

## Need for Achievement in Outdoor Recreation: Scale Construction and Validation

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### Abstract

*The article presents a new tool – The Outdoor Recreation Need for Achievement Scale (ORNAS). This scale is a scale which diagnoses need for achievement in outdoor recreation. Validity of the Outdoor Recreation Need for Achievement Scale was tested using exploratory and confirmatory factor analysis. The questionnaire's reliability and intercorrelations were also tested. The Outdoor Recreation Need for Achievement Scale correlates with general achievement motivation, temperamental traits: briskness, activity and endurance, the Sensation Seeking Scale and the Self-Efficacy Scale. The obtained results indicate that the Outdoor Recreation Need for Achievement Scale is a valid and reliable tool.*

**Keywords:** need for achievement, outdoor recreation.

### Introduction

Outdoor recreation is free time activity that occurs in the outdoors and embraces the interaction of people with the natural environment (Ibrahim & Cordes, 2002; Plummer, 2009). Activities enjoyed in close contact with the natural world are gaining in popularity. Every year more and more people are taking up kayaking, climbing, canoeing, skydiving, scuba diving, downhill or cross-country running (Priest & Gass, 1997). The positive consequences of outdoor recreation are multifaceted: improving psychological and social well-being, feeling healthy, learning of risk taking and risk management, improving cognitive skills, taking responsibility for oneself and others, feeling relaxed or deeply experiencing nature (Ardahan & Lapa, 2010; Berman, Jonides, & Kaplan, 2008; Ibrahim & Cordes, 2002; Pretty, 2005).

Outdoor recreation has multidimensional high risks too. These risks vary in line with the type of outdoor recreation being pursued; they may entail pitting oneself against the forces of gravitation when parachuting, paragliding and, to some extent, mountaineering. Battling with the power of water, as surfers, divers, canoeists and kayakers do, or taking on nature's challenging landforms by way of ski mountaineering, mountain biking or caving. Defined sets of characteristics thus also differentiate one recreational activity from another. What is interesting, though, is that all the above mentioned outdoor activities share a common feature in the challenging. Various constructs have been created to study the motivated outdoor adventure of individuals and to predict their involvement: flow (Csikszentmihalyi, 1990); sensation seeking (Gomà-i-Freixanet, 1991; Zuckerman, 1994), self-efficacy (Llewellyn & Sanchez, 2008; Llewellyn, *et al.*, 2008) or intrinsic motivation (Asci, *et al.*, 2007, Celsi, *et al.*, 1993, Deci & Ryan, 2000). Some studies suggest that participation in outdoor activities and sports can also be determined by need for achievement (Schüler, *et al.*, 2014).

### Need for Achievement

The forerunner of research on need for achievement is Henry Murray but the concept of need for achievements in psychology popularized psychologist David McClelland (1958). Need for achievement describes the desire for significant accomplishment, control, high standards and mastering of skills. McClelland and his coworkers (1961) defined the need for achievement as “success in competition with some standard of excellence. That is, the goal of some individual in a story is to be successful in terms of competition with some standard of excellence.

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The individual may fail to achieve this goal, but the concern over competition with a standard of excellence still enables one to identify the goal sought as an achievement goal. This, then, is our generic definition of achievement” (p. 181). Similarly, Lussier and Achua (2007) defined need for achievement as “the unconscious concern for excellence in accomplishments through individual efforts” (p. 42). Finally, Daft (2008) described need for achievements as “the desire to accomplish something difficult, attain a high standard of success, master complex tasks” (p.233).

Need for achievement is a product of the relations and interactions between cognition, emotions, behaviors and the environment (Daft, 2008). This need concerns new and ambiguous situations where risk is involved. The need of achievement is characterized by an enduring and meeting high standards of achievement. Moreover, need for achievement regulates the undertaking of innovative action, which requires courage and persistence (McClelland, *et al.*, 1989). Need for achievement is related to the new and difficulty of goals individuals chooses to undertake. People with low need of achievements may choose easy goals because they want to avoid the risk of failure or – surprisingly - highly difficult goals, such that a failure would not be embarrassing. Individuals with high need for achievement choose moderately difficult goals (McClelland, 1961). Need for achievement is positively related to other motivational states and traits, such as the self-efficacy or conscientiousness (Chen, *et al.*, 2000).

