

Accounting for Gender in a Study of the Motivation-Involvement Relationship

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ABSTRACT

The effects of gender on involvement in high-risk recreation have received limited research attention despite mounting evidence suggesting the learned interactions between people and places likely vary for men and women. The purpose of this study was to provide insights into how gender influenced the motivation-involvement relationship among whitewater recreationists on a Wild and Scenic River in California. Our results revealed the motivations of *Risk*, *Escape*, *Learning*, and *Achievement/Stimulation* positively influenced involvement in rafting activities. Although gender did not influence all dimensions of involvement, we found that identity expression varied between subgroups. Specifically, men were more likely to ascribe meaning to rafting than women because this activity allowed them to affirm and express their individual character. The implications emanating from this study advance theoretical understanding of the factors that influence enduring involvement and inform natural resource management decisions about maintaining the desired benefits of activities sought by nature-based recreationists.

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Introduction

The concept of enduring involvement is crucial for understanding how individuals develop attachment to recreational activities, particularly for public land management agencies mandated to provide stakeholders with meaningful experiences. High levels of leisure involvement are instrumental for achieving organizational goals, fostering positive relationships within communities, and promoting human well-being and quality of life (Iwasaki & Havitz, 2004; Jun et al., 2012; Kyle & Chick, 2004; Zabriskie & McCormick, 2003). A longstanding body of research has aimed to identify and explain the personal and social-situational factors that underpin enduring involvement (Iwasaki & Havitz, 1998, 2004). For example, Kyle et al. (2006) tested the motivation-involvement relationship and showed that the desired benefits of camping in a U.S. national forest promoted individuals' lasting connections to specific experiences. Indeed, motivation can be a catalyst for activity engagement that provides insight on the process by which recreationists initiate and maintain their involvement with select

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leisure pursuits (Josiam, Kinley, & Kim, 2005; Prebensen, Woo, Chen, & Uysal, 2012). Even though past research has indicated motivation and involvement vary by setting and activity type (Kyle, Bricker, Graefe, & Wickham, 2004; McIntyre, 1989), more remains to be learned about this relationship in the context of high-risk activities that may be experienced differently by men and women (McIntyre, 1992). That is, a greater understanding of the gendered aspects of enduring involvement and its antecedent processes carries potential to advance leisure research.

Gender has received considerable attention in the leisure literature given its influence on the meanings that individuals ascribe to their experiences (Henderson, Bialeschki, Shaw, & Freysinger, 1996; Little, 2002; Wiley, Shaw, & Havitz, 2000; Wood & Danylchuck, 2012). These gendered differences become more pronounced in the outdoors because women tend to be more risk-averse in their leisure choices and particularly wary of activities in isolated settings due to safety concerns (Evans, 2014; Wiley et al., 2000). The range of motivations that creates enduring involvement likely differs for men and women for other reasons as well, such as (a) the traditionally masculine nature of outdoor environments (Lee et al., 2007; Shaw, 1994); (b) overrepresentation of men in these contexts (Bialeschki & Henderson, 2000); and (c) greater leisure constraints faced by women, including time, family commitments, perceived technical knowledge, and self-doubt (Henderson, 1991; Shaw, 1994; Wood & Danylchuck, 2012). However, fewer studies have considered the role that gender plays in involvement and its antecedent processes in the context of risky pursuits. If addressed, this gap in the literature could enhance programming and sustain the provision of recreational opportunities in settings that are traditionally associated with masculine traits (Little, 2002). Moreover, gender differences in the outdoors may help explain why women are sometimes discouraged from or uncomfortable in wildland recreation environments (Bowker et al., 2006; Pohl, Borrie, & Patterson, 2000).

In this article, we examined the influence of motivation on enduring involvement in white-water rafting on a federally designated Wild and Scenic River in California's Sierra Nevada. We also investigated the similarities and differences in the experiences reported by male and female recreationists. Findings from this work provide insight into the perceived benefits of psychological associations with potentially dangerous, nature-based activities.

