

Predicting Motivations and Attitudes of Users of a Multi-use Suburban Trail

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ABSTRACT: This study examined how demographic characteristics, intensity of involvement, and activity type related to motivations and attitudes toward trail conditions among users of a paved trail in a suburban context. Data were collected from users of the All Purpose Trail (APT), a four-mile-long, eight foot wide, asphalt paved suburban trail near Cleveland, Ohio. Overall, we found that demographic characteristics were not very good predictors of APT users' motivations. Intensity of involvement and activity type, on the other hand, were valuable predictors of why people used the trail. Each of these constructs was significantly related to 7 of 12 motivation items examined in the study. The three sets of independent variables did not effectively predict APT users' attitudes about trail conditions, however. One conspicuous exception to this pertained to how activity type related to attitudes about trail design.

Our results also indicate that there is a core set of benefits embraced by APT users in general. Two of these—relaxation and appreciation of nature—were among the most highly sought after benefits for the sample as a whole and neither were significantly related to the independent variables included in this study. One implication of this finding is that promotional strategies, on the whole, should emphasize the natural beauty of the trail and its restorative properties. Other motives, however, were more or less important to different groups of APT users. Thus, promotional efforts should accentuate the benefits sought by particular groups (e.g., the excitement, enjoyment, and opportunities for skill development to in-line skaters in this study).

This study also provides insight about in-line skaters, a group of recreationists that has, until recently, received scant attention in the recreation management literature. In-line skating has increased dramatically over the last decade, and it shows every indication of remaining a popular trail activity for years to come. Because they are often paved, such multiple-use trails may soar in popularity among skaters. Results from this study suggest that skaters, more so than other trail users, may have higher expectations in terms of how trails are designed. Skaters in this study were far more likely than walkers and other users to regard the APT as rough, narrow, and having dangerous intersections. This result is not all that surprising given the setting attributes required for skating. Most paved trails were designed long before in-line skating became popular. Time will tell whether or not skaters will pressure park districts and agencies to retrofit multi-use trails according to their needs. Time will also tell whether or not such changes will impact other types of trail users.

KEYWORDS: Trails, walkers, runners, bicyclists, in-line skaters.

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Introduction

There is strong evidence that trail-related recreation activities are pursued by a large proportion of Americans. Recent data from the National Survey of Recreation and the Environment (2000) indicated that 87% of adults in the United States participated in trail/street/road activities during 1999-2000. Over 80% of Americans reported walking and 40% said they went bicycling. Similar results are reported in a *Roper/Starch* poll conducted in 1999: Walking, hiking, bicycling, and running or jogging were among the top ten outdoor recreation activities pursued by Americans (Outdoor Recreation in American, 2001).

Simultaneously, people tend to pursue trail activities in close proximity to where they live. In a statewide survey of Texans, walking, hiking, bicycling, and running/jogging were among the most frequently cited outdoor recreation activities residents said they participated within their community or city (Scott & Kim, 1998). The study also revealed that Texans were far more likely to participate in these activities close to home as opposed to outside their community or city. Likewise, data from a study of residents of a Houston suburb revealed that walking for pleasure, riding a bicycle, running or jogging, and in-line skating were among the 10 most frequently engaged in outdoor recreation activities pursued by residents near home (Scott, 2000). 85% of the residents said that members of their households walked for pleasure, 58% rode a bicycle, 47% ran or jogged, and 25% went in-line skating within their community.

The popularity of trail activities is matched in recent years by a growth in studies devoted to understanding various aspects of trail use, including users' attachment to trails (Moore & Graefe, 1994; Moore & Scott, 2002); Mowen, Graefe, & Williams, 1998), landowners' attitudes toward trails (Kaylen, Bhullar, Vaught, & Braschler, 1993; Moore, Graefe, & Gitelson, 1994), the economic benefits of trails (Siderelis & Moore, 1995; Crompton, 2001), constraints to trail use (Bialeschki & Henderson, 1988), and conflict among trail users (Heywood, 1996; Moore, Scott, & Graefe 1998). What is generally not well understood, however, are the motivations and attitudes of users of trails located in suburban and urban areas. Even less is known about the relationship between participants' motivations and attitudes toward trail conditions. This study examines the relationship between demographic characteristics, intensity of involvement, and the type of activity pursued and people's motivations to use trails and attitudes

toward trail conditions within a suburban context. Understanding the predictors of APT users' motivations and attitudes will assist park planners and managers in their efforts to develop trail amenities for different segments of the population.