Need for achievement determines whether individuals think pessimistically or optimistically in a difficult situation, and influence the way people motivate themselves in achieving their goals. Those who are more highly motivated to achieve enjoy life and feel in control (Singh, 2011). Additionally, people with strong need for achievements increase their efforts and persistence in the face of difficulties or potential failure (Bipp & Dam, 2014). Thus, high levels of need for achievement sustain motivation and improve skill development (Bipp & Dam, 2014; Lussier & Achua, 2007). Individuals with high need for achievement find enjoyment in performing challenging goals and see difficult goals as opportunities to better themselves. High achievers seek challenges and believe in continuing to attempt something in order to succeed instead of giving up or moving to something else. They strive to improve their skills and see success as a personal responsibility.

The need for achievement splits into an approach and an avoidance tendency (Atkinson, 1966; Elliot & Church, 1997). The approach tendency is labeled hope of success and the avoidance tendency is called fear of failure. Another distinction includes implicit and self-attributed achievement motives (McClelland, *et al.*, 1989; Thrash & Elliot, 2002). Implicit motives predict spontaneous behaviors over time and they are activated by so called activity incentives. Implicit motives are typically assessed through fantasy-based measures like the Thematic Apperception Test (TAT) (Schacter, *et al.*, 2009). TAT presents the subject with a set of pictures to guide the respondent in writing stories. The respondent writes a story interpreting pictures. The stories are then coded for the presence of various types of achievement imagery (Tuerlinckx, *et al.*, 2002). Self-attributed motives anticipate immediate responses to specific choice behavior. They are primarily facilitated by expectations, demands, and norms or rewards that come from outside the task. Self-attributed motives are assessed using questionnaires like for example the Achievement Motives Scale (AMS; Gjesme & Nygard, 1970).

The Achievement Motives Scale includes 30 items to measure hope of success and fear of failure. Researchers developed other varieties of measures to assess the achievement motive. Measurement need for achievement includes scales for diagnosing general need for achievement and specific need for achievement. Scales of general need for achievement diagnose a broader range of human behaviors when the context is less specific, for example the Achievement Motivation Inventory (AMI) (Schüler & Prochaska, 2001). Measurement of specific need for achievement refers to various issues, i.e. work (Amabile, *et al.*, 1994), sport (Conroy, *et al.*, 2003) or education (Elliot & Murayama, 2008). In the literature there have been no instruments that measure outdoor recreation linked to need for achievement. Thrill and Adventure Seeking (TAS) subscale assesses the search for adventure and risk in natural environments. Unfortunately, this scale does not includes items linked to achievements in recreational activity (Zuckerman, 1994). Wilderness Novelty Seeking Scale (WNSS) assesses curiosity and novelty seeking in wilderness. WNSS is also not linked to achievements (Próchniak, 2014). Outdoor Recreation Self-Efficacy Scale (ORSE) is a reliable and valid measure for assessing the self-efficacy of individuals who participate in outdoor recreation activities (Mittelstaedt & Jones, 2009). Outdoor Recreation Self-efficacy Scale consists of two subscales; Enjoyment/Accomplishment and Skills/Competence. A significant relationship exists between ORSE scores and participation in outdoor recreation. ORSE assesses self-efficacy unassociated with achievements. There have been few scales measuring need for achievement in the outdoor recreation. In this context the aim of the study is to suggest a new scale – the *Outdoor Recreation Need for Achievement Scale*.

## Study 1

### Dimensionality of the *Outdoor Recreation Need for Achievement Scale*

The purpose of the initial study was to construct and assess the dimensionality of the *Outdoor Recreation Need for Achievement Scale*.