Literature review

Motivation

Motivations for engaging in leisure elucidate why people are pushed or pulled into outdoor recreation. According to the expectancy-valence model, the motivating force of human behavior is need satiation (Lawler, 1973). The study of organizational behavior also suggests beneficial outcomes that inspire positive dispositions toward an activity will draw people to particular pursuits (Sherif & Cantril, 1947) because centrality and personal relevance determine the extent to which individuals are compelled to pursue their goals. Building on this concept, researchers have explored the psycho-physiological experiences that provide benefits to stakeholder groups such as outdoor recreationists. Specifically, Driver and others developed a battery of questions – the Recreation Experience Preference (REP) scale – to capture the psychological outcomes of recreation (Driver, 1983; Driver & Knopf, 1977; Driver & Tocher, 1970; Manfredo, Driver, & Tarrant, 1996). This scale sought to measure whether stakeholders attained their desired outcomes (Driver, 1983). Broadly, research that has used the REP scale can be organized into six categories:

- descriptions and comparisons among experience preferences;
- empirical research to categorize recreationists based on common experience preferences;
- investigations of the relationship between activity preferences and experience settings;
- connections between experience preferences and nonleisure conditions;
- connections between subject characteristics, values, and experience preferences; and
- methodological research for development and testing the REP scale ([Manfredo et al., 1996](#)).

Previous leisure research has examined motivation as an antecedent to involvement ([Kyle et al., 2006](#)). This area of inquiry has illustrated how recreationists initiate and maintain involvement in activities through the pursuit of desired outcomes ([Iwasaki & Havitz, 1998, 2004](#)) and indicated that recreationists become committed to activities most closely aligned with individual needs over extended periods of time ([Lawler, 1973](#)). For instance, a person who learns how to play basketball and go whitewater rafting recognizes the benefits of each activity over time. If time in nature is more appealing to the individual, that person may choose to continue rafting and discontinue basketball because rafting more closely aligns with a valued benefits derived from hiking, especially given repeated engagement in this activity. In this sense, the link between motivation and enduring involvement can be temporally reinforced and linked to decisions and/or behavior. As [Kyle et al. \(2006\)](#) stated, “the attributes of specific activities activate ego-attitudes that in turn arouse emotion, cognition, and ultimately behavior.” If activity attributes are consistent with personal needs, values and individual goals, enduring involvement will be more likely to ensue ([Celsi & Olson, 1988](#)). Activity attributes could include site characteristics (e.g., indoor versus outdoor settings), type of activity (e.g., running, skiing, or paddling), participants (solo activity, with friends, family, or teammates), and other things that differentiate one activity from another.

Extending previous empirical research on motivation and involvement, leisure scholars have unveiled diverse reasons for participation in water-based recreation. For example, [Lee et al. \(2007\)](#) found the experience level of paddlers influenced motivations and preferences for site attributes. These authors reported experiencing nature was the most important outcome for paddlers and indicated individuals with more experience placed greater value on competition, curiosity, developing skills, and challenge in their selection of sites and motivations. Paddlers with low levels of experience placed more importance on relaxation and social contexts. In a similar vein, [O’Connell \(2010\)](#) indicated *Enjoying Nature, Learning, Achievement/Stimulation*, and an opportunity to be with other people motivated sea kayakers. [Meyer et al. \(2002\)](#) also found the pursuit of desired outcomes, such as observing underwater life, feeling excitement, exploring, and engaging in adventure, motivated people to participate in scuba diving. These studies showed that nature, exploration, and learning were common motivators among water-based recreationists. As such, understanding the attributes of an activity that are personally relevant can clarify why individuals participate in recreation and report varying levels of enduring involvement.

Involvement

The study of involvement and its connection to motivation have roots in the disciplines of psychology and consumer behavior. For example, Sherif and colleagues have examined ego-involved attitudes and processes related to attitude change ([Sherif & Cantril, 1947](#); [Sherif & Hovland, 1961](#); [Sherif et al., 1958](#)), and argued that individuals are motivated to process information in persuasive messages when these messages are deemed personally relevant. To advance this work, [Johnson and Eagly \(1989\)](#) defined involvement as a “motivational state

induced by an association between an activated attitude and some aspect of the self-concept” (p. 293). Within the consumer behavior literature, Celsi and Olson (1988) suggested enduring involvement was most likely to form among college students and adults who related an activity to themselves or saw it as instrumental in their ability to achieve personal goals. These authors suggested that for enduring activity involvement to occur, there must be congruence among personal needs, goals, values, and the activity attributes.