Literature Review

Researchers and natural resource managers have long been interested in outdoor recreationists' motivations and attitudes about management practices and resource conditions. Interest in motivations and attitudes about resource conditions stems from the belief that an understanding of these phenomena can assist natural resource managers in their efforts to better deliver benefits and minimize conflicts among users (Manfredo, Driver, & Tarrant, 1996). To date, most studies of outdoor recreation have been pursued in dispersed or wildland areas. In contrast, we know little about why people use trails near urban areas and participants' attitudes toward trail conditions. Research from studies on outdoor recreation in general suggests that possible correlates may include demographic factors, intensity of involvement, and type of activity pursued by trail users.

Motivations

Motivations refer to those internal factors that arouse and give direction to human behavior (Iso-Ahola, 1999). Scholars generally agree that motivations stem from a desire to achieve particular outcomes or benefits (Manfredo et al., 1996). These motives may be intrinsic or extrinsic in origin (Laverie, 1998). Simultaneously, researchers have known for a long time that people often seek multiple outcomes when participating in outdoor recreation activities (Hendee, 1974). Researchers have also found that recreational motivations are associated with various characteristics of recreationists.

Although a number of studies have reported that recreational motivations vary little by demographic variables (Getz, 1991; Ralston & Crompton, 1988; Uysal, Gahan, & Martin, 1993), a handful of studies indicate that demographic factors are correlated with recreationists' motivations. One study found that females were more likely than males to be motivated by mental and physical relaxation, and a desire to develop close personal relationships when traveling (Ryan, 1995). Another study, in contrast, reported that males were more likely than females to place greater need for positive experiences of love and belongingness (Pearce & Catabiano, 1983). Race and ethnicity may be related to recreational motives. At least one study, for example, found that family togetherness was a stronger recreational motivation among Mexican Americans than Anglo Americans (Gramann, Floyd, & Saenz, 1993). There is also evidence that age is related to recreational motives. In a study of deer hunters, Decker and Connelly (1989) found that age was positively related to affiliation motives but negatively related to achievement motivations.

Several studies indicate that recreational motives are associated with recreationists' intensity of involvement. By intensity of involvement, we are referring to recreationists' commitment, experience, level of specialization, or involvement with an activity. Researchers have long believed that motives change as people acquire skills, experience, and commitment in outdoor recreation activities (e.g., Bryan, 1979; Scott & Shafer, 2001). Studies of anglers, for example, indicate that level of experience is positively related to a desire to obtain a "trophy" fish (Chipman & Helfrich, 1988; Ditton, Loomis, & Choi, 1992). Likewise, studies of birdwatchers suggest that intensity of involvement is positively related to achievement and competitive motives (McFarlane, 1994; Scott, Baker, & Kim, 1999). A study of white water recreationists reported by Kuentzel and McDonald (1992) also revealed that level of commitment was positively related to a desire to be with friends and family, a desire to keep physically fit, to have fun, and a desire to test one's skills. In the same study, however, past experience was negatively related to motives such as a desire to view the scenery, a desire to take chances, and the excitement of the rapids.

Studies of outdoor recreationists have also shown that people involved in specific types of recreation activities seek different types of benefits. In a groundbreaking study, Driver (1976) found that 10 different activity groups of outdoor recreationists varied in the importance they assigned to each of 13 different types of needs or outcomes. For example, exercise and achievement were the most important benefits sought by tennis players. Experiencing nature was the least important motive among tennis players but was very important to the backcountry campers and hikers. Brown (1981) summarized a variety of findings from various studies and found that some benefits (e.g., relationship with nature, escape from social pressure, and being with one's recreation groups) were commonly sought by participants in all eight outdoor recreation activities examined. Brown found, however, that other motivations tended to be associated with people's involvement in specific activities. For instance, a risk taking/action/excitement motivation was highly valued only for off-road vehicle recreationists and river runners.

Attitudes Toward Resource Conditions

Researchers have also been interested in understanding recreationists' attitudes toward resource conditions. To date, researchers have examined a variety of conditions across a multitude of settings. Resource conditions have been operationalized in terms of human impacts (Shafer & Hammit, 1995), crowding and congestion (Kuentzel & McDonald, 1992), physical, social, and management setting attributes (Virden & Schreyer, 1988), detractors of hunting quality (Kuentzel & Heberlein, 1992), depreciative behaviors (Wellman, Roggenbuck, & Smith, 1982), and management practices (McIntyre & Pigram, 1992). Consistent with the findings reported above regarding motives, researchers have found that attitudes about resource conditions are often linked to attributes of recreationists.

