

Examining Relationships between Leisure Involvement, Psychological Commitment and Loyalty to a Recreation Agency

Yoshi Iwasaki, Ph.D.
University of Manitoba

Mark E. Havitz, Ph.D.
University of Waterloo

Despite the recent proliferation of leisure involvement and loyalty research, very little attention has been given to systematically conceptualize and examine the nature of leisure involvement's relationship with loyalty. The purpose of the present study was to examine whether psychological commitment intervenes in the relationship between fitness participants' leisure involvement and their behavioral loyalty to a recreation agency. Concomitant consideration was also given to the moderating effects of selected personal and social factors on this relationship (Iwasaki & Havitz, 1998). Comparisons of a Fully Mediated Model (F-M-M) with rival Direct Effects Models (D-E-M I & II), using structural equation modeling (SEM), suggested that psychological commitment mediated the effects of enduring involvement on patrons' behavioral loyalty ($p < .01$). That is, enduring involvement appeared to indirectly influence behavioral loyalty via a sequence of commitment factors. Significant evidence was also found for the direct effects of skill, motivation, social support, and social norms on enduring involvement, while some support was found for moderating effects (i.e., skill, motivation, social support, and side bets significantly moderated the effects of enduring involvement on commitment's formative factors). Overall, the findings of the study help uncover some of the key mechanisms/processes by which customers become loyal to a recreation agency. Marketing strategies may be developed to aim at strengthening customer loyalty by maximizing key antecedents of behavioral loyalty (i.e., enduring involvement and psychological commitment), as well as personal and social factors (e.g., skill, motivation, social support, social norms, and side bets/sunk costs).

KEYWORDS: *Enduring involvement, commitment, loyalty, recreation services, leisure behavior.*

Research on leisure involvement and loyalty has important implications. Recreation service agencies can benefit from having involved and loyal par-

Address correspondence to: Yoshi Iwasaki, 102 Frank Kennedy Centre, Winnipeg, Manitoba, Canada R3T 2N2. Phone: (204) 474-8643; Fax: (204) 474-7634. Email: iwasakiy@ms.umanitoba.ca.

Author Note: Yoshi Iwasaki is in the Health, Leisure & Human Performance Research Institute, Faculty of Physical Education and Recreation Studies, at University of Manitoba. Mark Havitz is in the Department of Recreation and Leisure Studies at University of Waterloo. This research was supported by the University of Manitoba/University Research Grants Program. We gratefully acknowledge the insightful comments from the JLR reviewers which substantially improved the quality of the final manuscript. Any errors are, of course, our sole responsibility.

ticipants/clients since these participants or clients appear to play an essential role in achieving important organizational goals, including revenue generation, developing a positive reputation, networking, community development, and promoting the quality of life (Backman & Crompton, 1991; Bullaro & Edginton, 1986; Gahwiler & Havitz, 1998; Howard, Edginton, & Selin, 1988). Thus, developing and maintaining customer loyalty brings "a sustainable competitive advantage" (Dick & Basu, 1994, p. 99) and has become "a strategic mandate in today's service markets" (Ganesh, Arnold, & Reynolds, 2000, p. 65).

Leisure involvement and loyalty have implications for ongoing participation and client retention. For example, Gahwiler (1995) pointed out that annual retention rates of membership-based fitness facilities are, on average, only 50%. Howard (1992) found that only 2% of American adults accounted for 75% of annual participation in six leisure activities examined, including golf and running. More recently, Barber and Havitz (2001) examined adult Canadians' participation rates in ten sport and fitness activities. Similar to Howard (1992), Barber and Havitz split activity individuals into occasional, regular, and avid participants. They reported that avid participants accounted for a low of 70% of all bicycling to a high of 84% of all running/jogging and ice hockey participation. Furthermore, research evidence suggests that it is more efficient (i.e., up to six times) for practitioners to focus on retaining current clients than on seeking new ones (O'Boyle, 1983).

It has been shown that leisure involvement and loyalty are related but distinct constructs (e.g., Backman & Crompton, 1991; Park, 1996), while psychological commitment has been conceptualized as a key linking variable between these two constructs (Iwasaki & Havitz, 1998). Briefly, leisure involvement reflects people's beliefs about their leisure participation including the importance of and interest in such participation, and symbolic values derived from it (Havitz & Dimanche, 1997). Psychological commitment represents people's attitude toward a brand (e.g., a recreation service provider) such as their resistance to change their preferences toward the brand (Pritchard, Havitz, & Howard, 1999). Finally, loyalty reflects people's attitude and behavior toward a brand of service and repeat patronage in the use of the brand (Backman & Crompton, 1991; Park, 1996).

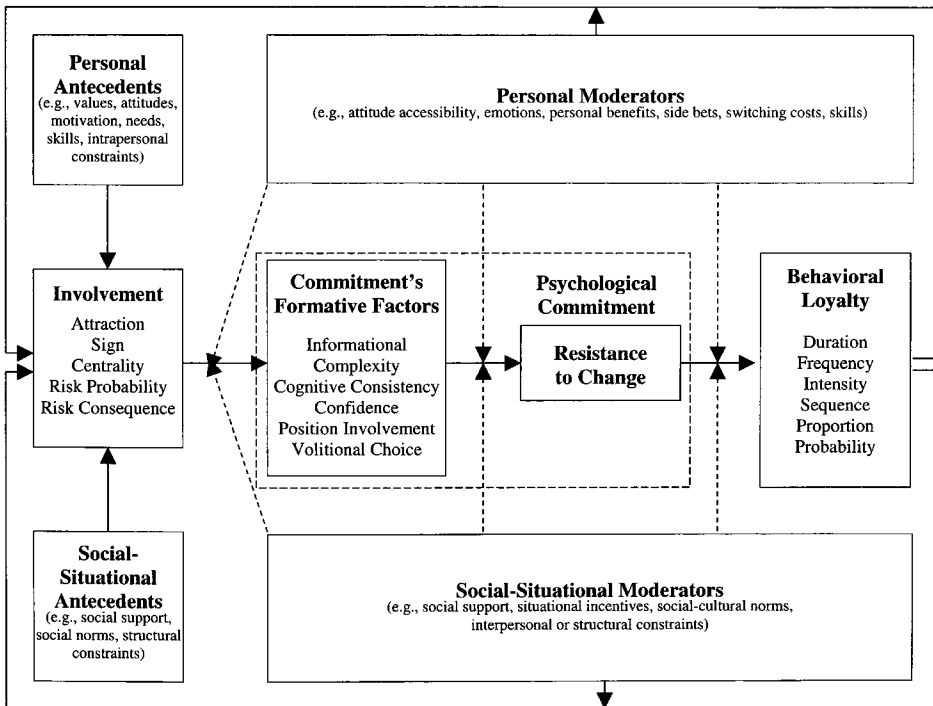
In contemporary leisure research, leisure involvement and loyalty have been two of the widely studied topics. The dimensions of leisure involvement have been extensively examined, along with their consequences (e.g., purchase decisions, participation patterns, and recreation service promotion). Other issues examined include the temporal stability of leisure involvement and its associations with user characteristics (see Havitz & Dimanche, 1997, 1999 for reviews of leisure involvement research). Loyalty in leisure settings has been discussed in both activity and service provider contexts, with researchers defining the phenomenon using both behavioral and attitudinal indicators. Participants and clients have been segmented based on their types and levels of loyalty, and antecedents of loyalty have been examined (e.g., Backman & Crompton, 1991; Howard et al., 1988; Pritchard et al., 1999; Pritchard, Howard, & Havitz, 1992; Selin, Howard, Udd, & Cable, 1988).

Also, conceptual links between loyalty and other constructs such as constraints and service quality have been explored (e.g., Backman, 1991; Backman & Veldkamp, 1995).

