

## DIFFERENCES IN PERSONALITY TRAITS OF MOUNTAIN CLIMBERS AND NON-ATHLETES IN SLOVENIA

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Psychology of personality in sport is very interesting about the specific psychological profile of elite athletes. Our research was oriented in personality of mountain climbers. Mountain climbing is a very specific sport discipline. Although it is hard to talk about classic competition in mountain climbing, it gets more and more the reference of sport. New possibilities of competition also appear. However, mountain climbing still remains a different discipline. One of the most important characteristic is the stress, since mistakes can be lethal. In our work we investigated personality traits of Slovene mountain climbers.

*Keywords: Personality, mountain climbing, high risk sports.*

### INTRODUCTION

Personality studies need an integral approach that includes biological, psychological and sociological aspects of athlete's being and behaviour. Personality, in a psychological sense, can be understood as a complex set of characteristics of physical and mental functioning (Musek, 1993). These include intellectual abilities, perceptive motor abilities as well as characteristics of moral judgment, human feelings, social activities (communication, relationships, conflicts, etc.), character and temperament. Communication of an athlete with his environment includes his views, motivation and values.

In our study we investigated the personality of mountain climbers, since mountain climbing is a specific sport activity. Although mountain climbing can hardly be considered a competitive sport, new characteristics that make mountain climbing a sport branch appear. More and more competitions are also being organized. There are, however, some distinctive differences. One of the most important ones is the presence of highly stressful situations, where a mistake can even lead to the loss of life.

#### Psychological profile of a top athlete

Statements resulting from the comparison of personal traits between athletes and non-athletes are very consistent. The athletes are usually more extraverted, emotionally stable and express stronger need for productivity and stimulation (Eysenck, Nias, & Cox, 1982).

Especially the top-level athletes show a distinct psychological profile, which is different from the profiles of recreational athletes, amateur athletes and non-athletes (Davis & Mogk, 1994; Tušak & Tušak, 2001). Eysenck,

Nias and Cox (1982) established that extraversion and some aspects of stimulation needs are connected with sport involvement and performance quality.

Despite the fact that some contradictions exist among some of the statements (mostly due to different researched samples) the hypothesis about specific psychological profile of athletes in comparison with non-athletes can be confirmed. Athletes are usually more aggressive, more psychologically stable, have better emotional self-control, are more emotionally stable, less anxious, more self-confident, show higher degree of dominance and responsibility, have higher degree of frustration tolerance and tolerance for unpleasant stimulation and pain and higher degree of self-confidence and positive self-view (Tušak & Tušak, 2001).

The second factor that influences the personality of an athlete is a sport branch. The athletes involved in individual sports show dominance, individualistic tendencies, sometimes on the margin of selfishness, endurance, high level of self-control, self-motivation and self-responsibility.

#### Mountaineering in Slovenia

Some experts include mountain climbing among the most tiring sports from both physical as well as psychological points of view. They include it among sport activities such as long run, cross-country skiing, rowing, cycling and similar. One of the most outstanding differences is that mountain climbers usually don't compete directly with one another as other athletes do. There are some exceptions, however, like overall climbing and ice climbing competitions.

In Slovenia climbing is well developed and popular sport and our climbers are among the best in the world.

Many factors have contributed to this fact. Climbing has developed from mountaineering which is inseparable part of Slovenian identity and its culture legacy and psychological profile. Mountains have been appearing in Slovenian culture and art, poets and writers wrote about them. The mountains have inspired our composers and painters. They are also present in our movies and artistic photographs. Mountaineering has helped Slovenian people fight and win the battle to save our nationality in the time of Austrian-Hungary monarchy. Our Mountaineering association – club was established in 1893 mostly to protect our mountains against germanization. German and Austrian alpinists were building mountain paths and huts and considered our mountains to be their own. The fact that Jakob Aljaž – the preacher from Mojstrana, bought the top of Triglav, our highest mountain, shows us the depth of this fight.

After the second world war we started to establish alpine clubs and to educate young climbers. Our alpinists climbed in West European mountains. In that time the best world alpinists climbed the first eight thousand meters high mountain Annapurna (1950). Then followed Everest – 1953, K2 – 1954, Kanchendzenga – 1955 and all the others. After that the world elite climbers started climbing in Himalayas big, high and difficult walls. At that point Slovenian climbers joined the world elite. Our way was shorter but steeper than theirs. We have been among them since 1975 when our climbers climbed south face of Makalu.