#### METHOD

##### *Participants*

In order to examine the factor structure of the newly developed scale, data was collected from two separate groups of participants. The first sample consisted of 232 university students (110 women and 122 men) ( $M_{age}=22.48$ ;  $SD=5.55$ ) recruited from a variety of courses at an urban university in Poland. The respondents in this group practiced the following outdoor activities: mountain climbing (10.50%), skiing (15.10%), snowboarding (5.80%), cycling in woods (40.00%), orienteering (15.40%), rafting (8.00%), sailing (6.30%), windsurfing (2.80%), waterskiing (1.40%), scuba diving (5.50%), running on the beach (33.50%), skydiving (2.50%), paragliding (1.90%), horse riding (20.00%) and others (27.00%) (The sum of percentages is higher than 100 because some respondents practiced more than one outdoor recreational activity). Data obtained from this sample was examined using exploratory factor analysis.

The second sample included a separate group of 221 university students (110 women and 111 men) ( $M_{age}=23.20$ ;  $SD=5.05$ ). The second sample recruited from a variety of courses at an urban university in Poland. The respondents in this group practiced the following outdoor recreational activities: mountains climbing (14.50%), skiing (18.50%), snowboarding (3.50%), cycling in woods (36%), orienteering (17.20%), rafting (32.00%), sailing (4.90%), windsurfing (2.20%), waterskiing (2.50%), scuba diving (6.00%), running on the beach (30.00%), skydiving (3.10%), paragliding (1.50%), horse riding (12.80%) and others (29%) (The sum of percentages is higher than 100 because some respondents practiced more than one outdoor recreational activity). Data obtained from this sample was examined using confirmatory factor analysis.

##### *Procedure*

Inspiration to create this scale came from a variety of sources: personal experience, literature on need for achievement, and the existing scales which diagnose recreational activities. Achievement in outdoor recreation was defined as a construct that was initially meant to include the following three aspects: 1. outdoor recreation in a new places, 2. outdoor recreation in natural places which are difficult to reach, 3. physical effort in outdoor recreation (Bipp & Dam, 2014; Conroy, *et al.*, 2003; Ibrahim & Cordes, 2002; Plummer, 2009; Próchniak, 2014). Work on the questionnaire began with creating a list of 18 statements describing achievements in recreational activities. The statements accounted for basic aspects of achievements in natural environment: seeking novelty in outdoor recreation (6 statements) exploration of difficult places in natural environment (6 statements) and physical effort in outdoor recreation (6 statements).

The list of 18 statements diagnosing the above aspects of achievement in recreational activity was sent to five experts. Each expert had a university degree in social sciences and each expert had personal experiences in outdoor activity (three experts were instructors of climbing and two experts were the instructors of sailing). Statements were evaluated by the experts. The experts evaluated the relevancy of each statement on a five-point Likert scale (very good, good, fair, poor, and very poor). 13 statements were qualified for further study.

13 statements were then used with the following response scale: 1- definitely untrue, 2-rather untrue; 3 – rather true; 4 - definitely true. Next, the respondents were approached by a researcher in different outdoor recreations. The researcher provided them with a general verbal introduction to the study. They were then asked to volunteer to complete the survey. Those who agreed completed the questionnaire anonymously. The list of 13 statements with the following response scale: 1- definitely untrue, 2-rather untrue; 3 – rather true; 4 - definitely true was administered to the first sample of respondents. Data obtained from this sample was examined using exploratory factor analysis (EFA).

Prior to factor extraction the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity (BTS) were applied to the data. Based on the results obtained in the EFA, confirmatory factor analysis (CFA) was conducted on scale results in the second group of participants.

## Results

### Exploratory Factor Analysis

The KMO analysis yielded an index of .94; Bartlett's Test of Sphericity reached statistical significance  $\chi^2(45)=1634$ ,  $p < .001$ . The KMO and BTS results indicated that our data satisfied the psychometric criteria for factor analysis to be performed. An exploratory factor analysis was performed for 13 statements on the data from the first sample of 232 respondents (110 women and 122 men). Exploratory factor analysis using *the maximum-likelihood method of parameter estimation* indicated strong a single-factor solution, upon observing the scree plot. In determining the optimal number of factors to extract, Parallel Analysis (PA) was also used (Ledesma & Valero-Mora, 2007). See table 1.