Generally, researchers have independently examined the concepts of leisure involvement and loyalty. Very little attention has been given to systematically conceptualize and/or directly examine the potential relationships between the two concepts. Although Backman and Crompton (1991) and Park (1996) reported correlations that suggest these two concepts are distinct, the detailed process by which leisure involvement influences client loyalty is largely unexplained. In an attempt to overcome this limitation, Iwasaki and Havitz (1998) developed a conceptual model to explain the complexity of leisure involvement's relationships with participant and client loyalty.

Relationships between Leisure Involvement and Behavioral Loyalty

Iwasaki and Havitz's (1998) theoretical model proposed relationships between individuals' involvement in a leisure activity and their behavioral loyalty to a recreation agency. Figure 1 represents their revised model to



Note: A revised version of the model adopted originally from Iwasaki and Havitz (1998)

Figure 1. A Conceptual Model of the Relationships among Involvement, Psychological Commitment, and Behavioral Loyalty

more appropriately reflect current conceptualizations. The revised model¹ argues that becoming a loyal client is entailed by becoming highly involved in a leisure activity and developing psychological commitment to a recreation agency. Psychological commitment is comprised of formative factors (e.g., informational complexity, cognitive consistency) and attitudes toward resistance to change agency preferences. The model also posits that processes leading to loyalty differ according to personal characteristics (e.g., motivation, skills) and social-situational factors (e.g., social support, social norms). In Figure 1, dotted lines represent interaction effects (i.e., moderating effects) between different constructs (e.g., skills X involvement, social support X resistance to change) for illustration purposes. Thus, the model consists of two major components: (a) the mediating role of psychological commitment in the relationships between leisure involvement and behavioral loyalty (*mediating component*), and (b) the moderating effects of personal and social-situational factors on such relationships (*moderating component*).

Iwasaki and Havitz's (1998) model is derived from existing conceptual frameworks. Day (1969) argued that true loyalty, as opposed to repeat purchasing, exists only when consumers are highly involved with their purchases and highly committed to a particular brand. Beatty, Kahle, and Homer (1988) developed an involvement-commitment model outlining how enduring or ego involvement leads to brand commitment and found empirical support for their model. Similarly, Crosby and Taylor (1983) stated that "involvement often precedes commitment" (p. 415). On the other end, Jacoby and Chesnut (1978) described the connection between commitment and loyalty, stating that "the concept of commitment provides an essential basis for distinguishing between brand loyalty and other forms of repeat purchasing behavior" (p. 84). Kelley and Davis (1994) and Morgan and Hunt (1994) further clarified the role of commitment by finding the mediating role it played in key outcomes of consumer or purchasing behavior including loyalty. Furthermore, Crosby and Taylor's (1983) definition of psychological commitment emphasized "resistance to change" as the construct's root tendency of psychological commitment that develops from antecedent or formative factors (i.e., informational, identification, and volitional processes). Many of the antecedents linked to loyalty in Iwasaki and Havitz's (1998) model are consistent with Dick and Basu's (1994) theoretical framework of attitudinal precursors to loyalty's formation.

Recently, Pritchard et al. (1999) developed a conceptual model of commitment and its link with loyalty (i.e., a Mediated Effects Model) to help explain an important question—how and why do clients develop a sense of

¹Iwasaki and Havitz's (1998) original model illustrated that resistance to change was a discrete or separate outcome of psychological commitment. Instead, their revised model described here suggests that psychological commitment is defined by its formative factors and resistance to change—resistance to change is considered an integral part of or the evidence of psychological commitment. The latter description is more consistent with the current conceptualizations of psychological commitment.

loyalty? They tested the validity of the Mediated Effects Model against its rival models, Direct Effects Models, using a sample of airline and hotel patrons, and found evidence that clients' resistance to change is best considered as an integral part of psychological commitment, and that it is a key precursor to the development of their loyalty.

In addition to being derived from the consumer behavior literature, Iwasaki and Havitz's (1998) model is grounded in the literature focusing on leisure and recreation. For example, Lee and Zeiss (1980) found that highly committed major league baseball spectators tend to show loyalty to their favorite teams. Siegenthaler and Lam's (1992) analyses of involvement in and commitment to recreational tennis suggested that these two concepts are highly correlated but distinct. Backman and Crompton (1991) found a significant relationship between involvement and loyalty among golfers and tennis players. Using data from participants of weight training and aerobic dance programs, Park (1996) found that involvement profiles and attitudinal loyalty profiles are significantly correlated and that involvement and attitudinal loyalty contribute independently to the prediction of different measures of behavioral loyalty (i.e., duration, intensity, and frequency).

More recently, Kim, Scott, and Crompton (1997) tested a model explaining the interrelationships among involvement, commitment, and intention to engage in birding trips and concluded that relationships did exist. They added, however, that the relationships were not fully understood, in part because the effects of each independent variable was examined independently using regression analysis, not as part of an integrated model. Specifically, Kim et al. concluded that "a more sophisticated model could readily be developed" to show that "psychological commitment precedes both behavioral involvement and commitment" (p. 338).

Definitions of key process variables. Involvement is defined as "an unobservable state of motivation, arousal, or interest toward a recreational activity or associated product. It is evoked by a particular stimulus or situation and has drive properties" (Havitz & Dimanche, 1997). In leisure research, "involvement has usually been treated as a multifaceted construct including attraction, sign, centrality, and risk" (Havitz & Dimanche, 1999, p. 123). Attraction refers to the perceived importance or interest in an activity or a product, and pleasure or hedonic value derived from participation or use, whereas sign refers to the unspoken statements that purchase or participation conveys about the person. Centrality encompasses both social contexts such as friends and families centered around activities, and the central role of the activities in an individual's life. Finally, risk consists of two primary aspects: risk probability (perceived probability of making a poor choice) and risk consequence (perceived importance of negative consequences in the case of a poor choice).

Pritchard et al. (1999) defined psychological commitment as a tendency to resist change. They argued that formative processes (i.e., informational, identification, and volitional) activate this tendency. Informational processes are represented, first, by informational complexity. This is the degree of

complexity of a person's cognitive structure (McQuiston, 1989). Informational processes are also defined in terms of cognitive consistency, or the congruence between beliefs or values and attitudes (Rosenburg, 1960). Finally, informational processes are represented in terms of confidence or degree of certainty associated with attitudes and/or behaviors (Berger & Mitchell, 1989). Position involvement (the degree to which self-image is linked to brand preference; Freedman, 1964) and volitional choice (the extent to which a decision to perform an action is based on a person's free choice; Bagozzi, 1993) play a key role in the identification and volitional processes, respectively (Pritchard et al., 1999).

Consistent with Crosby and Taylor's (1983) definition of psychological commitment, Pritchard et al. (1999) postulated that "resistance to change, as the principal evidence of commitment, will act as a mediator between the construct's antecedent processes and loyalty" (p. 337). Resistance to change refers to individuals' unwillingness to change their preferences toward, important associations with, and/or beliefs about a brand (e.g., a product, an agency).

Researchers generally agree that loyalty measures should combine both behavioral and attitudinal components (e.g., Backman & Crompton, 1991; Dick & Basu, 1994; Howard et al., 1988). Behavioral loyalty is comprised of several components, including duration (long-term length of participation, patronage, or use), frequency (number of purchases, uses, or participation over a specified time-period; for example, a week, month, season, or year), intensity (hours per week or days per month devoted to purchase, use, or participation), sequence (purchase patterns within or between brands), proportion (the percentage of brand loyalty), and probability of brand use over time (its intent being to predict future behavioral loyalty; Havitz & Howard, 1995; Park, 1996). Attitudinal loyalty is reflected in the components of psychological commitment described above (Pritchard et al., 1999).² Thus, Iwasaki and Havitz's model has incorporated both attitudinal and behavioral aspects of loyalty.