Measures of involvement attempt to capture, albeit abstractly, the meanings individuals ascribe to their leisure experiences. McIntyre (1989) identified facets of involvement that were later expanded into a five-factor Modified Involvement Scale (Kyle et al., 2007) that included *Attraction*, *Centrality*, *Social Bonding*, *Identity Affirmation*, and *Identity Expression*. *Attraction* focuses on the importance and enjoyment of the activity to the respondent, *Centrality* measures what lifestyle choices a respondent makes that ties them to the activity, and *Social Bonding* measures the social ties the lead to enduring involvement. *Identity Affirmation* and *Identity Expression* parallel McIntyre’s (1989) notion of self-expression. Specifically, “Identity affirmation examines the degree to which leisure provides opportunities to affirm the self to the self, identity expression examines the extent to which leisure provides opportunities to express the self to others” (Kyle et al. 2007, p. 405).

Gender

Gender has been an important concept for understanding variation in leisure participation (Henderson & Gibson, 2013; Jackson et al., 1993; Parry & Fullagar, 2013; Wood & Danylchuck, 2012), and this literature has grown and changed in its scope over the past 30 years (Henderson & Gibson, 2013; Lucas et al., 1990). The expanse of research on women’s leisure has focused on topics such as resistance and empowerment, feminist frameworks, social support, physical and mental health, family, and social inclusion (Berdychevsky & Gibson, 2015; Henderson & Hickerson, 2007; Warren, 2016). Increasingly, research has emphasized intersectionality and the diverse ways that women experience leisure (Henderson & Gibson, 2013). This body of work suggests gender may help to explain differences in leisure experiences, as indicated by Parry and Fullagar (2013) who stated “leisure is understood relationally as shaped by gendered norms about caring for others, caring about ones embodied self and care expressed through connections with nonhuman otherness” (p. 576). In this sense, gender has affected the activities people pursue, how they modify their participation based on expectations, and constraints to participation (Auster, 2008; Jackson et al., 1993; Johnson et al., 2001; Little, 2002; Wood & Danylchuck, 2012).

Past research has considered the gendered basis of motivation and involvement, and used these variables to identify market segments for leisure pursuits. For example, Kyle et al. (2002) studied 10 km running race participants and created consumer involvement profiles using socio-demographic variables, psychographic variables, and variables related to benefits of participation. These authors found that clusters of respondents defined by their reported levels of involvement were highly complex, and hypothesized that gender was one of the factors that influenced the preferences reported by each respondent subgroup. However, nonsignificant relationships emerged. Similarly, Wiley et al. (2000) examined recreational figure skaters and hockey players but did not find gendered differences in reported levels of involvement. In response to this work, researchers have increasingly considered motivation and involvement to be multi-dimensional constructs that help to explain the influence of gender on participation (Kyle et al., 2006, 2007).

Previous research has explored the effects of gender dynamics in the context of water-based recreation. For example, Lee et al. (2007) found motivations differed between male and female paddlers, in that women rated nature, relaxation, and social contact as more important motivators than men. In this study, women also rated social skills, wilderness, and safety as important site attributes, whereas male paddlers indicated that experiencing new sites was more important. Wiley et al. (2000) did not find gendered differences in the overall levels of involvement of hockey players and figure skaters, yet they did find differences among dimensions of involvement. More specifically, women, regardless of sport, scored higher on measures of activity attraction than men did while male hockey players scored the highest on their measures of centrality of sport. These studies found gendered differences in the dimensions of motivation and involvement, though contrasting findings have emerged (e.g., Schroeder et al., 2008). Due to uncertainty in the literature surrounding the role of gender in involvement and motivation of recreationists, we believed a crucial next step would be to advance knowledge of how gender affected involvement and its antecedent processes in water-based recreation. Thus, we tested the relationship between motivation and involvement using data collected from outdoor recreationists who participated in whitewater rafting activities on the Kern River in California in the United States. We also explored how these associations varied for men and women respondents.

