD)	(.91)	(1.24)	(1.68)
n = 261			
Awareness	2.84	2.04	1.91
(SD)	(1.35)	(1.07)	(1.15)
n = 373			
	F = 259.58	F = 277.88	F = 253.58

[a] Cross-stage post hoc ANOVA tests, mean scores significantly different $p < .05$

Table 4

Cross-Stage Multivariate Analysis of Variance of Behavioral Engagement (n = 1224)

PCM Stages	**Characteristics of Behavioral Engagement [a]**				
	MED [b]	GMU [c]	Rounds Played per Month	$ Spent Per Year on Golf	Years Played Golf
Allegiance	4.97	5.32	7.75	870.21	≥ 10
(SD)	(1.29)	(1.42)	(5.48)	(511.54)	(1.10)
n = 123					
Attachment	3.48	3.57	4.74	735.04	5-9
(SD)	(1.51)	(1.76)	(4.29)	(481.52)	(1.12)
n = 467					
Attraction	2.67	2.51	2.33	214.88	2-4
(SD)	(1.29)	(1.45)	(2.58)	(263.43)	(1.11)
n = 261					
Awareness	1.62	1.45	1.11	134.93	0-1
(SD)	(.82)	(.89)	(1.69)	(82.72)	(.75)
n = 373					
	F = 327.20	F = 440.15	F = 722.35	F = 5.35	F = 6.19

[a] Cross-stage post hoc ANOVA tests, mean scores significantly different $p < .05$
[b] Media Use
[c] Golf Merchandise Use

sequence by explaining similarities in attitudinal and behavioral characteristics among individuals within stages, while highlighting differences between stages. The following discussion addresses findings related to the four tested hypotheses.

Attitudinal Engagement

Hypotheses 1, 2, and 3 were supported through the incremental increase in attitude from Awareness to Attraction to Attachment to Allegiance. Consistent with Figure 1's hierarchy, mean scores for resistance to change, enduring involvement, and future intentions differed significantly at each phase. These incremental, positive increases at each stage support the PCM's notion of formation (Funk & James, 2001). Such shifts in attitude toward recreation golf typically reflect a change in structure as escalating, strong attitude is reportedly more stable and consistent (e.g., Krosnick et al., 1993).

Resistance to change represents an individual's commitment to recreational golf (e.g., Crosby & Taylor, 1983). The magnitude of scores between stages (i.e.,

smallest change of 1.10) suggests considerable differences exist and it is a valuable psychological characteristic to differentiate patrons. These findings endorse Iwasaki and Havitz's (2004) finding that resistance to change represents commitment's core tendency, a factor strongly linked to program loyalty in leisure patrons, and replicate and extend results reported by Beaton et al. (2009). RTC represents an important factor for recreational providers to identify, given its influence on continuance and a patron's ability to remain relatively unchanged in the face of alternate messages and competing leisure opportunities (Funk & Pritchard, 2006).

Enduring involvement reflects the personal relevance and devotion to golf a participant might hold (Kyle & Chick, 2002). Although difference between stages on this variable were statistically significant, the practical difference between Attraction and Attachment suggest enduring involvement's role as a psychological differentiator lessens in certain stages. However, limited fluctuations here may stem from situational determinants encountered during survey completion (Havitz & Howard, 1995). The notion that golf provides hedonic benefits ("makes me feel good") may prove more situation-specific with less powerful connections to activity engagement than symbolic perceptions, that golf "makes me look good" (Funk & James, 2001). This supports arguments for using multidimensional profiles of involvement, as these present richer understandings of one's involvement at a given point in time (Havitz & Dimanche, 1997).

Future intentions represent an individual's readiness to perform specific golf behaviors in the near future. The relative magnitude of scores between stages indicates a progressively stronger, positive disposition toward golf (Ajzen, 1991). This pattern illustrates that intention to engage in a specific behavior can and does mirror attitude formation and change (Krosnick et al., 1993). Relative differences between awareness and attraction stages were pronounced demonstrating the impact initial attitude formation holds, beyond awareness, in predisposing one toward engaging in recreational activities (Funk & James, 2001).

Behavioral Engagement

Hypothesis 4 was observed as the degree of behavioral engagement increased from Awareness to Attraction to Attachment to Allegiance. In line with Figure 1, the average self-reported use of media sources of TV, magazines, and newspapers to follow golf, self-reported number of rounds played per month, reported amount of money spent on golf equipment per year, number of years playing golf consistently and likelihood to wear and purchase golf related clothing and merchandise increased incrementally across the four stages. This evidence supports prior theorizing and findings for an increase in frequency and types of behaviors based on level of involvement (Bloch et al., 1990; Buchanan, 1985; Bryan, 1997). Collectively, these behavioral characteristics represent a range of golf related activities and illustrate how individuals have relatively more control over behavioral choices in leisure (Stebbins, 2005). Hence, activity choice should increase in terms of the depth, breadth and frequency as individuals' progress upward through the four stages (Funk & James, 2001).

Implications

Collectively, the current findings confirm and contribute new knowledge to support the stage-based conceptual framework of the Psychological Continuum Model (Funk & James, 2001). The results also provide further support for the staging method used to place individuals into specific stages of engagement (Beaton et al., 2009). The segmentation procedure empirically verified that the four stages correctly explained the direction and strength of attitudes and behaviors related to recreational golf. Overall, the results are consistent with earlier notions on serious leisure (Stebbins, 1982) and recreational specialization (Bryan, 1977) and support using the PCM as both a conceptual and analytic tool for assessing participation. For example, a city or company's wellness program can use the three-step staging procedure to place employees into stages of involvement with a specific activity offered. This would allow the effectiveness of strategies being employed to increase participation in the activity to be evaluated across different stages. In addition, park and recreation organizations can use the staging procedure to augment existing segmentation approaches that often use demographics and benefits sought to evaluate program services. This would allow participants within a segment of interest to be further examined by differentiating the stage of involvement with the program activity.