**Table 1: Parallel Analysis for the Outdoor Recreation Need for Achievement Scale**

Variable	Sample N= 232		
	PCA	PA	Differences
1	6.30	1.41	4.89
2	.78	1.30	-.52
3	.67	1.22	-.55
4	.52	1.15	-.63
5	.45	1.09	-.64
6	.37	1.03	-.66
7	.34	.98	-.64
8	.32	.92	-.60
9	.30	.88	-.58
10	.26	.82	-.56
11	.25	.77	-.52
12	.20	.71	-.45
13	.18	.64	-.46

PCA - Principal Component Analysis

PA - Parallel Analysis

Based on these results, a one-factor solution seemed to be the best solution.

The quality of the items that composed the one-factor solution was also analyzed. Comrey and Lee (1992) classified items with loadings higher than or equal to .71 as excellent. Thus, three statements loaded above .70 and were retained. Ten statements were accepted for the final version of the *Outdoor Recreation Need for Achievement Scale*. See Table 2.

**Table 2: Statements of the Outdoor Recreation Need for Achievement Scale, medium, standard deviation, factor, inter-correlations and Cronbach's  $\alpha$ . (N=232)**

No	Items:	M	SD	F	I-T
1	I like to take challenges in natural environment I haven't yet had the opportunity of going to	2.64	.97	.73	.69
2	I like the outdoor recreations which require a lot of physical effort	2.67	.94	.80	.76
3	I want to have more and more new achievements in outdoor recreation	2.48	.94	.84	.81
4	In outdoor recreation I prefer more difficult places of wild nature than those that are easily accessible	2.57	.92	.87	.84
5	I would like to be a person who was the first to conquer a summit	2.46	.98	.75	.72
6	I treat confrontation with a natural element as a battle	2.50	.92	.71	.68
7	Hard to reach places of wilderness is my passion	2.41	.96	.76	.73
8	I like to prove that I am strong and tough in the outdoor recreation	2.61	.95	.71	.68
9	I seek a new and ambitious goals in the outdoor recreation	2.57	.90	.81	.79
10	In the outdoor recreation I like the trails that are more difficult than easier routes	2.61	.98	.71	.62
Variance (%)			63.05		
Cronbach's $\alpha$			.93		

### Confirmatory Factor Analysis

A confirmatory Factor Analysis was performed on the single-factor model, revealed by exploratory analysis on data from a new sample of 221 university students (110 women and 111 men). Two models were tested. The first model represented the single-factor structure of the ORNAS. The second model assumed three factors: Factor 1 – “outdoor recreation in new places”, items 1, 3, 5, 9; Factor 2 – “outdoor recreation in places which are difficult to reach”, items 4, 7, 10; Factor 3 – “physical effort in outdoor recreation”, items 2, 6, 8; Table 3 presents the results of confirmatory analysis.

**Table 3: Fit Indices for Selected Models**

Model tested	$\chi^2$	p	df	GFI	AGFI	CFI	RMSEA
Model 1	94.16	.01	35	.935	.900	.949	.036
Model 2	526.93	.001	35	.655	.457	.575	.503

The fit indices of the model indicated that the model was satisfactory: GFI=.935; AGFI=.900, CFI=.949, RMSEA=.036;  $\chi^2(35)=94.16$ ;  $p=.01$ .

### Study 2

#### Criterion Validity

The purpose of this study was to provide criterion validity of the *Outdoor Recreation Need for Achievement Scale*. I analyzed how the scale functions among people with high- versus low-experience in outdoor adventure, and I hypothesized that individuals with high experience in outdoor adventure would report higher scores on the dimension of the ORNAS than people with low experience in outdoor adventure.

#### Method

##### Participants

Two groups of people filled out the ORNAS. The first group (only men) was highly experienced in the scope of their contact with the natural environment (N=35). The people who qualified to this group were climbers (Mage=26.45; SD=6.50). The second group (only men) had only sporadic contact with the wild nature (N=48) (Mage=22.30; SD=2.30) (each participant in this group was asked about personal experiences in exploration of the wild nature. Moreover, each participant in this group was asked about recreational preferences).