Methods

Building from past conceptual and empirical work, we hypothesized that six dimensions of motivation positively predicted three dimensions of enduring involvement, and tested whether gender affected this relationship (see Figure 1). To test these hypotheses, we used data collected from outdoor recreationists who rafted the Kern River as part of a guided trip from April–June 2014. All on-site encounters and observational data were collected using contact logs, which allowed us to calculate nonresponse bias, none of which existed on the basis of gender ($\chi^2 = 0.308$) and group size ($t = 0.487$, $df = 295$). A total of 584 people were contacted on-site and asked to complete a short one-page survey that included descriptive questions and requested contact information. To build a representative sample of respondents, we stratified

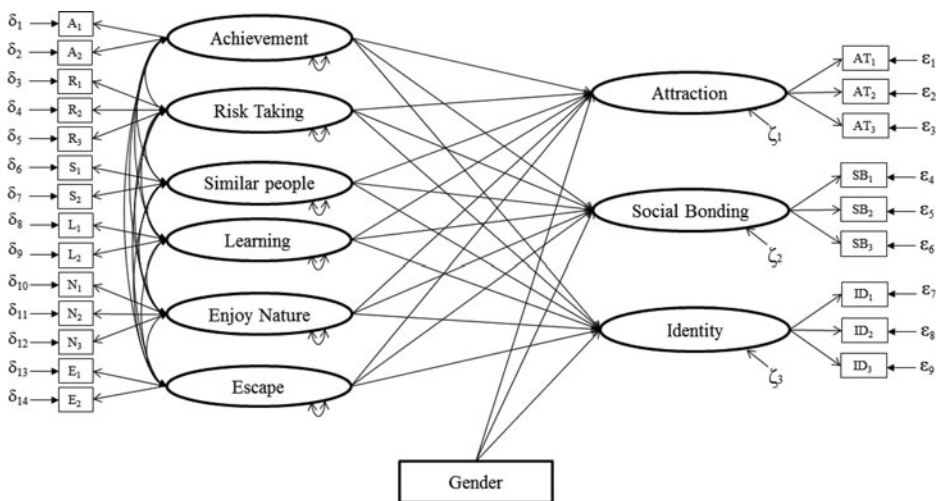


Figure 1. Hypothesized model of the role of gender in the motive-involvement relationship.

our survey schedule by day of the week. In addition, trained field technicians invited nearly all of the groups encountered to participate and selected the individual in each group with the most recent birthday. We discarded data collected from volunteer respondents. These methods resulted in a sample of 520 people who agreed to participate and an on-site response rate of 89%. Using a modified version of Dillman's (2009) total design method, we sent all on-site respondents follow-up questionnaires on three occasions by mail and/or email, depending on their reported preferences. A total of 242 people completed and returned the follow-up survey questionnaire used for the analysis presented in this article. Our response rate in the follow-up survey was 48%.

Study context

We explored the ideas of motivation, involvement, and gender on the Kern River, Calif., which is located in the southern Sierra Nevada. The Kern River was designated a Wild and Scenic River in 1987 with 123.1 miles of wild, 7.0 miles of scenic, and 20.9 miles of recreational river. Multiple federal agencies, including the National Park Service and USDA Forest Service (USFS), manage the river. In accordance with the mandates of the Wild and Scenic River Act and acquisition of a USFS Special Use Permit, commercial and recreational boating operations were permitted to facilitate recreational, scenic, scientific, educational, conservation, and historical experiences for recreationists. The majority of commercial whitewater operators and guides were located in Kernville, Calif., which was located at an elevation of 813 m approximately 68 km northeast of Bakersfield, Calif., and 264 km north of Los Angeles. The Kern River is one of the most popular whitewater rafting rivers in the United States. Its headwaters originate from snowpack in the Sierra Nevada near Mount Whitney. The flow rate of the Kern, as well as the length of the commercial whitewater season, is dependent upon the volume of discharge from the snowmelt on Mount Whitney, which was atypically low when the study was conducted in 2014.

During the peak of the 2014 season, the majority of guided trips began along various put-ins on the "Upper Kern," approximately 32 km north of Kernville. Less often, and depending on an operator's permit status with the USFS, guided trips ventured north of the Upper Kern to the wild and scenic portion of the river called the "Forks of the Kern" (north and south forks), approximately 75 km north of Kernville and 25 km south of the Golden Trout Wilderness. The length of whitewater trips on the Upper Kern varied between full-day trips to short one-hour runs, while trips to the Forks of the Kern typically lasted several days. Three whitewater operators holding USFS Special Use permits agreed to participate in the study: 1) White Water Voyages, 2) Mountain River Adventures, and 3) Sierra South. These operators provided a variety of leisure activities (e.g., tubing, rafting, kayaking) on the Upper Kern and depending on their permit, whitewater rafting on the Forks of the Kern. In 2014, recreationists experienced high quality, risky activities through the formation of trust and trustworthiness of rafting guides operating on the Kern River (van [Riper et al., 2016](#)).