Progressive processes leading to behavioral loyalty. "Leisure involvement refers to how we think about our leisure and recreation" (Havitz & Dimanche, 1997, p. 246), whereas commitment represents "consumer attitudes of attachment to a brand" (Pritchard et al., 1999, p. 334). On the other hand, loyalty has been defined as "a composite blend of brand attitude and behavior" (e.g., Day, 1969; Pritchard & Howard, 1997). Therefore, the processes conceptualized in Iwasaki and Havitz's model represent aspects of beliefs, attitudes, and behaviors. Leisure involvement reflects people's beliefs about their leisure participation/activity, whereas psychological commitment and attitudinal loyalty reflect their attitude toward a brand of service. In

²Detailed information for a rationale for such consideration of attitudinal loyalty can be found in Iwasaki and Havitz (1998; pp. 271-272).

contrast, behavioral loyalty represents people's behavior in their leisure (e.g., the use of a recreation service provider).

It has been widely shown that "beliefs play a central role in attitude theory because they provide the groundwork upon which attitudes are constructed. . . Thus, beliefs seen as being important and consistent lead to strong attitudes" (Madrigal, 2001, p. 149). Consequently, attitudes considered as being important play a key role when individuals process information, form intentions, and take actions (Boninger, Krosnick, & Berent, 1995; Fishbein & Ajzen, 1975). A belief-attitude-behavior linkage/hierarchy has been both theoretically and empirically established in the past (e.g., Ajzen, 1991, 2000; Albarracin, Johnson, Fishbein, & Muellerleile, 2001). It is important to emphasize that the progressive processes identified in Iwasaki and Havitz's model are consistent with this belief-attitude-behavior linkage/hierarchy.

Personal and social factors that may influence involvement-loyalty relationships. As well as considering psychological commitment as a key mediating variable linking involvement to behavioral loyalty, Iwasaki and Havitz's (1998) model suggests that personal and social factors may influence the relationship between involvement and loyalty. For example, skill/competence and motivation are assumed to be key personal antecedents of involvement and key personal moderators, whereas social support and social norms are considered as key social antecedents of involvement and key social moderators. In Siegenthaler and Lam's (1992) study on recreational tennis, skill was found to be significantly and positively related to ego-involvement (i.e., "the identification of self with an activity," Siegenthaler & Lam, 1992, p. 304). Also, Backman and Crompton (1991) found that competence/skill of golfers and tennis players significantly contributed to differentiating loyalty categories. According to Kuentzel and McDonald's (1992) study on river use, specialization dimensions (including commitment) were found to be significantly and differently related to attitudinal indicators such as motives. Furthermore, Gammonley (2001) found evidence for a positive association between involvement in recreation and community activities and the enhancement of social support, whereas Johnston and Carroll (2000) showed that involvement in sport was positively associated with the use of a support-seeking coping strategy during rehabilitation processes among patients who had sustained injury restricting their normal functioning. In Dick and Basu's (1994) conceptual framework of client loyalty, social norms are identified as moderators of loyalty.

Other personal or social factors such as satisfaction and side bets/sunk costs likely influence the relationship between involvement and loyalty, once individuals have developed their involvement in an activity. Allen, Machleit, and Schultz Kleine (1992) have shown the moderating effects of satisfaction and emotion on loyalty, while Dick and Basu (1994) conceptualized satisfaction as one of the key affective antecedents of loyalty. Also, Backman and Crompton (1991) found that side bets significantly discriminated loyalty cat-

egories, and sunk costs and switching costs are identified as key conative/behavioral antecedents of loyalty in Dick and Basu's (1994) model.

Purpose and Research Questions

The purpose of the present study was to examine mediating effects of psychological commitment on the relationship between leisure involvement and behavioral loyalty to a recreation agency. Concomitantly, the moderating effects of selected personal and social factors on this belief-attitude-behavior sequence were also examined. Testing these mediating effects may contribute to better understanding the processes by which clients become loyal to a recreation agency, while testing moderating effects helps further understand personal and social factors that influence these processes. This research is ground-breaking in the sense that past research has not focused on the link between all three factors—leisure involvement, commitment or loyalty (e.g., Kim et al., 1997; Park, 1996).

Specific research questions are: (a) Does psychological commitment mediate the effects of leisure involvement on behavioral loyalty? (b) Does resistance to change mediate the effects of commitment's formative factors on behavioral loyalty? and (c) Do selected personal and social factors directly influence leisure involvement, or moderate the involvement-behavioral loyalty relationships? As suggested by past research, the personal and social factors examined in this study are: (a) skill/competence, (b) motivation, (c) social support, (d) social norms, (e) satisfaction, and (f) side bets/sunk costs.

There are, of course, leisure contexts wherein repeat visitation may not be viewed as a desirable management outcome, for example when public land resources are stressed or when overcrowding exacerbates user-group conflicts (McLean, Havitz, & Adkins, 2002; Manning, 1999; Sem & Vogt, 1997). Nevertheless, the development of participant loyalty has been recognized as an important organizational goal in many other recreation settings (Backman & Crompton, 1991; Bullaro & Edginton, 1986; Gahwiler & Havitz, 1998; Howard et al., 1988). Loyal clients help recreation agencies meet pragmatic goals such as increased or stable revenues, generating a positive reputation, enhancing the capacity for networking, and several important social and political goals (e.g., enhancing citizens' quality of life, developing community, and increasing participation rates). In addition, loyalty may offer benefits for participants/clients themselves (Anderson & Sullivan, 1993; Oliva, Oliver, & MacMillan, 1992). For example, loyal participants who exhibit strong interest in a leisure activity and are committed to a recreation agency, appear to experience personal goals (e.g., improved skills, health, quality of life, self-identity, self-expression, self-actualization) and social rewards from that association (e.g., satisfying social relationships, a sense of belonging, social identity, group accomplishment; Csikszentmihalyi, 1990; Kaczynski & Havitz, 2001; Stebbins, 1998, 2000).

Thus, understanding the characteristics of loyal leisure participation offers an important challenge to the field. It is particularly helpful for recreation service managers to understand how and why clients develop their

loyalty to a recreation agency. The method discussion that follows explains the approach used to explore this important question.

Methods

Data Collection

Prior to the collection of data, the principal investigator contacted the directors of recreation service agencies and secured cooperation. The two research assistants of the study systematically intercepted clients (every third person) around reception areas at several locations of these agencies during various times of days (mornings, afternoons, and evenings) on one weekday and one weekend. The research assistants were rotated to perform their tasks for subject recruitment for an entire week so that a systematic bias was reduced. The locations were selected to represent different sections of the city (i.e., central, northeast, northwest, southeast, and southwest). Those clients intercepted were briefly explained the purpose and nature of the study and asked to participate in the study. Those who agreed to participate brought home a project package (which consisted of a cover letter describing the purpose and importance of the study, instructions summarizing their tasks, a set of questionnaires including the measures to be described below, and a self-addressed and stamped envelope). They followed the instructions and returned their completed questionnaires to the principal investigator using a self-addressed and stamped envelope. Those participants who returned their completed questionnaires received \$10 in appreciation of their time and contribution to the study. Payment was deemed appropriate given the fairly extensive (8-page long) questionnaire.

Measures

Leisure involvement. The participants' levels of involvement were measured using a modified version of Laurent and Kapferer's (1985) Consumer Involvement Profile (CIP) scale, with respect to the participants' most favorite leisure activities. The scale consisted of three facets for enduring involvement: (a) attraction (6 items), (b) sign (3 items), and (c) centrality (3 items), and two facets for risk involvement: (a) risk probability and (b) risk consequence (3 items each). The addition of the centrality facet to enduring involvement was examined, consistent with recent leisure and involvement research (e.g., McIntyre, 1989; Schuett, 1993). The measure used a five-point Likert-type scale (1 = "strongly disagree" to 5 = "strongly agree"). The CIP scale has been widely used in leisure and involvement research and has been shown to have good validity and reliability (see Havitz & Dimanche, 1997). In the present study, risk items were prefaced with an explanatory sentence and followed-up with screening questions in order to improve the reliability and validity of those facets.

