PERSONALITY IN HIGH-RISK SPORTS ATHLETES

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Abstract:

The research investigated personality traits of high-risk sports athletes. The aim was to investigate the personality dimensions and compare the results to the results of non-risk sports athletes and non-athletes. Thirty eight high-risk sports athletes participated in the research (alpinists, sky divers, paragliders, white--water kayakers, downhill mountain-bikers, motocross riders, downhill skiers and ski jumpers). The non-risk sports athletes consisted of 38 swimmers, track athletes, sailors, flat-water kayakers, rowers, Nordic skiers, sports climbers and karatekas. The non-athletes were equalled with both groups in age and education and included 76 non-athletes. The Big Five Observer Scale was used. It was found that high-risk sports athletes scored highest in *emotional stability,* they were followed by the non-athletes and the lowest scores were achieved by non-risk sports athletes. The same order of groups was shown in *conscientiousness* and *energy*. *Openness* was highest in the non-risk sports athletes, followed by the non-athletes and the lowest score was achieved by the high-risk sports athletes. The differences in *acceptability* were not significant. Four out of five hypotheses were accepted.

Key words*: high-risk sports, extreme sports, high-risk sports athletes, personality, personality dimensions, Big Five Observer Scale*

DIE PERSÖNLICHKEIT VON RISIKOREICHE SPORTARTEN TREIBENDEN SPORTLERN

Zusammenfassung:

Diese Studie untersuchte die Persönlichkeit der Sportler, die risikoreichen Sport treiben. Unser Ziel war es, die Persönlichkeitsdimensionen zu untersuchen und die Ergebnisse von Sportlern, die keinen risikoreichen Sport treiben, mit den Ergebnissen von Nichtsportlern zu vergleichen. Die Studie umfasste 38 Sportler, die die Sportarten hohen Risikos treiben (Alpinisten, Fallschirmspringer, Gleitfallschirmflieger, Wildwasser-Kajakfahrer, Bergab-Mountain-Bike-Fahrer, Motocrossrenner, Abfahrtsläufer and Skispringer).

38 Sportler, die keinen risikoreichen Sport treiben, nahmen an der Forschung teil - Schwimmer, Laufbahnrenner, Segler, Kajakfahrer auf stillen Gewässern, Ruderer, nordische Skiläufer, sportliches Klettern und Karateka. Alle Sportler, sowie die 76 Nichtsportler waren gleichaltrig und der gleichartigen Ausbildung. Die Big Five Observer Scale wurde benutzt. Die risikoreichen Sport treibenden Sportler hatten die besten Ergebnisse in der emotionellen Stabilität erreicht, worauf die Nichtsportler folgten, und die schwächsten Ergebnisse hatten die Sportler, die keinen risikoreichen Sport treiben. Die gleiche Reihenfolge von Gruppen der Probanden war bei *Gewissenhaftigkeit* und *Energie*. Die *Offenheit* war bei den Sportlern, die keinen risikoreichen Sport treiben, am meisten zu merken, dann bei Nichtsportlern und am wenigstens bei den risikoreichen Sport treibenden Sportlern. Die Unterschiede bei der *Annehmbarkeit* waren nicht bedeutend. Vier von den fünf Hypothesen wurden akzeptiert.

Schlüsselwörter: *risikoreiche Sportarten, Extremsport, die risikoreichen Sportarten treibenden Sportler, Persönlichkeit, Persönlichkeitsdimensionen, Big Five Observer Scale*

Introduction

Allport claimed that what seems to be an enormous amount of possible units for the analysis of one's personality can be reduced into several basic units of analysis, so called personality traits (Allport, 1937, in Johnson, 1997). The term *personality trait* should thus be of cruical importance for the understanding of personality. It can be defined as "a consistent pattern of thinking, feeling and acting, that differs between people themselves" (Johnson, 1997). This definition also includes some important characteristics of personality traits – they can be used to compare people, since they contain a basic descriptive unit and help explain consistent behaviour patterns in humans (Hanson, 1958, in Johnson, 1997). There are two types of traits (Allport, 1937, in Johnson, 1997): external traits that can be directly observed (behavioural traits, we also describe them as fenotypical traits) and internal traits (emotional and cognitive traits) that can be described as genotypical traits.