Survey measures

We examined motivation to determine what compelled people to engage in rafting activities. This construct was measured using 14 items falling within six dimensions of the REP scale (Driver, 1983): *Achievement/Stimulation*, *Risk*, *Similar People*, *Learning*, *Enjoying Nature*, and *Escape Personal/Social Pressures*. These dimensions (or "domains" in REP parlance) were selected in light of past research and based on relevance to the study site and activity. We

dropped two survey items from the analysis due to low factor loading scores and improvement in model fit indicated by our modification indices. Consequently, all factor loadings were above .40 and the overall modified (12-item) scale had good internal consistency ($\alpha = .869$). Our measure of involvement assessed attachment to an activity using an adapted version of Kyle et al.'s (2007) Modified Involvement Scale. However, the scale did not include items representing the dimension of centrality, and we collapsed the dimensions of *Identity Expression* and *Identity Affirmation* due to item cross loading. The final scale included ten items that comprised three dimensions: *Attraction*, *Bonding*, and *Identity*. All factor loadings in the final model were above .40 and the scale had good internal consistency ($\alpha = .882$). We added gender to the model as a covariate to explore its effect on respondents' reported levels of enduring involvement.

Model analysis

We tested a Multiple Indicators Multiple Causes (MIMIC) model in Mplus version 7.2 using a maximum likelihood estimation procedure. Missing data were accounted for using the full information maximum likelihood method. To test our MIMIC model, we incorporated gender as a covariate to determine whether women would tend to develop fewer enduring relationships with the activity of whitewater rafting and, therefore, be compelled by different motivations than men. A chi-square test of significance assessed model re-specification, though this was not the sole indicator of model fit given this statistic's sensitivity to sample size (Byrne et al., 1989). Thus, we used three fit indices to determine the fit of our model to the data (Kline, 2011). Root Mean Square Error of Approximation (RMSEA) values less than .08 indicated acceptable fit (Steiger 2007), Comparative Fit Index (CFI) values over .90 were accepted (Bentler, 1990), and Standardized Root Mean Square Residual (SRMR) values less than .08 were considered acceptable (Hu & Bentler, 1999). We did not allow correlation between any error terms in the model.

Results

Socio-demographics

We analyzed socio-demographics to characterize people who floated the Kern River in 2014. Thirty-eight percent were female and 62% male. The age of respondents ranged from 20 to 75 with a mean of 43 years. Overall, people included in our sample were highly educated with 37.5% reporting having obtained a graduate degree, 37.1% had a four-year college degree, 11.2% had a two-year college degree, 7.3% had a vocation or trade school certificate, 6.5% had a high school degree, and 0.4% had less than a high school education. Most were well within middle and upper-middle class socio-economic categories; 31.9% indicated their income was between \$50,000–99,999 and 28.2% reported earning \$100,000–149,999 before taxes. The majority identified as White (79.1%), an additional 14.7% as Asian, 3.5% as American Indian/Native, 3.1% as Black/African American, 2.2% as Native Hawaiian/Pacific Islander, and 6.2% as "Other." On average, respondents had previous rafting experiences. About half (50.8%) rated their skill level as average, 19.5% rated their skill as somewhat low, and 12.7% as very low, while 14.0% rated their skill as high and 3.0% as very high. Most survey respondents (71.9%) said they participated in the rafting trip with family and/or friends, 2.5% were alone, 2% with an organized group, and 1.7% reported other group types.

Table 1. Level of Agreement or Disagreement with Statements about Motivation to Engage in Whitewater River Rafting.