Little is known about the relationship between demographic characteristics and attitudes toward trail conditions specifically. However, outdoor recreation researchers have reported several significant findings that might be applied to attitudes toward trail conditions. For example, Gramann and Burdge (1984) found that older respondents were less likely to report serious crowding problems than younger visitors to a recreation area. They also reported that education and income did not significantly impact attitudes toward crowding. Westover and Collins (1987) also indicated that neither income nor education were significantly related to recreationists' attitudes toward crowding when other variables were controlled. In contrast, West (1981) indicated that education was significantly related to people's perceptions of crowding and number of campsites preferred. The relationship between race/ethnicity and gender and attitudes toward resource conditions are less well known. One study, however, found that Anglo Americans were more likely than Mexican Americans to favor campsites that were relatively far away from other campers (Irwin, Gartner, & Phelps, 1990). In another study, Westover (1986) reported that women were more likely to avoid parks that were perceived as unsafe.

Studies have also focused on the relationship between intensity of involvement and attitudes toward resource conditions. These studies, however, do not provide consistent findings. In a study of mountain bikers, Hopkin and Moore (1995) found level of activity specialization related to 6 of 18 trail attributes. Specialization was positively related to preferences for "fast downhill sections," "technical sections," "single track trails," "technical descents," and "log crossings/obstacles." A negative relationship was found for "level sections." In a study on the relationship between hiking specialization and perceived setting preferences, Virden and Schreyer (1988) found that level of specialization was negatively correlated with tolerance for seeing others on trails, seeing motorized recreationists, well-maintained trails, directional travel signs, and domestic livestock on trails. Likewise, Shafer and Hammit (1995) found that level of concern for human impacts was high among individuals with strong wilderness values. In contrast, Wellman et al. (1982), found that there was little association between level of canoeing experience and attitudes about depreciative behaviors. Moreover, while some studies have reported that past experience is associated with perceived crowding (e.g., Vaske, Donnelly, & Heberlein, 1980), other studies have shown that there is little relationship between intensity of involvement and crowding measures (Kuentzel & McDonald, 1992).

Findings from a few studies suggest that type of activity may be associated with recreationists' attitudes about trail conditions. Moore et al. (1998) reported that people participating in different types of activities along a suburban multi-purpose trail varied in the problems they attributed to people participating in other activities. For example, runners were perceived as causing the least conflict while skaters were felt to produce the greatest negative impact on other groups. Other studies also indicate that

people participating in different activities vary in the extent to which they reported being impacted by other participants (Blahna, Smith, & Anderson, 1995; Gibbons & Ruddell, 1995; Ramthyn, 1995).

Purpose of Study

Findings from previous studies indicate that demographic factors, intensity of involvement, and activity type may have some relationship with recreationists' motives and attitudes about resource conditions. However, the research reported above is equivocal in terms of reporting consistent findings. Moreover, little is known about these relationships among users of trails located within or near urban areas. Thus, the purpose of this study was to examine the relationship between demographic characteristics, intensity of involvement, and activity type on trail users' motivations and attitudes toward trail conditions. By understanding the relationship between users' motivations and attitudes, park planners and managers will be in a better position to offer trail amenities to various segments of the trail-using public.

Study Area and Methods

Study Area

Data were collected during the summer of 1994 from users of the All Purpose Trail (APT), a four-mile-long, eight foot wide, asphalt paved suburban trail in North Chagrin Reservation near Cleveland, Ohio. The study was conducted under the direction of the second author, when he was employed as Manager of Research for Cleveland Metroparks, with the cooperation of employees at North Chagrin Reservation. At the time of the study, the APT received approximately 5,700 visits per week during the summer. There were about 700 visits each weekday and about 1,100 each weekend day. Users of the APT include walkers, runners, in-line skaters, and bicyclists. North Chagrin Reservation, which is approximately 20 miles from downtown Cleveland, includes 1,912 acres of wooded forests, wildflower areas, and a wildlife sanctuary. The park also includes a nature center, where employees interpret the ponds and marshes of the surrounding area. Facilities at North Chagrin, other than the APT, include picnic areas, a golf course, a ball field, and unpaved hiking trails.