Our first Himalayan expedition was in 1960 on Trisul 2 and 3, following Kangbachen (west summit – 7535 m) in 1965, Annapurna 2 (7937 m) and 4 (7526 m) in 1969, Makalu (no summit) in 1972, again Kangbachen in 1974 with summit and in 1975 south face of Makalu (8463 m) with the new way. That made us the third on the world to climb the new direction of the big Himalayan wall on an 8000 m high mountain. This was our earlier mentioned touch with the best world climbers. In two years we were again successful by climbing the new way of the south west ridge of the Gasherbrum 1 (8068 m). Our biggest success was climbing the west ridge of Everest in 1979. Then followed the other eighttousenders: Manaslu – 1984, Broad Peak – 1986, Gasherbrum 2 – 1986, Daulagiri – 1987, Cho Oyu – 1988, Lhotse – 1989, Shisha Pangma – 1989, Nanga Parbat – 1990, Kangchenjunga – 1991, K2 – 1993 and Annapurna – 1995.

Slovenia is the eighth country that has reached the all 14 eighttousenders.

In view of mountain climbing, another Slovenian characteristic exists. Beside top sport achievements, Slovenians have also produced numerous literary works about mountain climbing. They show that mountain climbing means for Slovenians more than sport. Mihelič and Zaman (1987) described a part of this phenomenon: One of the most important distinctions and values

of mountain climbing is the experience of nature as well as oneself during a climb. Defence mechanisms, triggered in a human body in dangerous situations, change the body into a quivering antenna. The human senses are insufficient, one is all absorbed in the experience. Human being is completely uncovered. Tuma (1930) classified mountain climbers into different types: sport, aesthetic, ethic and religious. Virk (1995) tried to define the meaning with yearning, death, eternity and seeking. The meaning is also explained with the Zaplotnik's work "The Way" (Zaplotnik, 1999). It says that the goal is not important. The only thing that really counts is the way. There is also a thought by Tomazin that there is no goal. There is only what one meets, feels and learns on the way towards it. Virk considered modern mountain climbers a sort of seekers of the Holy Grail, which is – like mysterious power of a mountain that attracts a mountain climber – indefinable, is a value by itself like the Absolute. Mountain climbers are not only athletes, they are also philosophers, seekers of the way, truth, eternity (Zaplotnik, 1999). They do not only care for a sport achievement, which is why it shall be even more interesting to study their personality characteristics from the point of view of sport results as well as their analysis.

#### **Psychological profile of Slovene top mountain climbers**

Markič (1990) found that Slovene top mountain climbers differed from the usual population. He stressed their introversion, independence and individualism. He said that mountain climbers were sensitive, sentimental and artistic people. He especially emphasized their introversion and shyness. He found them temperate, serious and calm. On the other hand they showed dominance and self-confidence that are supposed to be the characteristics of successful people. Markič (1990) said that they also showed strong need for exploration and experiences.

The study entitled "Personality of Slovenian mountain climbers" (Burnik & Tušak, 1999) gave contradictory results. We investigated 24 categorized Slovenian mountain climbers between 21 and 30 years of age. The control group consisted of 26 students from different faculties, between 20 and 27 years of age, which practiced sport only recreationally. The study confirmed some statistically important differences between the mountain climbers and control group. Statistically, the mountain climbers appeared less neurotic, less introverted, more extraverted and social. The control group showed a little higher degree of sincerity.

Other studies have been made on the same subject – Manfreda (1996) found mountain climbers to be explorers that find satisfaction and happiness in achieving the top of a mountain. During the Norwegian expedition Everest 1985, it was concluded that their mountain

climbers had very impulsive personalities with strongly expressed dominance and tendency towards new, unusual, exciting experiences. During the Lhotse expedition, the Slovenian mountain climbers stated among the most important personality characteristics: diligence, endurance, comradeship, courage, resourcefulness, considerateness, determination, sincerity, responsibility, tolerance and self-sacrifice. Comparing personality characteristics of mountain climbers and overall climbers, Zaplotnik found overall climbers to be more neurotic and introverted, while mountain climbers appeared to have strongly expressed masculinity.

## AIM OF THE STUDY

Within the frame of our study, we tried to determine and compare the personality characteristics of mountain climbers and of the control group in order to support some previous studies, which are stated in the introduction part of this article and to show that there are really differences in personality characteristics of investigated groups.

## METHOD

### Subjects

- 58 male mountain climbers from alpinistic clubs in Ljubljana, Celje, Maribor, Tržič, Kranj, Jezersko, Kamnik and Velenje, aged between 22 and 45 years ( $M = 31.54$ ;  $SD = 4.43$ ). All of them have been a part of at least one alpinistic expedition to the Himalayas.
- 50 male non-athletes who never climbed, aged between 19 and 29 years ( $M = 26.54$ ;  $SD = 2.43$ ). The differences in age are significant ( $t = 7.05$ ,  $\text{sig}(t) = 0.001$ ). The best climbers needs several years more than other top athletes to reach the best results.