##### Procedure

The author was searching for a group of people who have personal experiences in outdoor adventure. Therefore, the people who qualified to the first group were recruited from mountain clubs in the Poland. In this group, all individuals had experience in climbing. The second group preferred activity in a city environment. Prior to testing the researcher asked individuals in the second group how much time they spend in green areas and what sort of leisure time they prefer. Individuals with sporadic experience in green areas, who prefer spending their leisure time in city surroundings, were qualified for the study. The researcher informed the participants about the goals of the study and handed out the questionnaire. The participants were asked to fill out a written consent, to carefully read the directions of the scale, and to raise their hands if they had any questions. The participants filled in the questionnaire individually.

### Results

The *Outdoor Recreation Need for Achievement Scale* distinguishes between individuals who have undertaken climbing and controls. Climbers scored higher on the scale than the control group; Mage climbers=2.84, SD=.78; Mage control group=2.40, SD=.65;  $t(81)=2.76$ ,  $p<.01$ .

### Study 3

#### Construct Validity

The aim of the present study was to establish the validity of the *Outdoor Recreation Need for Achievement Scale*. I expected the scale to be connected with receptive issues, for example general achievement motivation, to relate positively to the *Outdoor Recreation Need for Achievement Scale*.

In this study the *Outdoor Recreation Need for Achievement Scale* was correlated with Achievement Motivation Inventory (Widerszal-Bazyl, 1978). A lot of recreational activities are often associated with extensive physical involvement. In this context, the psychic traits rooted in biology - temperamental traits - play an important role. Past studies confirm this fact (Strelau, 2004, 2013). It means that temperamental traits should correlate to achievements in outdoor adventure (Strelau, 2004). In this study the *Outdoor Recreation Need for Achievement Scale* was correlated with temperamental traits proposed by Strelau (2004).

Adventure recreation can be interpreted from the theory of M. Zuckerman (1994). Zuckerman's theory (1994) posits that people who undertake risky activities are characterized by a need, heightened in intensity, to seek novel, complex and thrilling experiences. Research on sensation seeking has shown scores to be associated with engagement in high-risk sports (Gomà-i-Freixanet, 1991; Straub, 1982; Zuckerman, 1994). In this study the *Outdoor Recreation Need for Achievement Scale* was correlated with sensation seeking forms.

Some studies suggest that participation in outdoor activities and sports can also be determined by self-efficacy (Bandura, 1977). Self-efficacy is positively connected with the frequency and difficulty of doing outdoor activities, regardless of its form (Celsi, *et al.*, 2003; Llewellyn & Sanchez, 2008; Llewellyn, *et al.*, 2008; Slanger & Rudestam, 1997). In this study the *Outdoor Recreation Need for Achievement Scale* was correlated with self-efficacy construct.

On the basis of the previous research, it was hypothesized that, the *Outdoor Recreation Need for Achievement Scale* would positively correlate to general achievement motivation, activity, endurance, sensation seeking, self-efficacy, and the *Outdoor Recreation Need for Achievement Scale* would negatively correlate to emotional reactivity.

## Method

### *Procedure*

All participants were recruited from the urban university which took part in the study. The students practiced some form of outdoor recreation. Each student was briefed on the general aims of the research and instructed how to administer the questionnaires. The participants were asked to fill out a written consent, to carefully read the directions of the scales, and to raise their hands if they had any questions. The study was anonymous.

### *Participants*

The instrument was distributed to 245 students (125 women and 120 men) ( $M_{age}= 22.45$ ;  $SD=3.20$ ) (other than samples in earlier studies) recruited from a variety of courses at an urban Polish university. The students practiced different forms of outdoor recreation. The respondents practiced the following outdoor recreational activities: mountains climbing (13.60%), skiing (35.60%), snowboarding (7.40%), orienteering (9.30%), rafting (21.00%), sailing (5.80%), windsurfing (3.20%), waterskiing (2.50%), scuba diving (3.70%), running on the beach (37.20%), skydiving (3.20%) paragliding (1.50%), horse riding (15.60%) and others (32%) (The sum of percentages is higher than 100 because some respondents practiced more than one outdoor recreational activity).