Collection of Data

Adult trail users were contacted at different points along the trail on both weekdays and weekends. Twenty-one sample days were selected systematically and each was divided into six two-hour sample periods between 8 a.m. and 8 p.m. During each selected period, volunteer interviewers stopped trail users along the trail. Following a random start, APT users were selected by choosing the first individual or party arriving at the interview point after a four minute interval from the completion of the previous interview. After a party was selected, the member was chosen who had celebrated the most recent birthday. Of a total of 839 trail users

approached, 652 (78%) agreed to take part in the study. Refusals came primarily from APT users unwilling to interrupt a physical workout. Those agreeing to participate were given a self-administered questionnaire and asked to take it home, complete and return it through the mail. Participants were also asked to furnish their names and addresses for mailing replacement surveys to non-respondents.

Of the 652 people who originally agreed to take part in the study, 438 (67%) returned questionnaires. Although the overall effective response rate was 52% (438 completed mail questionnaires from 839 trail users approached), we were encouraged that our sample was consistent with data gathered earlier on this trail for the crucial variable of trail activity. Of mail questionnaires returned, 50% were walkers, 13% runners, 20% skaters, and 17% bicyclists. These proportions were very close to those found during comprehensive trail user counts conducted by park personnel during the previous summer (49% walkers, 12% runners, 16% skaters, and 22% bikers; $n = 2,620$).

Measurement of Independent Variables

The independent variables for the study included trail users' demographic characteristics, intensity of involvement, and the activity which respondents were engaged in on the day of the interview. Four demographic variables were included: gender (0=females, 1=male), race/ethnicity (0=non-white, 1=white), age (measured in years), and level of education (1=did not graduate from high school, 2=completed high school or equivalent, 3=some college or vocational school, 4=completed college, and 5=graduate school). Activity type included walking, running, in-line skating, or bicycle riding. Respondents' activities were determined at the time of the interview and were confirmed using a close-ended question early in the mail questionnaire. Those who were walking their dogs, pushing strollers, or "speed walking" were included in the walking category for study analyses.

We used three scales to measure participants' intensity of involvement: frequency of trail use, personal commitment, and behavioral commitment. These measures are increasingly used by researchers to study specialization, commitment, and involvement (Scott & Shafer, 2001). Frequency of trail use was measured by asking respondents to estimate how many times, during the last 12 months, they had used the trail for walking/hiking, running/jogging, bicycling/mountain biking, roller blading/in-line skating, cross country skiing, and other activities. Responses to these six activity categories were summed to create a composite measure of frequency of use. Personal commitment is similar to what others have referred to as affective attachment (Buchanan, 1985). We measured the construct by combining trail users' responses to five attitude items (e.g., "I find a lot of my life is organized around bicycling" and "My favorite free time activity is bicycling"). Items were worded in such a way as to conform to the activity in which respondents were engaged in on the APT at the time. Behavioral commitment, in contrast, reflects the expectations held by others and costs

associated with discontinuing involvement (Buchanan, 1985). We measured it by combining participants' responses to three attitude items (e.g., "Most of my friends are in some way connected with bicycling" and "Because of bicycling, I don't have time to spend participating in other leisure activities"). The two commitment scales displayed acceptable degrees of reliability (Cronbach's Alpha were .80 and .63 respectively).

Measurement of Dependent Variables

We used 12 items to measure trail users' motivations. These items were drawn from the Recreation Experience Preference (REP) scales (Manfredo et al., 1996). However, instead of using multiple items within sub-scales, as is typically done, we deliberately used single items that represented diverse experiences that people might seek when using a suburban trail. Our goal here was to simplify the survey process. To avoid ambiguity, we provided key words on the questionnaire to illustrate what we meant by a given motive or benefit. For example, next to the relaxation motive, we included the phrase, "To get away from the usual demands of life." Similarly, along with the appreciation of nature motive, we included the expression, "To view the scenery and enjoy the sights, sounds, and smells of a natural area." Participants were asked to indicate how important the motives were as reasons for visiting the APT on the day of their visit. Response categories ranged from not at all important (1) to very important (4).

We measured participants' attitudes about trail design and trail conditions using 21 items, which we drew from a previous study of users of three trails (Moore, Graefe, Gitelson, & Porter, 1992). Items were designed to cover participants' attitudes about a range of issues related to trail design and potential problems associated with others' use of the trail. Some of these issues pertained to depreciative behaviors, conflict with other trail users, and the lack of comfort amenities. Participants were asked the extent to which they believed various conditions were a problem during the trail visit on the day they were interviewed. Response categories ranged from not a problem (1) to very serious problem (7). We used factor analysis to reduce the number of attitude items into dimensions of opinions about trail conditions and design.