The empirical evidence supporting Figure 1 provides some insight on how important sociological and psychological processes may create momentum through various stage-based outcomes (Beaton & Funk, 2008). Research indicates that involvement over time with a recreational activity can produce certain psychological outcomes or benefits (Havitz & Howard, 1995; Wilson, et al., 2003). However, the built environment and social/cultural forces shaping an individual's needs from their involvement with activities requires more detailed consideration (Harrison et al., 2006; Henderson & Bialeschki, 2005).

Governments worldwide are investing in tailored physical activity interventions for specific groups, as different actions and programmes are needed to reach and target segments of interest (Sallis et al., 2006; WHO, 2010). The stage-based approach to segmentation provided by the PCM augments traditional demographic approaches with an understanding of the type of benefits segments may desire from their participation. Once effectively segmented, information from other aspects of daily life can be incorporated to provide an even fuller understanding of participation at each phase of engagement (Allport, 1945).

The current research supports a segmentation procedure that can also help identify appropriate targets and messages for interventions. Research reveals the greatest societal benefit can be gained by getting the least active members of society to be slightly more active (Dishman, 2003). The positive linear relationship observed in these data between behavioral characteristics and PCM stage indicates this segment of society is likely to be in awareness and/or attraction stages. In such cases, resources should be invested into identifying these two segments of a community's population before implementing programs and communication strategies to increase their physical activity. Otherwise, the net gain from program offerings may be limited to getting active people already in advance stages of the

PCM (i.e., attachment and allegiance), to become more active. Furthermore, the intensity and duration levels of physical activity guidelines to achieve health benefits in the general population continue to be relaxed (Haskell, et al., 2007). Hence, public agencies should focus on promoting enjoyment derived from physical activity programs in early stages of involvement over the health related benefits to counteract drop-out rates that can occur in awareness and attraction stages (e.g., Guillot, Kilpatrick, Hebert, & Hollander, 2004).

Limitations and Future Direction

There a number of limitations in this study that should be addressed by future research. First, the context of recreational golf is unique and therefore, results may not be generalizable to other contexts. Second, behavior was self-reported and is therefore subject to self-report bias and recall errors. Future studies should include organizational data on actual golf rounds played and expenditure. Third, the data represent a cross-sectional snap shot of a time-based phenomenon. Therefore, this study provides evidence of different categories of recreation participation, but does not provide evidence of progression through stages by individual participants. Finally, the attitude and behavior measures selected represent a limited understanding of depth and breadth of attitudinal and behavioral engagement.

The current results should be replicated in other forms of physically active leisure such as walking, aerobics/fitness, swimming and cycling that are more popular activities across many cultures. In addition, activities that require substantial energy expenditure (i.e., higher MET intensities) such as jogging, running, or cycling should be examined as they provide more health-related benefits than recreational golf. Comparisons to structured and unstructured programs as well as individual and team-based participation are warranted. Also, METs related information would be useful to gauge the intensity level during participation or the use of accelerometers would provide a more objective measurement of actual physical activity (Ward, Evenson, Vaughn, Rodgers, & Troiano, 2005). A beneficial approach would also be to track participants longitudinally, for example from beginning golf lessons.

The empirical results suggest that equal and different processes may operate across stages that individually and collectively lead to attitudinal and behavioral outcomes. Collectively, the correlations reported in Table 2, and the progressive increase of attitude and behavior indicators reported in Tables 3 and 4, suggest that the consistency between attitude and behavior, rather than the relative strength of the attitude and/or complexity of behaviour, may be a mechanism that moves individuals' upward and onward. However, behavior and participation in particular may not adhere to a simple linear progression, as perceived.

The PCM framework suggests that some individuals may intensify their engagement and progress steadily up through the stages. However, activity may not always progress in a simple linear fashion (Weinstein, Rothman, & Sutton, 1998), as recreation participation may at some point stall, diminish, or discontinue. Inertia, or stage movement in either direction should be explored by forging a better understanding of the motives at work (Petrick, Backman, Bixler, & Norman,

2001), the barriers that curtail participation (Jackson et al., 1993; White, 2008), and the activity substitutes that exist (Brunson & Shelby, 1993; Jeffres, Neuendorf, & Atkin, 2003; Pritchard & Funk, 2006). Future research on the processes and contextual influences that govern this movement will have the greatest potential to shed light on practice, how best to shape and delivering recreation opportunities.

Developing sustainable programs has become an important challenge for recreation service managers. Conducting further research on stage-based frameworks with different populations (e.g., seniors) would allow practitioners to gather insights on the viability of different management strategies. Such work could arm managers with effective, targeted, tailored communication approaches (e.g., Kaczynski, Havitz & McCarville, 2005). Investing public resources to combat sedentary lifestyles, the quality of life and health issues they bring, seems an essential next step for those advocating the wellbeing of the generations that follow.

Conclusion

The current research provides evidence in support of a stage-based framework to help understand how active lifestyles develop and continue. The framework characterizes an individual's relationship with a recreational activity as progressing upward through four distinct phases that correspond to different levels of attitude formation as well as increased frequency and type of behavior. Although work remains to be done on which tactics will best influence the adoption and continuance of physically active leisure, the framework for segmentation rendered and described here offers a useful base for guiding such undertakings.

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