	Mean (SD)	λ
Achievement / Stimulation ($\alpha = .791$)		
<i>To gain a sense of self confidence</i>	2.18 (1.18)	.684
<i>To test the extent to which I can do it</i>	2.66 (1.23)	.954
Risk ($\alpha = .903$)		
<i>To take risks</i>	2.57 (1.22)	.834
<i>To chance dangerous situations</i>	2.26 (1.24)	.942
<i>To experience the risks involved</i>	2.54 (1.23)	.853
Similar People ($\alpha = .791$)		
<i>To be with friends</i>	3.94 (1.15)	.421
<i>To be with people having similar values</i>	3.22 (1.31)	.773
Learning ($\alpha = .701$)		
<i>To develop my knowledge of rafting</i>	3.07 (1.22)	.775
<i>To discover something new</i>	3.91 (1.10)	.643
Enjoy Nature ($\alpha = .930$)		
<i>To view the scenery</i>	4.00 (0.93)	.846
<i>To be close to nature</i>	3.97 (1.01)	.956
<i>To enjoy the smells and sounds of nature</i>	3.84 (1.09)	.913
Escape Personal / Social Pressure ($\alpha = .812$)		
<i>To give my mind a rest</i>	3.94 (1.11)	.824
<i>To get away from the usual demands of life</i>	3.37 (1.57)	.834

Note. Values are mean scores on a five point scale ranging from 1 = "Not at all Important" to 5 = "Extremely Important."

Motivations

Respondents were motivated to engage in rafting activities on the Kern River for a variety of reasons (see Table 1). To assess motivation, six dimensions were drawn from the REP scale (Driver, 1983), each of which included two or three survey items. The strongest motivators that pushed and pulled people into recreation were *Enjoying Nature* ($M = 3.94$, $SD = 0.95$) and *Escaping Personal/Social Pressure* ($M = 3.76$, $SD = 1.07$). Conversely, *Achievement/Stimulation* ($M = 2.42$, $SD = 1.10$) and *Risk* ($M = 2.46$, $SD = 1.13$) were the two weakest motivators. The most highly rated survey items were desire to experience something new (*Learning* domain) ($M = 4.09$, $SD = 0.98$) and interests in viewing scenery (*Enjoying Nature* domain) ($M = 4.00$, $SD = 0.93$).

Involvement

Survey respondents formed diverse bonds with whitewater rafting (see Table 2). We analyzed three dimensions drawn from past research to examine enduring involvement (Kyle

Table 2. Level of Agreement or Disagreement with Statements about Involvement in Whitewater River Rafting.

	Mean (SD)	λ
Attraction ($\alpha = .890$)		
<i>Rafting is one of the most enjoyable things I do</i>	3.49 (0.91)	.796
<i>Rafting is very important to me</i>	3.12 (0.96)	.843
<i>Rafting is one of the most satisfying things I do</i>	3.12 (1.01)	.909
Social Bonding ($\alpha = .735$)		
<i>I enjoy discussing rafting with my friends</i>	3.03 (1.16)	.718
<i>Most of my friends are in some way connected with rafting</i>	1.93 (0.92)	.568
Identity ($\alpha = .824$)		
<i>I identify with the people and image associated with rafting</i>	2.69 (1.11)	.801
<i>You can tell a lot about a person by seeing them rafting</i>	2.54 (1.05)	.802
<i>Participating in rafting says a lot about whom I am</i>	2.55 (1.14)	.881

Note. Values are mean scores on a five point scale ranging from 1 = "Strongly Disagree" to 5 = "Strongly Agree."

Table 3. Structural Model Results.

Dependent Variable	Predictor	β	<i>t</i> -value	R^2
Attraction	Risk	.19	2.18*	.24
	Escape	.28	2.65*	
Social Bonding Identity	Learning	-.29	2.65*	.29
	Achievement	.35	3.16*	
	Gender	.11	1.97*	

* $p < .05$.

et al., 2007; Havitz & Dimanche 1997, 1999), each including either two or three survey items. The most highly rated dimension measured *Attraction* to the activity ($M = 3.24$, $SD = 0.87$) whereas *Social Bonding* ($M = 2.48$, $SD = 0.88$) was the least important. Respondents were also involved in whitewater rafting for the purposes of identity formation ($M = 2.59$, $SD = 0.95$).