### Instruments

**FPI 114 (Freiburg Personality Inventory)** (Bele-Potočnik, Hruševar, & Tušak, 1990).

The Freiburg personality inventory is a multidimensional personality questionnaire, which can be used on all populations with persons above 15 years of age. It consists of 114 statements, to which the subjects answer with YES or NO. It measures 9 personality dimensions:

*Neuroticism*: it is shown in frequent pains and problems with one's health, motoric disturbances, sleep disturbances, sensitivity to the weather.

*Spontaneous aggression - impulsivity*: it is shown as restlessness, need for constant change and emotional immaturity.

*Depression*: it includes bad moods, lability in emotions, pessimism, fears, anxiety, loneliness, lack of concentration, constant worries...

*Irritability*: it is demonstrated in tension, sensitivity and low frustration tolerance, even in everyday situations.

*Sociability*: sociable people are lively, friendly, have a strong need for associating with other people, have many friends and acquaintances, like to talk and have well developed communication skills.

*Control*: it is demonstrated in self-confidence, persistence, optimism, good spirits.

*Reactive aggression*: it is shown as physical, verbal or imaginary acts of aggression, in enforcing one's interests, egocentrism, lack of confidence in others.

*Repression*: it is demonstrated in shyness, confusion and repression in contacting with others, it can also be shown in problems with establishing contacts with others, fear of performing or speaking in front of an audience.

*Sincerity*: high values indicate that the person is capable of admitting their own flaws, whereas low values indicate that the person is trying to impress others.

Secondary factors of the questionnaire are:

*Extraversion*: extraverted persons are sociable, have a strong need for establishing and maintaining contact with other people, are lively, impulsive, are well capable of putting effort in achieving their goals. They like changes and fun. The opposite of extraversion is introversion.

*Emotional lability*: it is shown in fast changing of moods, depression, irritability, sensitivity, day dreaming, tension, it can also be shown as troubles with establishing contacts.

*Masculinity*: it is shown in traits, which are often understood as typically male activity, also physical enforcing of oneself, confidence, entrepreneurship, reliability, stability of moods, absence of physical and psychosomatic disorders.

Reliability of FPI is satisfactory, the lowest values appear on the dimension of honesty, Cronbach's alpha 0.61. Other dimensions show reliability coefficients of 0.70 and higher. Timm (1970), Bele-Potočnik et al. (1990) confirmed also the manifest validity of the questionnaire.

### Procedure

The application of the questionnaires was carried out individually on alpinistic associations, the results were evaluated and calculated using the SPSS 11.0 program. The differences between mountain climbers and non athletes were determined with a t-test.

## RESULTS AND DISCUSSION

Analysis of results as shown in TABLE 1 confirms that there are several significant differences between mountain climbers and the control group. The largest differences between the means of both groups appear in depression, emotional lability, neuroticism, extraversion and repression. The differences in means are somewhat smaller in irritability, impulsivity and sincerity, whereas the differences are smallest in sociability, masculinity, control and reactive aggression.

**TABLE 1**

Differences in personality traits between mountain climbers and the control group

Trait	Group	M	SD	t	sig (t)
<i>Neuroticism</i>	Climbers	3.22	2.49	11.333	.001
	Control	5.00	3.00		
<i>Impulsivity</i>	Climbers	3.78	2.09	8.919	.004
	Control	4.92	1.86		
<i>Depression</i>	Climbers	3.84	2.59	18.495	.000
	Control	6.22	3.14		
<i>Irritability</i>	Climbers	2.60	2.14	9.644	.002
	Control	3.92	2.27		
<i>Sociability</i>	Climbers	8.84	2.69	.096	.757
	Control	8.68	2.82		
<i>Control</i>	Climbers	5.79	1.70	3.697	.057
	Control	5.12	1.93		
<i>Reactive aggression</i>	Climbers	3.03	1.96	5.824	.018
	Control	3.98	2.10		
<i>Repression</i>	Climbers	3.48	1.77	2.657	.106
	Control	4.08	2.04		
<i>Sincerity</i>	Climbers	7.84	2.63	3.173	.078
	Control	8.70	2.31		
<i>Extraversion</i>	Climbers	6.64	2.46	1.029	.313
	Control	7.12	2.46		
<i>Emotional lability</i>	Climbers	4.33	2.76	13.447	.000
	Control	6.26	2.69		
<i>Masculinity</i>	Climbers	8.36	1.70	1.728	.191
	Control	7.88	2.11		

**Legend**

Climbers – mountain climbers; Control – control group; M – mean; SD – standard deviation; t – t-statistic; sig (t) – statistical significance of t

T-test has shown that there are significant differences in the case of emotional lability, where the mountain climbers obtained a lower mean than the control group, the differences between the groups are largest in this trait. The control group is more emotionally labile, which means that they more often experience mood swings, depression and negative emotions. This is the result that was expected on the basis of previous research, since mountain climbing is a sport, which requires a great amount of confidence, belief in one's abilities, it also requires good concentration and a good physical condition, because it involves long lasting physical strains, carrying heavy gear, long climbs, that can last a whole day. The preparation for a climb itself demands self-discipline, self-motivation and emotional stability.