Analyses

We used standard multiple regression analyses to test whether or not demographic characteristics, intensity of involvement, and activity type were significantly related to motivations and attitudes. In order to accommodate activity type in our multivariate analyses, we created three dummy variables. In this case, in-line skaters (X_1), bikers (X_2), and runners (X_3) were all treated as unique variables and assigned scores of "1." Walkers, thus, constituted a reference category and individuals engaged in this activity were assigned a score of "0." [See Cohen and Cohen, 1983, for an explanation of the way dummy variables were used in the regression analyses.] For summary purposes, R-square change scores and standardized Beta coefficients are reported.

Results

Characteristics of Respondents

54% of respondents were male, 93% were Anglos, and 57% were college graduates. The mean age of respondents was 45 years. As noted, 50% of trail users were walkers, 20% were in-line skaters, 17% were bicyclists, and 13% were runners. The average amount of time it took respondents to get to North Chagrin was 16 minutes and the average distance from their home to the APT was 11 miles. Respondents reported that they used the trail an average of 72 times during the last 12 months and stayed an average of 80 minutes each visit.

Table 1 provides a summary of the mean scores for the 12 motivation items. Recall that response categories ranged from 1 (not at all important) to 4 (very important). Six of the items had mean scores of 3.0 or higher, indicating a relatively high degree of importance. In rank order, these items included exercise ($M=3.74$), enjoyment ($M=3.69$), relaxation ($M=3.55$), appreciation of nature ($M=3.54$), personal control ($M=3.11$), and solitude ($M=3.00$).

Table 1
Motivations of APT Users

Motivation Item	N	Mean
<i>Exercise</i> : To keep me healthy and fit	419	3.74
<i>Enjoyment</i> : To do something I really like to do	415	3.69
<i>Relaxation</i> : To get away from the usual demands of life	412	3.55
<i>Appreciation of nature</i> : To view the scenery and enjoy the sights and sounds of natural areas	419	3.54
<i>Personal control</i> : To feel independent and/or do something that I wanted to do	401	3.11
<i>Solitude</i> : To be where it is quiet and/or to get away from other people	403	3.00
<i>Reflection</i> : To think about things and/or to get in touch with myself spiritually	399	2.82
<i>Family togetherness</i> : To spend quality time with members of my family	367	2.59
<i>Excitement</i> : To have a stimulating and exciting experience	397	2.57
<i>Friendship ties</i> : To spend quality time with my friends	358	2.52
<i>Skill development</i> : To be challenged and/or develop my skills and abilities	392	2.51
<i>Novelty</i> : To do something different and unique	383	2.15

Response categories ranged from 1 (not at all important) to 4 (very important).

Dimensions of Attitudes Toward Trail Conditions

Factor analysis of the trail condition items produced a five-factor solution (Table 2). The first factor included six items and reflected respondents' attitudes about access/comfort amenities along the trail. The second factor included five items pertaining to opinions about depreciative behaviors. The third factor included four items that reflected respondents' attitudes about the quality of trail design. The fourth factor included three items that had to do with respondents' attitudes about the degree of trail conflict. The final factor included a pair of items pertaining to attitudes about safety. Together, the five factors explained 63% of the variance. We created additive indices for each scale and assessed their degree of reliability. The Cronbach's Alphas for the scales ranged from .67 to .83 and were judged to be acceptable. We dropped one item from the depreciative behavior scale because it had a low item-to-scale correlation. The mean scores for the scales ranged from 1.74 (depreciative behavior) to 2.71 (conflict with other users). These low scores indicate low levels of trail conditions problems.

Table 2
Factor Analysis of Attitude Items

	Factor Loading	Eigen-value	Variance Explained	Alpha
Access/Comfort Amenities ($M = 2.40$)	----	6.58	31.33	.83
Lack of information to plan visits	.75			
Not enough access points	.75			
Lack of services (food, drink, bike repair, etc.)	.73			
Not enough parking at access points	.71			
Lack of drinking water	.64			
Lack of trail direction signs	.62			
Depreciative Behaviors ($M = 1.74$)	----	2.40	11.46	.79
People playing loud music	.77			
Litter and glass	.73			
People shouting and yelling on trail	.69			
Pets off leash ^a	.68			
Trail vandalism	.66			
Trail Design ($M = 2.44$)	----	1.84	8.77	.77
Rough trail surface	.83			
Dangerous road intersections	.67			
Narrow trail width	.64			
Traffic barriers	.60			
Conflict with Other Users ($M = 2.71$)	----	1.37	6.51	.78
Conflict with other activities	.84			
Too crowded	.79			
Reckless behavior of trail users	.70			
Safety ($M = 2.06$)	----	1.02	4.87	.67
Inadequate ranger/safety patrol	.74			
Personal safety	.71			

^aItem was deleted from the final scale because of low reliability.