Psychological commitment. Participants' levels of psychological commitment were assessed by measures of the construct's formative factors and participants' resistance to change. These scales were derived from Pritchard et

al.'s (1999) Psychological Commitment Instrument (PCI), and were adapted to the context of participants' primary recreation service providers. The PCI consisted of 3 items for each of four facets: (a) informational complexity, (b) volitional choice, (c) position involvement, and (d) resistance to change. Pritchard et al. found satisfactory psychometric properties of the PCI. The original Iwasaki and Havitz (1998) model, based on Pritchard et al.'s (1992) original work, proposed six facets of psychological commitment. However, as a result of extensive testing for scale purification, validity, and reliability using data from travel service users, Pritchard et al. (1999) suggested dropping cognitive consistency and confidence, as the two facets failed to converge as discrete components and tended to be reflected in the informational processes of psychological commitment. As pointed out previously, Pritchard et al.'s analyses have suggested that resistance to change is a key precursor to loyalty that is distinct from other formative components of psychological commitment.

Behavioral loyalty. Participant behavioral loyalty was captured by two major behavioral aspects of leisure participation at a public recreation facility: frequency of attendance and proportion of participation. Frequency was assessed by asking: "On average, how many days a week did you participate at _____ (primary recreation service agency)?" Two items were used for measuring proportion of participation: "How many hours in a typical week do you spend at _____ (primary recreation service agency)?" and "Including the hours you spend at _____ (primary recreation service agency), how many hours in total do you participate in recreational and social activities outside your home in a typical week?" Participants' responses to the former were divided by their responses to the latter to calculate proportion of participation at their primary recreation service agencies. Although other forms of behavioral measures such as duration (length of participation, patronage, or use), sequence (purchase patterns within or between brands), and probability of brand use over time could be used for assessing behavioral loyalty, frequency and proportion of participation appear to reflect two primary aspects of behavioral loyalty (Havitz & Howard, 1995; Park, 1996).

Personal and social moderators. *Skill/competence* was assessed using a single-item self-rated measure of skill (Kuentzel & Heberlein, 1997; five-point scale; 1 = none, 2 = novice, 3 = intermediate, 4 = high, and 5 = expert) with respect to the participants' most favorite leisure activities. Their *motivation* toward such activities was measured using Carroll and Alexandris' (1997) Strength of Motivation Scale (five-point scale; 1 = strongly disagree to 5 = strongly agree) consisting of five items (e.g., "I regret when I am unable to participate in _____."). The level of *social support* was assessed by the four items for measuring emotional social support included in Iwasaki and Mannell's (2000) Leisure Coping Scale (five-point scale; 1 = strongly disagree to 5 = strongly agree; e.g., "I feel emotionally supported by my leisure companions."). Whereas, *social norms* toward most favorite leisure activities were measured by Ajzen and Driver's (1992) two-item scale of subjective

norms (five-point scale; 1 = strongly disagree to 5 = strongly agree; e.g., "Most people who are important in my life think I should engage in _____").

A single-item five-point scale was used to measure the participants' *satisfaction* with their most favorite leisure activities ("Overall, I would rate my level of satisfaction with _____ as: 1 = very low to 5 = very high"). Finally, *side bets/sunk costs* toward such activities were measured using six-item five-point scales (1 = strongly disagree to 5 = strongly agree) developed based on Buchanan (1985) and Dick and Basu (1994). A sample item is that "I have invested a lot of money in _____ (e.g., costs, equipment, membership, lessons)."

Analysis

First, descriptive analyses of the measures used were performed. Then, confirmatory factor analysis (CFA) using AMOS 4.0 (Arbuckle & Wothke, 1999), with a maximum likelihood estimation method, was carried out to test goodness of fit of the measurement models for the constructs examined, and the factor structures and dimensionalities of these constructs. Consequently, structural equation modeling (SEM) using AMOS 4.0, with a maximum likelihood estimation method, was conducted to examine the mediating effects of psychological commitment. To test these mediating effects, we compared goodness of fit of the Fully Mediated Model (F-M-M; see Figure 2) with goodness of fit of the Direct Effects Models (D-E-M, also see Figure 2). The two D-E-M models were not developed at random or simply presented as "straw men" clearly inferior to the F-M-M. Rather, both represented models deemed viable within the leisure literature. The F-M-M assumes that involvement indirectly influences behavioral loyalty via psychological commitment. In contrast, the Direct Effects Model I (D-E-M I) included the direct path from involvement to behavioral loyalty in addition to the mediating paths depicted in the F-M-M. The direct path from involvement to behavioral loyalty represents the dominant mode of thinking among leisure involvement researchers in the early 1990s (see Havitz & Dimanche, 1999 for a summary of this literature). Likewise, the Direct Effects Model II (D-E-M II) included the direct path from commitment's formative factors to behavioral loyalty, a relationship postulated by Pritchard (1992) in his original research.

The comparison of the D-E-Ms with the F-M-M allowed us to test whether psychological commitment mediates the effects of leisure involvement on behavioral loyalty (Research Question 1) and whether resistance to change mediates the effects of commitment's formative factors on behavioral loyalty (Research Question 2). These procedures are consistent with a current standard practice of SEM that moves beyond simply testing a proposed model by comparing the performance of the proposed model with competing or rival models (Arbuckle & Wothke, 1999; Hubbard & Mannell, 2001). Each of the three models consisted of the same four constructs (i.e., involvement,

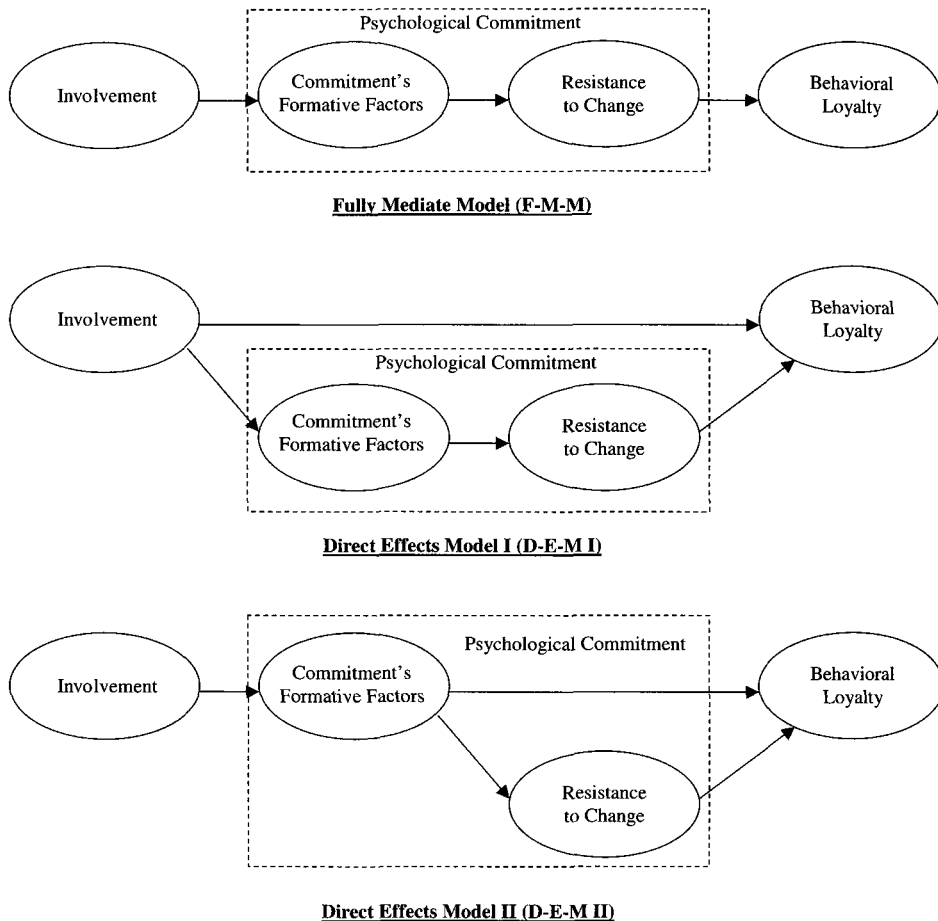


Figure 2. Fully Mediated Model (F-M-M) and Direct Effects Models (D-E-Ms) Tested

commitment's formative factors, resistance to change, and behavioral loyalty), and the differences among the models were attributed to the specification or non-specification of a certain path between constructs, as described above. Thus, these are considered nested models. Pedhazur and Schmelkin (1991) stated, "When one or more free parameters of a model are constrained (e.g., constraining them to equal zero), the model thus obtained is said to be nested in the one from which it was derived. A nested model, therefore, is a 'special case' . . . or a 'specialization' . . . of a more comprehensive model" (p. 651). To perform significance tests for these nested models, we followed a protocol described by Bollen (1989, p. 289-292). Specifically, we used the likelihood ratio (LR) test. Bollen (1989) argued, "In practice, analysts calculate the LR statistic as the difference in the usual chi-