### *Measures*

#### *The Outdoor Recreation Need for Achievement Scale*

*The Achievement Motivation Inventory* (AMI) (Widerszal-Bazyl, 1978).

Motivation Inventory measures the strength of an individual's general achievement motivation in the different situations. (Cronbach's  $\alpha=.73$ ). The Motivation Inventory is a single-factor scale.

*FCZ-KT temperament questionnaire* (Strelau & Zawadzki, 1997).

The Regulative Theory of Temperament proposed by J. Strelau (Zawadzki, *et al.*, 1997) provides the theoretical framework for the FCT-KZ. FCZ-KT consists of 120 items in the form of statements to which the subject responds YES or NO. The items are grouped into six scales: Briskness, Perseveration, Sensory Sensitivity, Emotional Reactivity, Endurance, and Activity. Coefficients alpha reliability in the polish version for the FCZ-KT were (in five independent studies): Briskness (Cronbach's  $\alpha=.77-.79$ ), Perseveration (Cronbach's  $\alpha=.79-.81$ ), Sensory Sensitivity (Cronbach's  $\alpha=.72-.78$ ), Emotional Reactivity (Cronbach's  $\alpha=.82-.87$ ), Endurance (Cronbach's  $\alpha=.85-.88$ ), and Activity (Cronbach's  $\alpha=.82-.84$ ).

*Sensation Seeking Scale IV (SSSIV)* (Oleszkiewicz-Zsurs, 1986).

SSS IV consists of 68 items making 6 scales: general tendency of sensation seeking (G) (this scale was not used in this study), Thrill and Adventure Seeking (TAS) (Cronbach's  $\alpha=.79$ ), Experience Seeking (ES) (Cronbach's  $\alpha=.75$ ), Disinhibition (DIS) (Cronbach's  $\alpha=.73$ ), Boredom Susceptibility (BS) (Cronbach's  $\alpha=.70$ ) and Intellectual Stimulation (this scale was not used in this study) (Oleszkiewicz-Zsurs, 1986).

*Generalized Self-Efficacy Scale (GSES)* (Juczyński, 2000; Schwarzer, 1998).

GSES consists of 10 statements, included in one factor. It measures the strength of an individual's general self-efficacy beliefs in the face of difficult situations and obstacles (Cronbach's  $\alpha=.85$ ).

## Results

**Table 4: Correlation between the AMI, FCZ-KT, SSSIV, GSES and the *Outdoor Recreation Need for Achievement Scale (ORNAS)***

Variables	ORNAS
Achievement Motivation	.23*
Perseveration	.12
Briskness	.19*
Sensory Sensitivity	.09
Emotional Reactivity	-.09
Endurance	.33*
Activity	.43*
TAS	.48*
ES	.45*
DIS	.34*
BS	.40*
Self-Efficacy	.43*

\* $p<.05$

The *Outdoor Recreation Need for Achievement Scale* correlates positively with Achievement Motivation Inventory, Briskness, Endurance, Activity, Sensation Seeking and Self-Efficacy.

## General Discussion

The *Outdoor Recreation Need for Achievement Scale* provides a new tool for diagnosing behaviors associated with the natural environment. Findings from the author's research provide evidence that the *Outdoor Recreation Need for Achievement Scale* is a reliable and valid scale. Exploratory Factor Analysis and Confirmatory Factor Analysis were performed in order to test the factor structure of the *Outdoor Recreation Need for Achievement Scale*. The items included the *Outdoor Recreation Need for Achievement Scale* has been shown to load on a single factor. Intercorrelations between particular statements of the questionnaire range between .62 and .84. Cronbach's alpha coefficient equaled .93. It can be concluded that the reliability level was satisfactory.