Predicting Trail Users' Motivations

Tables 3 and 4 present a summary of the results of the regression analyses on participants' motives to use the all-purpose trail on the day of their visit and their attitudes about trail conditions. The R-square change coefficients in Table 3 provide information about the amount of variation explained in the dependent variables after the effects of other variables have been controlled. The R-square change coefficients, thus, provide insight into the relative efficacy of predicting participants' motives and attitudes using one set of independent variables over another. Table 4, in contrast, provides more detailed information about what factors are related to trail users' motives and attitudes. In this case, we reported standardized Beta coefficients for those independent variables that are significantly related to participants' motives and attitudes toward trail conditions.

Collectively, the three sets of independent variables were significantly related to 9 of the 12 motivation items. Intensity of involvement and activity type were both significantly related to seven of the motivation items. In contrast demographic characteristics were significantly related to only two motivation items. Activity type was the single best predictor, as evident by the R-square change coefficients, for the following five motives: family togetherness (.054), friendship ties (.084), exercise (.039), excitement (.121), and skill development (.168). Intensity of involvement, in contrast, was the best predictor for the personal control (.028), enjoyment (.061), and reflection (.064) motives. The demographic variables were the best predictor of the novelty motive (.041).

Table 4 clarifies the relationships between the three sets of independent variables and participants' motives. Beginning with activity type, we see a number of significant differences between walkers (our reference category) and other trail users, particularly in-line skaters. Compared to walkers, in-line skaters were less likely to be motivated by a desire to foster family togetherness ($\beta = -.159$) but more likely to be motivated by a desire to exercise ($\beta = .211$), to feel personal control ($\beta = .194$), to experience excitement ($\beta = .388$), to develop skills and abilities ($\beta = .507$), and for enjoyment ($\beta = .170$). Runners and walkers differed across four motivation items. Runners reported higher motivation scores than walkers for exercise ($\beta = .169$) and skill development ($\beta = .240$) but lower motivation scores for family togetherness ($\beta = -.155$) and friendship ties ($\beta = -.126$). Bicyclists reported higher motivation scores than walkers for the excitement ($\beta = .235$), skill development ($\beta = .196$), and enjoyment ($\beta = .157$) motives.

Personal commitment was significantly related to five of the motivation items. In this case, this measure of intensity of involvement was positively related to the personal control ($\beta = .157$), excitement ($\beta = .150$), skill development ($\beta = .174$), enjoyment ($\beta = .261$), and reflection ($\beta = .163$) motives. Frequency of trail use was positively related to two motive items: exercise ($\beta = .158$) and reflection ($\beta = .174$). Behavioral commitment was positively related to one motive item: friendship ties ($\beta = .255$). Age was negatively related to trail users' motives to foster friendship ties ($\beta = -.139$).

Table 3
Regression Analyses for Predicting Motivations and
Attitudes About Trail Conditions

	Demographic Characteristics R-Square Change	Intensity of Involvement R-Square Change	Type of Activity R-Square Change	Total R-Square
<i>Motivations</i>				
Exercise	.019	.029 *	.039**	.091***
Enjoyment	.006	.061***	.029 *	.091***
Relaxation	.031	.016	.003	.041
Appreciation of nature	.011	.011	.034	.045
Personal control	.028	.028 *	.024 *	.073**
Solitude	.019	.011	.031	.046
Reflection	.025	.064***	.016	.118***
Family/ togetherness	.024	.011	.054***	.116***
Excitement	.021	.040***	.121***	.224***
Friendship ties	.044**	.071***	.084**	.187***
Skill development	.017	.053***	.168***	.265***
Novelty	.041 *	.011	.020	.084**
<i>Attitudes About Trail Conditions</i>				
Access/comfort amenities	.041**	.003	.015	.073**
Depricative behaviors	.011	.012	.011	.034
Trail design	.006	.008	.214***	.313***
Conflict with other users	.023	.023	.016	.049
Safety	.021	.005	.002	.029

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

Table 4
Summary of Significant Variables Predicting
Trail Users Motives and Attitudes