square estimators for the restricted and unrestricted models, with *df* equal to their difference in *df*. For this reason the LR test is often called a chi-square difference test" (p. 292). Furthermore, to examine the moderating effects of selected personal and social factors on involvement-loyalty relationships (the second part of Research Question 3), we tested the best model found in the previous analyses in different conditions (e.g., high skill vs. low skill groups), using medium splits. Finally, regression analyses were used to test the direct effects of personal and social factors on leisure involvement (the first part of Research Question 3).

Results

Participants

The sample consisted of 296 individuals who were users of fitness facilities or participants in fitness-related programs at one of two recreation service agencies in a large western Canadian city. Of 166 female and 128 male participants,³ ages ranged from 18-25 (*n* = 110) to 26-35 (*n* = 64), 36-45 (*n* = 64), 46-55 (*n* = 41), 56-65 (*n* = 11), and 66-75 (*n* = 4). Most of the participants were Caucasian (*n* = 239). Other racial groups included Asian (*n* = 33), African (*n* = 7), Aboriginal (*n* = 2), and South American (*n* = 2). The participants were predominantly single (*n* = 145) or married (*n* = 122), but some were divorced (*n* = 12), separated (*n* = 3), common law (*n* = 3), engaged (*n* = 4), and widowed (*n* = 1). The majority of the participants were either paid workers (full-time, *n* = 153; part-time, *n* = 47) or students (full-time, *n* = 64; part-time, *n* = 8), and other occupational categories included retired (*n* = 6), household workers (*n* = 5), unemployed (*n* = 2), and semi-retired (*n* = 1). Their annual incomes in Canadian dollars ranged from none (*n* = 1) and below \$10,000 (*n* = 87) to \$10,001-\$30,000 (*n* = 81), \$30,001-\$50,000 (*n* = 83), \$50,001-\$70,000 (*n* = 22), \$70,001-\$90,000 (*n* = 7), and more than \$90,001 (*n* = 5).

Descriptive Statistics

Table 1 presents correlation coefficients and descriptive statistics of the measures used. As expected, all the measures representing key constructs/factors (i.e., enduring involvement, risk involvement, psychological commitment, and behavioral loyalty) were positively and significantly correlated with each other (e.g., attraction, sign, and centrality for enduring involvement). Although risk consequence (as a facet of risk involvement) was positively and significantly correlated with sign (as a facet of enduring involvement), risk probability (as a facet of risk involvement) had a negative and significant correlation with all the enduring involvement measures. This observation is not surprising and is consistent with most leisure involvement research (Hav-

³To individuals did not indicate their gender.

TABLE 1
Correlation Coefficients and Descriptive Statistics of Measures Used

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Attraction (enduring involvement)																			
2. Sign (enduring involvement)	.43*																		
3. Centrality (enduring involvement)	.31*	.56*																	
4. Risk probability (risk involvement)	-.41*	-.25*	-.19*																
5. Risk consequence (risk involvement)	-.03	.13*	.08	.14*															
6. Informational complexity (commitment's formative factors)	.23*	.20*	.25*	-.17*	.04														
7. Volitional choice (commitment's formative factors)	.16*	.02	-.02	-.14*	.001	.56*													
8. Position involvement (commitment's formative factors)	.18*	.32*	.20*	-.14*	.13*	.49*	.47*												
9. Resistance to change item 1	.17*	.16*	.12	-.13*	.09	.61*	.47*	.53*											
10. Resistance to change item 2	.11	.05	-.01	-.12	.10	.45*	.44*	.47*	.49*										
11. Resistance to change item 3	.15*	.12*	-.02	-.14*	.15*	.45*	.46*	.50*	.54*	.72*									
12. Frequency (behavioral loyalty)	.07	.08	.18*	-.10	-.02	.31*	.17*	.18*	.21*	.22*	.21*								
13. Proportion (behavioral loyalty)	-.07	.02	.03	-.03	-.03	.11	.12	.07	.08	.15*	.12*	.26*							
14. Skill	.12*	.19*	.33*	-.05	.04	.31*	.09	.09	.09	.02	.06	.13*	.002						
15. Motivation	.50*	.36*	.28*	-.35*	.11	.17*	.08	.10	.23*	.13*	.22*	.10	-.08	.13*					
16. Social support	.19*	.36*	.47*	-.09	.07	.19*	.05	.25*	.10	-.02	.02	.08	-.09	.21*	.16*				
17. Social norms	.28*	.18*	.16*	-.24*	.02	.19*	.15*	.14*	.08	-.02	.09	.04	-.08	.18*	.22*	.20*			
18. Satisfaction	.36*	.29*	.23*	-.25*	.01	.19*	.04	.14*	.12*	.12*	.17*	.04	-.02	.27*	.37*	.13*	.20*		
19. Side bets/sunk costs	.25*	.31*	.45*	-.09	.18*	.29*	-.02	.16*	.15*	.06	.12*	.16*	.08	.30*	.24*	.24*	.13*	.17*	
Means ¹	4.15	3.12	2.82	2.02	2.42	3.65	3.89	2.60	3.33	3.16	3.30	3.38	.50	3.49	4.09	3.08	4.21	4.32	3.31
Standard deviations	.56	.91	1.03	.63	.97	1.02	1.06	1.10	1.17	1.37	1.42	2.22	.28	.76	.67	.95	.82	.68	.73

Notes: * $p < .05$

¹Means for all measures, excluding proportion of purchase, are generated on a 1-to-5 scale.

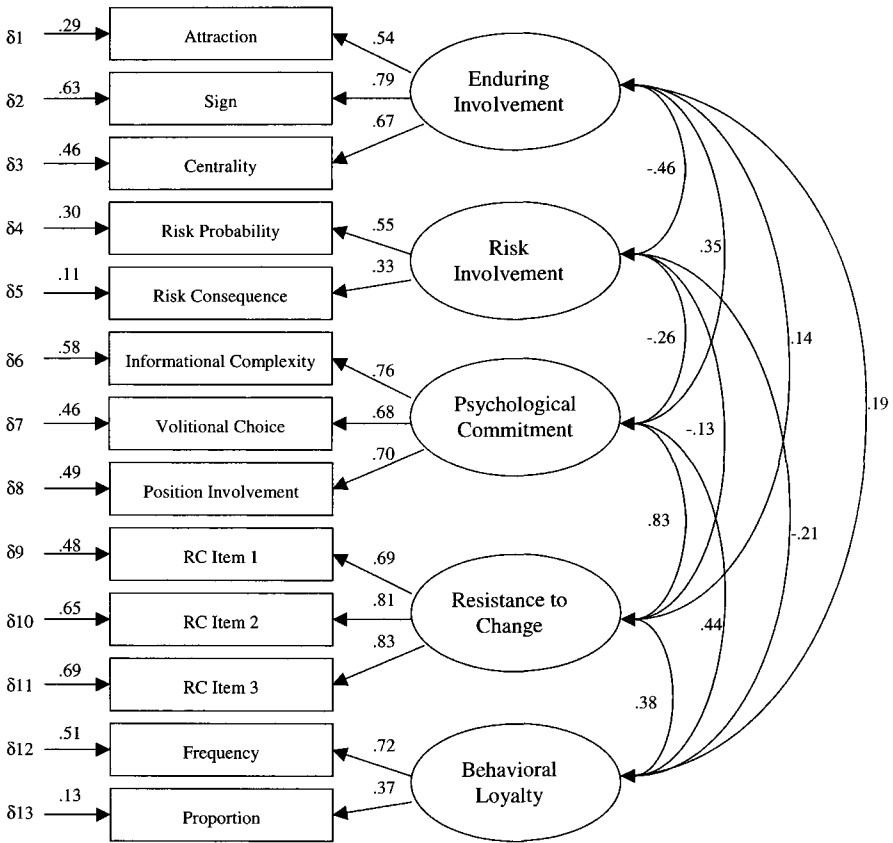
itz & Dimanche, 1997). Risk probability is largely a confidence measure, and the more involved a participant is (on other facets), it makes conceptual sense that the lower are her or his chances of making a poor choice.