Some other factors can also influence the outcome of the climb – they can make mountain climbers to take action in what can appear to be hopeless situations, difficult conditions and occasions, when there's no turning back. A smooth wall can appear in front of them, steep cliffs, avalanches and storms can happen... In such situations they need to be able to think clearly, calm down and find a solution that can mean saving their life. They have to persist till the end of the climb and even till they come back from the mountain and a person with a low amount of control over him or herself, with low discipline and low emotional stability has very few chances to survive such experiences.

Congruent with these findings are also the significant differences in depression and neuroticism. These two traits are similar already in their description – depression is described as bad mood, irritability, fear, high levels of anxiety, pessimistic views, loneliness and worrying to a great extent. The results of previous research show that mountain climbers are lower in depression when compared to sport climbers (Zaplotnik, 1999) and when compared to recreational athletes (Burnik & Tušák, 1999). The comparison with sports climbers in related with the competitive situation – a mountain climber's competition is a lot different, since there is no direct comparison with other competitors and since there is an immediate presence of objective danger, which can lead to serious injury or even death. Thus a mountain climber gets no second chances in his decisions, whereas a sport climber has an opportunity to change his mind and select a different course almost at any moment with no danger to his health or threat to his life. With respect to these circumstances in mountain climbing it is obvious that there can be very little depression, neuroticism and repression, since all these traits present a problem when facing difficult decision making and problems.

A significant difference appears also in irritability, where mountain climbers obtained a lower score. In control group we can find higher levels of tension, they are more irritable, they have a lower frustration tolerance, are more uneasy, feel enraged more often... Significant differences appear also in impulsivity – the control group is more impulsive, it is also less controlled, but the differences were not significant in this trait. According to our results we could describe the control group as more irritable, with more worries, with lower confidence and self-control than the mountain climbers, they appear to avoid decision making and taking fast actions, which could not be said for alpinists.

Sincerity also almost reaches significance, the control group appears to be more sincere. Mountain climbers could be described as less sincere, with a lower level of criticism for themselves, which can result in them being more successful when achieving their goals, since we

have seen that they are also more confident and spontaneous and also more stable.

Studies have shown alpinists to be more withdrawn, that they are socially shy and more serious than the rest of the population (Markič & Pogačnik, 1981). They appeared to be more introverted, they were supposed to prefer solitude and true friendships to numerous acquaintances. The descriptions regarding introversion were denied in some studies as well as in our own. The value of extraversion was high in both groups, the differences between both groups were not that high. The same trend appeared in sociability. High extraversion can help with group problem solving, which has to take place in a mountaineering expedition, to better understanding among members of an expedition and better cooperation, all of which can contribute to safer and more successful climbs.

## CONCLUSIONS

The results of our research deny the stereotype of mountain climbers being loners, introverts and people who shut themselves from others, with suicidal tendencies and of them trying to direct their aggression towards themselves and seeking a way to death. Our results show them as emotionally stable, extraverted and sociable. Many accidents and deaths that happen in alpinism are a consequence of real environmental dangers and of the characteristic of a sport they are involved with, of a sport, where mistakes are often paid for with lives, not just with bad results. It is assumed that their lifestyle is due to different values (Burnik & Tušak, 1999), which they build throughout their lives and in which the length of life may not be the most important value, but its quality and intensity.

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## ROZDÍLY V OSOBNOSTNÍCH RYSECH HOROLEZCŮ A NESPORTOVců VE SLOVINSKU (Souhrn anglického textu)

Psychologie osobnosti ve sportu, zabývající se specifickým psychologickým profilem špičkového sportovce, je velmi zajímavá. Náš výzkum byl zaměřen na osobnost horolezců. Horolezectví je velmi specifická sportovní disciplína. Ačkoliv v něm sotva můžeme hovořit o klasickém soutěžení, je čím dál tím více považováno za sport. Objevují se nové možnosti soutěžení. Horolezectví přesto stále zůstává odlišnou disciplínou. Jednou z nejdůležitějších charakteristik je stres, protože chyba může způsobit smrt. V naší práci jsme zkoumali osobnostní rysy slovinských horolezců.

*Klíčová slova: osobnost, horolezectví, rizikové sporty.*

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