Dependent Variables	Significant Independent Variables	<i>Beta</i>	P-Value
<i>Motivations</i>			
Exercise	Frequency of trail use	.158	.007
	In-line skaters	.211	.002
	Runners	.169	.008
Enjoyment	Personal commitment	.261	.000
	In-line skaters	.170	.012
	Bicyclists	.157	.009
Personal control	Personal commitment	.157	.013
	In-line skaters	.194	.005
Reflection	Frequency of trail use	.174	.003
	Personal commitment	.163	.009
Family togetherness	In-line skaters	-.159	.024
	Runners	-.155	.019
Excitement	Personal commitment	.150	.010
	In-line skaters	.388	.000
	Bicyclists	.235	.000
Friendship ties	Age	-.139	.039
	Level of education	-.149	.009
	Behavioral commitment	.255	.000
	Runners	-.126	.051
Skill development	Personal commitment	.174	.002
	In-line skaters	.507	.000
	Bicyclists	.196	.000
	Runners	.240	.000
Novelty	Race/ethnicity	-.128	.025
	Age	-.138	.044
<i>Attitudes About Trail Conditions</i>			
Access/comfort amenities	Age	-.163	.015
Problems with trail design	In-line skaters	.532	.000

and desire to seek novelty ($\beta = -.138$). Likewise, level of education was negatively related to trail users' desire to cultivate friendship ties ($\beta = -.149$). Race/ethnicity was significantly related to the novelty item. In this case, non-whites were somewhat more likely than whites to be motivated by a desire for novelty ($\beta = -.128$).

Predicting Trail Users' Attitudes Toward Trail Conditions

As evident from Table 3, the three sets of independent variables were significantly related to only two sets of attitudes items. In this case, the demographic characteristics of trail users were significantly related to attitudes about access and comfort amenities (.041), and activity type was significantly related to attitudes about trail design (.214). Table 4 shows that younger trail visitors had more problems with trail access and comfort amenities than did older visitors ($\beta = -.163$), and in-line skaters were far more likely than walkers to be critical of issues pertaining to trail design ($\beta = .532$).

Discussion and Implications

The purpose of this study was to examine how demographic characteristics, intensity of involvement, and activity type related to motivations and attitudes toward trail conditions among users of an all-purpose trail in a suburban context. Overall, we found that demographic factors were not very valuable predictors of APT users' motivations. Intensity of involvement and activity type, on the other hand, were equally valuable predictors of why people use trails. Each of these constructs was significantly related to 7 of 12 motivation items examined in the study. The three sets of independent variables did not effectively predict APT users' attitudes about trail conditions. One conspicuous exception of this pertained to how activity type related to attitudes about trail design.

Our findings, which target an urban proximate location, parallel those reported of outdoor recreationists within backcountry settings. Consistent with other studies, we found that recreational motivations among APT users varied little by demographic variables (Getz, 1991; Ralston & Crompton, 1988; Uysal, Gahan, & Martin, 1993). We found that demographic variables related to only two motivation items—friendship ties and novelty—and these relationships were not strong. Until recently, few studies of outdoor recreationists have examined the relationship between demographic factors and attitudes about trail conditions. Our results indicated that the relationship between these variables is weak. One demographic variable—in this case age—was related to attitudes about access and the availability of comfort amenities. Again, the relationship was not strong.

Our results corroborate that intensity of involvement is a useful predictor of outdoor recreationists' motives. Studies generally show that motives change as people acquire skills, experience, and commitment in outdoor recreation activities (Chipman & Helfrich, 1988; Ditton, et al., 1992; McFarlane, 1994; Scott, et al., 1999). At least one study, however,

reported that different indicators of involvement vary in how they impact motives (Kuentzel & McDonald, 1992). We found that one indicator of involvement—in this case personal commitment—was among the best predictors of APT users' motives and certainly the best predictors among the three measures of intensity of involvement. Personal commitment was positively related to APT users' need for enjoyment, personal control, reflection, excitement, and skill development. These results suggest that future studies that seek to understand motivations among users of urban trails should consider the affective attachment (measured in this study by commitment) people have toward the activities in which they are involved.

Studies focusing on the relationship between intensity of involvement and attitudes toward resource conditions have not reported consistent findings. Some studies have found significant relationships (e.g., Hopkin & Moore, 1995; Shafer & Hammit, 1995; Vaske et al., 1980; Virden & Schreyer, 1988) while others have reported little association between the variables (Kuentzel & McDonald, 1992; Wellman et al., 1982). Results from our study indicated that none of the three indicators of involvement—personal commitment, behavioral commitment, and frequency of use—were related to APT users' attitudes about trail conditions. Future research will need to confirm whether or not different indicators of involvement are related to participants' attitudes about trail conditions within an urban context.