Skill, motivation, social support, social norms, satisfaction, and side bets all had positive and significant associations with each of the three indicators of enduring involvement and with informational complexity. Social support, social norms, satisfaction, and side bets were positively and significantly associated with position involvement. By contrast, motivation, social norms, and satisfaction were negatively and significantly correlated with risk probability. Motivation and satisfaction showed a positive and significant correlation with all the indicators of resistance to change, and side bets with two of the three indicators of resistance to change. Skill and side bets were positively and significantly associated with the frequency measure of behavioral loyalty.

Measurement Models: Confirmatory Factor Analysis

Measurement models for all the constructs/factors to be used for the subsequent structural equation modeling (SEM) were created, and goodness of fit of these models was tested using confirmatory factor analysis (CFA). Because risk probability was negatively and significantly correlated with all the enduring involvement measures, separate measurement models were created for risk involvement and enduring involvement. The measured variables/indicators depicted with squared boxes in Figure 3 represent participants' mean scores of the items for enduring involvement, risk involvement, and psychological commitment, and their raw scores of the three questionnaire items for resistance to change. Behavioral loyalty was comprised of frequency and proportion indicators with respect to the use of primary recreation agencies.

The results of CFA using AMOS 4.0 are presented in Figure 3 with the assumption that each of the five constructs/factors is correlated with each other. As for the selection of overall fit indices for CFA and SEM with maximum likelihood (ML) estimation methods, Hu and Bentler's (1998) evaluation of the sensitivity of various fit indices to model misspecification has recommended the use of standardized root-mean-square residual (SRMR), supplemented by Tucker-Lewis Index (TLI), Bollen's fit index (BL89), relative noncentrality index (RNI), comparative fit index (CFI), gamma hat, McDonald's centrality index (Mc), or root-mean-square error of approximation (RMSEA). However, no definite recommendation has been provided. Bollen (1989) suggested that "the safest recommendation is to always report the chi-square estimate along with several of the other fit indices (e.g., residuals; normed fit index, NFI; incremental fit index, IFI; relative fit index, RFI; and Tucker-Lewis Index, TLI)" (p. 281). In contrast, Hu and Bentler (1998) pointed out that "as noted by many researchers, . . . the standard chi-square test may not be a good enough guide to model adequacy" (p. 425). The selection and interpretation of overall fit indices reported in Table 2 were based on the above arguments. Generally, the measurement models



Note: Correlation coefficients estimated between factors are indicated with double-arrows. The numbers indicated on the right of each of the 13 measured variables/indicators (depicted with squared boxes) are standardized factor loadings, whereas the numbers indicated on the left of these variables/indicators are squared multiple correlations that reflect the amount of each indicator's variance explained by its respective factor, δ = delta (measurement errors).
 Model fit indices: $\chi^2 = 215.17$ (df = 56, $p < .01$); Normed Fit Index (NFI) = .98; Relative Fit Index (RFI) = .96; Increment Fit Index (IFI) = .98; Tucker-Lewis Index (TLI) = .97; Comparative Fit Index (CFI) = .98; Standardized Root Mean Residual (SRMR) = .09

Figure 3. Measurement Models Tested Using Confirmatory Factor Analysis (CFA)

fit to the data fairly well. As for component fit indices, all of the indicators loaded significantly on their designated factors ($p < .01$).

The indicators used in the present study showed acceptable to moderately high internal consistency in measuring key constructs. Composite reliability estimates were .75, .63, .59, and .56 for enduring involvement, commitment's formative factors, resistance to change, and behavioral loyalty, respectively. Correlations between the five factors estimated are shown in Figure 3. A high correlation between commitment's formative factors and

TABLE 2
Analysis of Competing Structural Models

	F-M-M	D-E-M I	D-E-M II
Direct effects (β s):			
Enduring Involvement \rightarrow Commitment's Formative Processes	.28*	.28*	.28*
Commitment's Formative Processes \rightarrow Resistance to Change	.83*	.83*	.82*
Resistance to Change \rightarrow Behavioral Loyalty	.44*	.40*	.29*
Enduring Involvement \rightarrow Behavioral Loyalty		.11 ^{n.s.}	
Commitment's Formative Processes \rightarrow Behavioral Loyalty			.14 ^{n.s.}
Squared Multiple Correlations (R^2):			
Commitment's Formative Processes	.08*	.08*	.08*
Resistance to Change	.69*	.69*	.67*
Behavioral Loyalty	.19*	.19*	.20*
Model fit indices:			
Chi-Square (df)	159.95* (41)	158.63* (40)	156.75* (40)
Normed Fit Index	.98	.98	.98
Relative Fit Index	.97	.97	.97
Increment Fit Index	.99	.99	.99
Tucker-Lewis Index	.98	.98	.98
Comparative Fit Index	.99	.99	.99
Standardized Root Mean Residual	.09	.10	.10

Notes: * $p < .01$; n.s. = not statistically significant at .05 level

resistance to change raised some concern with the discriminant validity between these two constructs. As recommended by Burnkrant and Page (1982), we compared the existing measurement model ($\chi^2 = 215.17$, $df = 56$, $p < .01$) in which all the five factors were allowed to correlate, with one in which commitment's formative factors and resistance to change were hypothesized to have a unity correlation that depicted as unidimensional ($\chi^2 = 238.99$, $df = 57$, $p < .01$). A chi-square difference test between the two models supported the existing model (Figure 3) and suggested that the two constructs should be considered as discrete factors, showing the discriminant validity between these constructs ($\Delta\chi^2 = 23.82$, $df = 1$, $p < .01$). This finding is consistent with data reported by Pritchard et al. (1999).

Structure of Involvement-Loyalty Relationships: Structural Equation Modeling

Next, we performed structural equation modeling (SEM) analyses to test the Fully Mediated Model (F-M-M; Figure 2) in comparison to the Direct Effects Models I and II (D-E-M; Figure 2). As noted earlier, because of the

negative and significant association between enduring involvement and risk probability (as a facet of risk involvement), testing of the F-M-M began with having both enduring involvement and risk involvement as antecedents of psychological commitment. However, we found that the effects of risk involvement on both psychological commitment and behavioral loyalty were not statistically significant. The problem of risk involvement with respect to its conceptualization and measurement has been recognized in the past. According to Havitz and Dimanche's (1997) review of evidence from 50 leisure involvement data sets, one of the reoccurring results has been a poor performance of risk involvement items. They have identified challenges in appropriately conceptualizing and measuring risk involvement and have suggested that refined measures of risk involvement are needed. Thus, risk involvement was dropped in the further analyses. Table 2 presents the results of overall fit indices, beta values, and squared multiple correlations (SMC; indicating the amount of variance explained) for the F-M-M without risk involvement. Overall, the results suggested a good fit of the F-M-M to the data. All of the mediating paths leading to behavioral loyalty were found to be statistically significant. The amount of variance explained by enduring involvement in predicting commitment's formative factors was 8%, whereas 69% and 19% of the variance in predicting resistance to change and behavioral loyalty were explained by commitment's formative factors and resistance to change, respectively.