Testing the motivation-involvement relationship

The motivation-involvement relationship was investigated by first estimating a measurement model for the pooled sample of survey respondents ($\chi^2 = 321.73$, $df = 185$, RMSEA = .06, CFI = .95, SRMR = .04). Given adequate model fit, we then tested the hypotheses in our structural model, which also illustrated a good fit to the data ($\chi^2 = 396.88$, $df = 713$, RMSEA = .06, CFI = .95, SRMR = .05) (Anderson & Gerbing, 1988). Analyses revealed motivations positively influenced respondents' involvement in rafting activities along the Kern River (see Table 3). Specifically, results from the structural analysis indicated *Attraction* was positively associated with *Risk* ($\beta = .19$, t -value = 2.18) and *Escape* ($\beta = .28$, t -value = 2.65), *Identity* was positively associated with *Achievement/Stimulation* ($\beta = .35$, t -value = 3.16), and *Social Bonding* was negatively associated with *Learning* ($\beta = -.29$, t -value = 2.65).

Given the purpose of the study was to determine whether men and women experienced whitewater rafting differently, we addressed our hypotheses by testing a MIMIC model and including a covariate to represent group membership (i.e., gender). This analysis approach was adopted due to concern over sample size and the understanding that we would be limited to testing only two potential sources of invariance (i.e., factor means and indicator intercepts) (Muthen, 1989). To estimate a MIMIC model, the latent variables of enduring involvement were regressed onto the group covariate, which revealed that gender positively influenced the *Identity* dimension of involvement ($\beta = .11$, t -value = 1.97) but did not significantly affect *Social Bonding* or *Attraction*. These effects of gender on respondents' involvement in whitewater rafting indicated differential item functioning and population heterogeneity. In other words, men were more likely to become involved in whitewater rafting than women because this activity reaffirmed their identity. An independent sample *t*-test was also estimated (see Table 4). Results suggested the motive of *Similar People* differed between groups to a statistically significant degree (t -value = 2.34, $df = 225$). In this sense, men were more inclined to engage in whitewater rafting activities than women for interacting with like-minded individuals. Thus, gender accounted for small but important differences in the identity affirmation of male and female recreationists on the Kern River.

Discussion

This study examined the relationship between recreationists' motivation to participate in whitewater rafting and involvement in activities in the southern Sierra Nevada. We also

Table 4. Results of an Independent Samples T-test of the Differences Between Males and Females Motivations and Involvement.

	Pooled Sample (<i>M, SD</i>)	Male (<i>M, SD</i>)	Female (<i>M, SD</i>)	<i>t-value</i>
<i>Motivations</i>				
Achievement / stimulation	2.42 (1.10)	2.37 (1.09)	2.51 (1.12)	− 0.96
Risk	2.46 (1.13)	2.50 (1.15)	2.38 (1.09)	0.77
Similar People	3.57 (1.10)	3.70 (0.94)	3.38 (1.08)	2.34 ^{a,b}
Learning	3.49 (1.01)	3.47 (0.94)	3.53 (1.10)	− 0.47 ^a
Enjoy Nature	3.94 (0.95)	3.87 (0.92)	4.03 (0.99)	− 1.24
Escape Personal / Social Pressure	3.76 (1.07)	3.74 (1.05)	3.79 (1.12)	− 0.37
<i>Involvement</i>				
Attraction	3.24 (0.87)	3.26 (0.85)	3.19 (0.88)	0.53
Social Bonding	2.48 (0.88)	2.54 (0.88)	2.38 (0.87)	1.30
Identity	2.59 (0.95)	2.64 (0.93)	2.51 (0.95)	1.04
<i>Socio-demographics</i>				
Age (average years, SD)	43.00 (10.66)	43.35 (10.96)	42.63 (10.06)	0.49

^aEqual variances not assumed.

^bSig at $p \leq 0.05$.

investigated the moderating effect of gender on this relationship. Overall, results showed respondents were motivated to raft the Kern River for a variety of reasons and attachment to the activity was grounded in enduring involvement. More specifically, *Enjoying Nature* and *Escaping Personal/Social Pressure* were the strongest contributing factors that pushed or pulled recreationists into rafting, whereas *Achievement/Stimulation* and *Risk* played less of a formative role. Our findings support Meyer et al.'s (2002) argument that nature is one of the most highly rated motivators to participation among outdoor recreationists, and work conducted by Lawler (1973) indicating that motivation is best understood through the pursuit of outcomes. That is, as involvement in an activity continues, water-based recreationists become committed to activities based on alignment with their individual needs. Management agencies responsible for addressing the needs of rafters on the Kern River or in related contexts will be more likely to provide high quality experiences and sustain natural areas for recreation when considering the expectations and needs of individuals (Manning et al., 2011).