The author's scale constitutes a tool for diagnosing involvement in outdoor recreational activity. The issue of effort, challenges or even pain has so far been absent from scales diagnosing outdoor activity. The results obtained in the *Outdoor Recreation Need for Achievement Scale* by people who perform outdoor sports indicate that scale differentiates people who practice risky activities in the natural environment from those who practice safe activities. This means that the scale could be an effective tool for selecting people who undertake risky activities in close contact with nature. It is also possible that the scale could be an alternative for the TAS scale proposed by M. Zuckerman (1994). Previous scales exploring the intensity of seeking and preferring adventures in the natural environment include statements which usually concern specific activities e.g. skydiving, climbing or waterskiing. The author's scale aims at eliminating references to specific outdoor disciplines, enabling a more precise and objective comparison of people undertaking diverse outdoor activities.

The *Outdoor Recreation Need for Achievement Scale* demonstrated convergent and divergent validity in terms of its expected correlations with other measures. The convergent validity of the *Outdoor Recreation Need for Achievement Scale* was indicated by positive correlations with Achievement Motivation Inventory, Temperamental Scales, Sensation Seeking and Self Efficacy-Scale.

The divergent validity of the *Outdoor Recreation Need for Achievement Scale* was indicated by zero correlations with Perseveration, Sensory Sensitivity and Emotional Reactivity. The *Outdoor Recreation Need for Achievement Scale* correlates with other scales, including general achievement motivation inventory. This result suggests that The *Outdoor Recreation Need for Achievement Scale* can be an aspect of the broader construct of a general need for achievement.

The *Outdoor Recreation Need for Achievement Scale* correlates to the temperament questionnaire of Strelau (2013). These results confirm the previous links between temperament and physical involvement (Strelau, 2004, 2013). Briskness was demonstrated as correlating to achievements in outdoor activity. This trait is the tendency to react quickly, maintain a high pace of activity and switch easily from one behavior to another other in response to changes in the environment (Strelau, 2013). In this context, the relationship between briskness and the need for achievement in outdoor recreation seems reasonable. The natural environment is dynamic and unpredictable. If participants in outdoor activities wish to achieve ambitious goals, they must be capable of responding very quickly to a changing situation.

The positive relationship between the *Outdoor Recreation Need for Achievement Scale* and Endurance was observed. Endurance indicates the sustaining of activity in spite of adversity (Strelau, 2004). The natural environment can be a source of disagreeable emotions and it involves exertion or struggle. Only good physical strength, pain-resistance and perseverance can help one survive outdoor recreational activities. The correlation between the Activity trait and the *Outdoor Recreation Need for Achievement Scale* seems to be equally clear and explicable. Activity expresses a passion for seeking out activities connected with physical effort and risk (Strelau, 2004). Risky natural environment presents a dangerous situation. This type of situation is thus a challenge and, as such, attractive to people with a high need for stimulation.

The *Outdoor Recreation Need for Achievement Scale* correlates to sensation seeking. It means that need of achievements in outdoor activity probably maintains a positive attitude towards new experiences in nature which demand risk taking. People with a high need for achievement believe in their own ability to cope with the most difficult of natural hazards. To them, nature is a place for experiencing adventure. They maintain a positive attitude toward new and difficult events which demand risk taking, perceiving them as a source of challenges. They enjoy effort and physical activity and their values are those involving an adventurous life and achievements.

### **Limitations and Conclusions**

An important limitation of the actual study is that the participants were university students. This fact limits the generalization of results. In further research, it will be important to assess not only students but other groups. To next studies should assess the role of gender also: the current study didn't diagnose the meaning of gender for the need of achievement in outdoor recreation. The relationship of the *Outdoor Recreation Need for Achievement Scale* with the perception of danger assessment of risk in practicing ambitious outdoor activities should be pursued for better understanding. Previous findings in the field indicate that engaging in risky outdoor activities is positively related to minimizing the hazards entailed in risky outdoor recreation (Demirhan, 2005). It might be that an underestimated risk could even encourage the undertaking of hazardous challenges. However, the outcome of that same underrated danger may well be tragic.

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