Results from this study corroborate findings reported elsewhere that indicate that the type of activities in which outdoor recreationists participate are likely to be strongly related to the type of benefits they seek (Brown, 1981; Driver, 1976) and their opinions about issues related to management activities (Mowen et al., 1998). We found that walkers were more likely than others to use the trail for purposes of bonding with family and friends. In-line skaters, in contrast, were far more likely than walkers to use the APT because they wanted to feel a sense of personal control, hoped to develop their skills, and were seeking exercise, enjoyment, and excitement. Runners, too, were more likely than walkers to use the trail because they sought exercise and wanted to develop their skills. Compared to walkers, bicyclists wanted to develop their skills and also sought excitement and enjoyment. Finally, we also found that in-line skaters were far more likely than other APT users to feel that the trail had a rough surface, had dangerous road intersections, was too narrow in width, and had traffic barriers.

Our results indicate that there is a core of benefits embraced by APT users in general. Two of these benefits include relaxation and appreciation of nature. These were among the most highly sought after benefits for the sample as a whole and neither was significantly related to the independent variables included in this study. One implication of this finding is that promotional strategies, on the whole, should emphasize the natural beauty of the trail and its restorative properties. This only tells part of the story, however. As noted, most motives we included were more or less important to different groups of APT users. Promotional efforts to in-line skaters, for

instance, should accentuate the excitement, enjoyment, and opportunities for skill development engendered on the trail. Likewise, promotional pitches to walkers should emphasize how the trail can facilitate bonding among friends and family members.

This study provides practitioners valuable in-sight about a user group that has, until recently, received scant attention from the trail research literature, namely in-line skaters. In-line skating has increased 850% since 1989 and it shows every indication of remaining a popular trail activity for years to come (Dendy, 1999). Because they are often paved, multiple-use trails may soar in popularity among skaters. Results from this research suggest that skaters, more so than other trail users, may ask much from park managers and planners in terms of how trails are designed and managed. Skaters in this study were far more likely than walkers and other users to regard the APT as rough, narrow, and having dangerous intersections. Given the nature of skating, this result is not all that surprising. The APT was designed long before in-line skating became popular. Time will tell whether or not skaters will pressure park districts to retrofit trails to better suit their needs. Simultaneously, time will tell whether or not such changes impact other types of trail users.

Results from this study also suggest that practitioners should make sure local trail systems are diverse enough that opportunities are available for the many kinds of experiences that diverse groups of trail users desire. This is the premise of the Recreation Opportunity Spectrum (ROS) and has generally not been applied well to trail resources outside the backcountry. Creating such systems often requires cooperation and planning across different agencies to achieve broad opportunities in a community or region. At the very least, local park districts should make sure users and potential users understand what trail types are available, what experiences can occur there, and what activities are most appropriate for those trails. Newer and wider trails may be perfectly appropriate for skaters whereas more narrow trails may not. Not only will trail users be better able to select the best places for their desires, but also they may realize that other opportunities exist for trail experiences they had not considered before.

This research offers implications for the management and promotion of *multi-use trails* in particular. The reality is that multi-use trails attract a diverse group of users. We have already noted that focused promotional tactics could be pitched to different user groups. Another implication is the potential for helping visitors time their visits so that they can avoid user groups who seek a very different mix of experiences. An extreme practice would be to actually give primacy to certain groups at certain times of day, as is currently done on some trails. Such a measure is not only drastic but may, in most cases, be unnecessary. As noted above, respondents generally reported low levels of dissatisfaction with trail conditions. Likewise, as we have noted elsewhere (Moore et al, 1998), trail users reported minimal conflict with other users. Together, these results suggest that *most users of the multi-use trail appear to be getting along amiably despite the fact that they*

pursue different activities and have varying levels of experience and involvement. Such a conclusion should empower practitioners who are considering developing multi-use trails in their communities. They should be able to make a strong case that community tax dollars will be spent on a trail amenity that will be used by a heterogeneous group of constituents.

Future research should be directed at determining whether or not our findings can be generalized to other urban proximate locations. Beyond this, it is important for practitioners to understand the range of benefits people seek when using multi-use trails and the extent to which these are compatible. To the extent they are not compatible, research must help practitioners determine strategies for mitigating differences among trail users. It is also important for practitioners to monitor people's satisfaction with multi-use trails. Our measures of "attitudes about trail conditions" may be inadequate and may need to be refined. Research should also be directed to assisting park planners and managers' efforts to provide the "best" mix of opportunities in their trail systems. Urban and suburban trails vary markedly in terms of development and inclusion of natural elements (Shafer, Scott, & Mixon, 2000). Continued trail user research will assist practitioners' efforts to target trail amenities to different groups of constituents.

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