We investigated the multidimensional properties of involvement and found *Attraction* to the activity was highly important while *Social Bonding* was not. Our findings extend previous research on ego-involvement conducted by Sherif and colleagues. This body of work has suggested the degree to which individuals are motivated to understand messages depends on the personal relevance of those messages (Sherif & Cantril, 1947; Sherif & Hovland, 1961; Sherif et al., 1958). In a similar vein, given high levels of reported involvement, our results show congruence between the attributes of whitewater rafting and respondents' needs and goals (Celsi & Olson, 1988), as well as attraction to activities that reaffirm individual identity. That is, respondents attracted to whitewater rafting on the Kern River likely found this activity to be personally relevant, particularly male respondents given the importance of gender in explaining *Identity Affirmation*. Moreover, increased levels of nature enjoyment and opportunities for escape likely widened respondents' latitude of acceptance concerning attraction to whitewater rafting.

Motivation positively influenced involvement, which partially supported our study's hypothesized model. Specifically, as *Learning* increased, so too did *Attraction*, *Social Bonding*, and *Identity Affirmation*, indicating that discovering new experiences and skills through whitewater activities allowed respondents to affirm their identities, reap benefits from social interaction, and develop an attraction to the activity of rafting. The relationship identified

between *Escape* and *Attraction* can be explained by the work of Driver et al. (1983) who described *Escape* as a “pull” rather than “push” factor of motivation. This finding suggested the more respondents wanted to get away from their everyday lives to enjoy whitewater rafting, the more likely the activity was to become a source of enjoyment and importance. Results also showed that *Achievement/Stimulation* predicted *Identity Expression*, indicating the role of rafting in gaining self-confidence and ability to complete the activity affected how respondents were able to define and recognize themselves. Thus, if rafting was part of their identity, succeeding in that activity likely played a substantive role in gaining self-confidence. As an extension to the idea of ego-involvement (Sherif & Cantril, 1947; Sherif & Hovland, 1961; Sherif et al., 1958), individuals who find rafting to be personally relevant, as part of identity, will be more motivated to participate and seek achievement in that pursuit.

We used a rigorous statistical method, a MIMIC latent variable model, to explore the gendered dynamics of whitewater rafting and found that males were more likely to develop attachment to rafting due to identity formation. However, contrary to our expectations, gender did not play a significant role in explaining the *Social Bonding* and *Attraction* dimensions of involvement. Our findings extend previous research conducted by Lee et al. (2007) and Ritchie et al. (2010) who supported the influence of gender on motivations and reported involvement of recreational paddlers and cycling tourists. However, these results lie in contrast to authors such as Kyle et al. (2002) who conducted a market segmentation of recreationists using involvement profiles and Schroeder et al. (2008) who examined the constraints and motivations of anglers in Minnesota. Both of these studies suggested gender did not play a significant role in explaining experiential outcomes. Our results could be attributable to the fact that the majority of respondents were with family and/or friends. Because family obligations and time are often cited as major constraints to women (Little, 2002; Wood & Danylchuck, 2012), the re-occurrence of family versus solo activities could have mitigated the expected constraints and differences in motivation and involvement in family trips. Similarly, female rafters on the Kern may have similarly overcome constraints such as lack of perceived skills, given that experienced, knowledgeable guides directed large, multi-person boats (Wallen et al., 2015). In these contexts, individual skills may be considered less important and enable the person to develop attachment to the activity of rafting despite insecurities. The potential effect from engagement in large groups may have had particular bearing on women’s abilities to overcome constraints.

Conclusion

Drawing on the expectancy-valence model, this study advances knowledge of gendered recreation with a particular focus on involvement and its antecedent processes in a nature-based context. We found partial support for the study hypotheses, in that motivations positively influence enduring involvement and gender plays a significant role in explaining identity formation of respondents included in this study. We suggest guided, controlled environments such as rafts and/or other group-based contexts offset responses to traditional gender dynamics, and emphasize the importance of tailoring management decisions to subgroups of recreationists defined by qualities such as gender. Our study findings extend literature showing an intricate relationship between gender and activity engagement, though more remains to be learned about how males and females experience leisure differently, particularly in the context of high-risk recreation wherein gender differences may become more pronounced.

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