Competing or rival models that assumed direct links from enduring involvement to behavioral loyalty (D-E-M I) and from commitment's formative processes to behavioral loyalty (D-E-M II) were also tested. Table 2 reports overall and component fit indices of both models. A LR or chi-square difference test suggested that the addition of the direct path from enduring involvement to behavioral loyalty in the D-E-M I did not improve goodness of fit, in comparison to the more restrictive F-M-M ($\Delta\chi^2 = 1.32$, $df = 1$, $p > .05$). The path from enduring involvement to behavioral loyalty was found to be not statistically significant ($\beta = .11$, $p > .05$; Table 2). Thus, the data lead us to conclude that the F-M-M is a better description of the relationships between enduring involvement and behavioral loyalty than the D-E-M I. That is, enduring involvement indirectly influenced behavioral loyalty with psychological commitment mediating the effect of enduring involvement on behavioral loyalty.

Similarly, the addition of the direct path from commitment's formative factors to behavioral loyalty in the D-E-M II did not improve goodness of fit, in comparison to the more restrictive F-M-M ($\Delta\chi^2 = 3.20$, $df = 1$, $p > .05$). We found that the path from commitment's formative factors to behavioral loyalty was not statistically significant ($\beta = .14$, $p > .05$; Table 2). Therefore, the data suggest that the F-M-M is a better model describing the relationships between enduring involvement and behavioral loyalty than the D-E-M II. Specifically, commitment's formative factors indirectly influenced behavioral loyalty, and resistance to change mediated the effect of commitment's formative factors on behavioral loyalty.

Testing for mediation. In addition to the above LR or chi-square difference tests, our review of the conditions for mediation (Baron & Kenny, 1986) suggested that the mediating effects of psychological commitment were indeed present. As for the mediating effects on the relationship between enduring involvement and behavioral loyalty, first, the F-M-M showed that enduring involvement had a significant effect on commitment's formative factors. Second, the F-M-M also noted that commitment's formative factors had a significant effect on resistance to change, as well as a significant effect of resistance to change on behavioral loyalty. Third, when commitment's formative factors and resistance to change were constrained (i.e., not linked to behavioral loyalty), enduring involvement had a significant effect on behavioral loyalty ($\beta = .15, p < .05$). Fourth, the D-E-M I showed that the previously significant effect of enduring involvement on behavioral loyalty became non-significant or was significantly reduced ($p > .05$) when the mediating paths from enduring involvement, through psychological commitment, to behavioral loyalty were opened.

Similarly, the potential mediating effects of resistance to change on the relationship between commitment's formative factors and behavioral loyalty were examined. First, the F-M-M indicated that commitment's formative factors had a significant effect on resistance to change. Second, the F-M-M also showed that resistance to change significantly influenced behavioral loyalty. Third, when resistance to change was constrained (i.e., not linked to behavioral loyalty), commitment's formative factors had a significant effect on behavioral loyalty ($\beta = .44, p < .001$). Fourth, the D-E-M II showed that the previously significant effect of commitment's formative factors on behavioral loyalty became non-significant ($p > .05$) when the mediating paths from commitment's formative factors, through resistance to change, to behavioral loyalty were opened.

Direct and Moderating Effects of Personal and Social Factors

Next, to examine the direct effects of personal and social factors on enduring involvement, four selected personal and social antecedent factors (i.e., skill, motivation, social support, and social norms) were simultaneously entered into a regression model in predicting enduring involvement. Each of these antecedent factors was found to significantly predict enduring involvement ($R^2 = .40$). Greater levels of skill ($\beta = .13, p < .05$), motivation ($\beta = .41, p < .05$), social support ($\beta = .32, p < .05$), and social norms ($\beta = .11, p < .05$) were significantly related to higher levels of enduring involvement.

Finally, to examine the moderating effects of personal and social factors on the relationships between enduring involvement and behavioral loyalty, the F-M-M was tested separately for different conditions (e.g., high skill group versus low skill group), using the medium splits. The results of these analyses are summarized in Table 3. Of the six potential moderators tested, we found skill, motivation, social support, and side bets **all** moderated the

TABLE 3
Analysis of Moderating Effects of Selected Personal and Social Factors

	Enduring Involvement → Commitment's Formative Processes	Commitment's Formative Processes → Resistance to Change	Resistance to Change → Behavioral Loyalty
<i>Skill:</i>			
Low (n = 148)	.16 ^{n.s.}	.92**	.38**
High (n = 148)	.31**	.71**	.46**
<i>Motivation:</i>			
Low (n = 149)	.17 ^{n.s.}	.79**	.37**
High (n = 147)	.23*	.91**	.47**
<i>Social support:</i>			
Low (n = 158)	-.01 ^{n.s.}	.87**	.41**
High (n = 138)	.46**	.81**	.49**
<i>Social norms:</i>			
Low (n = 156)	.20*	.87**	.44**
High (n = 140)	.28*	.85**	.46**
<i>Satisfaction</i>			
Low (n = 157)	.26*	.70**	.36**
High (n = 129)	.21*	.91**	.52**
<i>Side bets/sunk costs</i>			
Low (n = 145)	.12 ^{n.s.}	.93**	.46**
High (n = 151)	.42**	.72**	.37**

Notes: Structural equation modeling was used to test the F-M-M separately for different conditions (e.g., high skill group versus low skill group), using the medium splits. ** $p < .01$; * $p < .05$; n.s. = not statistically significant at .05 level.

effects of enduring involvement on commitment's formative factors. Specifically, in groups with low levels of these moderators the effects of enduring involvement on commitment's formative factors were found to be non-significant, whereas in groups with high levels of the moderators these effects were found to be significant. Higher levels of skill, motivation, social support, and side bets significantly accounted for a stronger relationship between enduring involvement and commitment's formative factors than did lower levels of these moderators. No other moderating effects were found to be statistically significant.

Discussion

In this study we first examined mediating effects of psychological commitment on the relationship between leisure involvement and behavioral loyalty to a recreation agency, as hypothesized in Iwasaki and Havitz's (1998) revised model. Our study represents the first attempt to test comprehensively the relationships among three of the key variables having important implications for leisure studies and services, namely, leisure involvement, psycho-

logical commitment, and loyalty. The findings of our analyses using confirmatory factor analysis and structural equation modeling to test these mediating effects leading to behavioral loyalty contribute to better understanding the processes by which clients become loyal to a recreation agency. Furthermore, the results better explain ways in which different factors influence the relationship between leisure involvement and behavioral loyalty. Below, the findings are summarized with respect to the three research questions examined.

The comparison of the Fully Mediated Model (F-M-M) with its rival models, Direct Effects Models (D-E-M I & II), suggest that psychological commitment plays a mediating role in the relationship between enduring involvement and behavioral loyalty. Enduring leisure involvement does not appear to directly influence behavioral loyalty. Instead, enduring leisure involvement seems to indirectly influence behavioral loyalty via psychological commitment. Also, it is important to distinguish two components of psychological commitment, namely, commitment's formative factors and resistance to change, since commitment's formative factors tend to indirectly influence behavioral loyalty via resistance to change. The data suggest that current conceptualizations involving mediation effects are more reflective of reality than were previous models built primarily around direct effects.

These data suggest that not all highly involved leisure activity participants become loyal to a recreation agency, although higher levels of enduring involvement seem to be an important precursor to behavioral loyalty of this type. Higher levels of psychological commitment, in which resistance to change is a pivotal element, appear essential for the development of client loyalty to a recreation agency. The development of client loyalty appears to be best explained as a progressive process. That is, the formation of high involvement in a leisure activity seems to be a key precondition for becoming a committed user of a leisure service agency and supporter of that agency. Loyalty, thus, seems to occur when people develop a resistance to change in preferences, beliefs, and associations within the agency.

These findings are consistent with past research on leisure involvement, commitment, and/or loyalty. For example, James (2001) used Piaget's (1970) theory of cognitive development and Iwasaki and Havitz's (1998) model as the conceptual framework to examine when and how children begin to demonstrate their loyalty to sports teams. Based on his interviews with children aged 5 to 6 ($n = 25$) and 8 to 9 ($n = 25$), James found that "half of the children interviewed . . . did have a favorite sports team, suggesting that they had an interest in or attraction to a specific team" (p. 256), and that these children were capable of showing a psychological commitment to a favorite team. James suggested that "the current study does provide support for portions of the conceptual framework proposed by Iwasaki and Havitz (1998), particularly the relationship between involvement (attraction/preference), psychological commitment, and resistance to change" (p. 259).

According to Park's (1996) analyses of data obtained from 208 participants of an adult fitness program, highly involved individuals tend to "continue participation due to emotional attachment to and identification with

the program" (p. 246). Using data collected from 517 visitors to a birding festival, Kim et al. (1997) investigated relationships between involvement and commitment. Their correlational analyses suggested that the facets of enduring involvement (what they termed "social psychological involvement"), namely, importance/pleasure and sign were significantly related to commitment, defined as "personal and behavioral investments that bind individuals to consistent patterns of leisure behavior" (p. 336). Kim et al. also found that "highly involved and committed birders tend to go birding often, travel and spend money on birding, are skilled at identifying birds, read about birding, belong to birding organizations, and own equipment that facilitates the identification of birds" (p. 337).

More recently, Pritchard et al. (1999) examined the role of commitment in the development of loyalty, using 421 airline and hotel patrons. The results of their path analyses suggested that "the tendency to resist changing preference" is "a key precursor to loyalty, largely explained by a patron's willingness to identify with a brand" (p. 333). Similar to the findings of the present study, the formative factors of psychological commitment (i.e., volitional choice, position involvement, and informational complexity) did not have a significant direct effect on loyalty. Instead, resistance to change fully mediated the effects of commitment's formative factors on loyalty. Pritchard et al. emphasized that "our current study's rejection of a direct effects model supports the notion that some formative processes are only indirectly related to loyalty. This suggests that a wider review of other loyalty antecedents could be undertaken and considered in the light of commitment's mediating effect" (p. 345). These statements are consistent with the present findings with respect to the non-significant direct paths from enduring involvement and commitment's formative factors to behavioral loyalty. Most of the antecedents of loyalty appear to have indirect effects on loyalty being potentially mediated by factors such as individuals' resistance to change their preference of and attitude toward a brand.

The present study also examined the direct and moderating effects of selected personal and social factors on the relationship between leisure involvement and behavioral loyalty. First, we found that skill, motivation, social support, and social norms were significant predictors of enduring involvement. These findings are consistent with past research. For example, Siegenthaler and Lam (1992) found that skills of recreational tennis players were significantly related to ego-involvement, while Ray's (1997) study provided empirical support for a conceptual framework depicting the relationships between enduring involvement in jogging and its motivating antecedents and behavioral consequences. In her study to evaluate the effectiveness of interventions focusing on peer education and advocacy through recreation and leadership, Gammonley (2001) showed that involvement in recreation and community activities was positively associated with the enhancement of social support. Similarly, Johnston and Carroll (2000) found evidence for a positive association between involvement in sport and the use of a support-seeking coping strategy during rehabilitation processes among patients who had sus-

tained injury restricting their normal functioning. Discussing social comparison theory in the context of aerobic exercise classes, Frederick, Havitz, and Shaw (1994) suggested that individuals' involvement profiles are related to "the type and extent of social comparison made in recreational settings" (p. 167) in which social norms appear to play a key role.

Furthermore, the present study provided some evidence supporting the moderating effects of personal and social factors. Of a number of moderating effects examined, we found that skill, motivation, social support, and side bets moderated the effects of enduring involvement on commitment's formative factors. Specifically, the data suggest that the positive relationship between enduring involvement and commitment's formative factors is stronger for those individuals with higher levels of skill, motivation, social support, and/or side bets associated with their leisure activities than for those with lower levels of these aspects of leisure activities. Once people become highly involved in leisure activities, greater levels of skill, motivation, social support, and/or side bets appear to be key factors for developing individuals' psychological commitment toward their primary recreation service providers. Although examinations of moderator effects have rarely been conducted in leisure involvement and commitment research, these findings make sense in comparison to past research. For example, in their river-use study, Kuentzel and McDonald (1992) found that attitudinal indicators such as motives were significantly and differently related to specialization dimensions including commitment. Also, it has been suggested that individuals' investments or side bets influence their commitment to brands such as an activity or agency (e.g., Allen & Meyer, 1990; Buchanan, 1985; Meyer, Allen, & Smith, 1993). For example, Siegenthaler and Lam (1992) found that financial side bets toward tennis (i.e., tennis expenditures) were significantly related to both ego-involvement and commitment in tennis.

Overall, the findings from this study suggest that the relationship between involvement and loyalty is very complex, and these findings help uncover some of the key mechanisms/processes by which clients become loyal to a recreation agency. An understanding of these mechanisms/processes has important implications for managers and professionals of recreation services. For example, marketing strategies may be developed to aim at strengthening client loyalty by maximizing key antecedents of behavioral loyalty (i.e., enduring involvement and psychological commitment), as well as personal and social factors/moderators (e.g., skill, motivation, social support, social norms, and side bets/sunk costs) conceptualized in Iwasaki and Havitz's model. However, recommending specific strategies for developing client loyalty is premature at this stage because we did not attempt to segment participants and evaluate the effectiveness of different strategies in this study. Nevertheless, it appears intuitive to suggest, for example, that market segmentation using profiles of involvement, psychological commitment, and behavioral loyalty to perform market analysis would be useful (Park, 1996). Based on such analysis, marketing strategies targeting and attracting a particular segment of the market could be developed. For instance, Warrington

and Shim (2000) argued that, "when high-involvement consumers are satisfied, they are expected to develop brand and store loyalties, and in doing so, represent important market segments. . . . Marketing strategies designed to attract and retain these consumers can potentially lead to higher sales and a more satisfied core of committed customers" (p. 762). Kyle, Kerstetter, and Guadagnolo's (2002) research regarding 10K road race participants supports these general conclusions.

It should be noted that with the use of cross-sectional data we can not provide definitive support for the existence of the causal links suggested by the Fully Mediated Model (F-M-M) even though we found stronger support for the F-M-M in comparison to rival Direct Effects Models. However, the a priori specification of the model based on a sound theoretical rationale plus the use of structural equation modeling (SEM) that allows a statistical test of the fit of the model to the data, provide clues about causal processes than more exploratory approaches (Bollen, 1989). Obviously, the use of a longitudinal design is needed in future research. Indeed, the present study was developed as the first stage of a longer-term project. Also, generalizability of the model must be examined using various population groups. Furthermore, as suggested by Pritchard et al. (1999), it is important to examine other antecedent factors of loyalty since a large amount of variance in predicting behavioral loyalty was left unexplained in the F-M-M.

Another important task of leisure researchers is to identify reasons why certain individuals do not become involved participants and loyal clients. There is an important need for recreation service agencies to develop structures (e.g., policies, human resources) and provide opportunities (e.g., programs, services) for eliminating or reducing constraints associated with leisure participation and the use of recreation services. For example, single working parents with small children experience constraints unique to their life circumstances such as those associated with finance, family, accessibility, and time, which seem likely to inhibit both the development of enduring involvement with leisure activities and relationships and psychological commitment to leisure service providers. Public sector agencies, however, have political and moral obligations to provide recreation services that accommodate the needs of single working parents to the same extent that they strive to serve perhaps more responsive loyal clients. Our conceptual model of involvement-loyalty relationships identifies antecedents of involvement and moderating variables (including constraints) that help further explain the complex relationship between involvement and behavioral loyalty. Testing of these antecedent factors and moderating effects has important theoretical and practical implications, thus, needs to be carried out in future research.

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