One of the most important events in personality exploration is the occurrence of the Big Five model, which can be used as a general model for describing the structure of personality. That model is derived from the works of Cattell, whose work is a cornerstone of all modern exploration of personality (Hall, 1997). Even though this model is not generally recognized, it adequatlly complements the biologically oriented genetical approach that is the second dominant orientation in modern personality research. The Big Five model appeared in the work of Allport and Odbert, who attempted to identify interpersonal differences on the basis of the lexicographic approach – they began by extracting all the words, that referred to one's personality, from the dictionary and combined them into clusters. The other approach - the factor approach - was used by Eysenck. He based his findings on his own theory (Caprara et al., 1997).

The first author to extract five replicable factors on the basis of Cattell's studies was Donald Fiske. Tupes and Christal (1961, in Hall, 1997) reanalyzed his data which were obtained on eight separate samples. They obtained five strong, recurring factors, and named them *surgency* (assertive talkativeness), *acceptability, dependency, emotional stability* and *culture*. That was the first set of personality dimensions ever to be called the Big Five (Goldberg, 1981, in Hall, 1997). Norman confirmed the five-factor model and renamed the third factor *conscientiousness.* A separate investigative programme by McCrae and Costa identified a Big Five model on the basis of personality questions rather than single words. They named their factors *neuroticism, extraversion, acceptability, conscientiousness* and *openness.* We thus have two separate Big Five models – one of them is based on the lexicographical approach and the other on the factor approach of personality questionnaires. One of the characteristics of the work of Costa and McCrae are six traits that are contained by each of the factors (Costa, McCrae, & Dye, 1991) – for example, some of the traits in extraversion are warmth, sociability, assertiveness, thrill-seeking and positive emotions. In the revised version of their questionnaire, Costa and McCrae prepared questions that measure both individual traits and higher order factors (Costa & McCrae, 1992b, in Hall, 1997).

Researchers, who investigated sensation-seeking in sport dealt mainly with the sensation-seeking needs in athletes that engage in so called high-risk sports, also known as extreme sports. We refer to them as *high-risk sports*, as does the majority of researchers (Breivik, 1995; Campbell, Tyrrell, & Zingaro, 1993; Chirivella & Martinez, 1994; Cogan & Brown, 1999; Cronin, 1991; Goma i Freixanet, 1991; Jack & Ronan, 1998; Kerr, 1991; Rossi & Cereatti, 1993; Wagner & Houlihan, 1994 and Zarevski at al., 1998), but expressions such as "extreme" or "adrenalin" sports are also used (Žiberna, 2000). They are used to describe sports such as mountain climbing, white-water kayaking, diving, ski jumping, as well as some other sports (Burnik & Tušak, 1999). Breivik defines them as "any sport, where one has to accept a possibility of severe injury or death as an inherent part of the activity" (Breivik, 1995). We can thus add the following sports to the previous list: downhill skiing, sky diving, paragliding, downhill mountain-bike riding, speleology, freestyle snowboarding, motocross, car racing, speed-boat racing, sleigh racing and probably some other modern sports.

High-risk sports were scientifically explored in Slovenia mainly in the area of alpinism. Markič (1990, in Burnik & Tušak, 1999) found alpinists to be more introverted, more independent, more individualistic, more used to going their own way than the rest of the population; he found them to reject traditional norms and to have their own set of moral values; they were withdrawn, socially shy, serious and calm. He used the Cattell 16 BF and, in comparison with sports climbers, the alpinists turned out to be more introverted, had lower ego strength, but also the climbers appeared to have

their own set of moral values. The findings of Burnik and Tušak (1999) were different. They used the Freiburg personality inventory and alpinists turned out to be less neurotic, more extraverted, more open and more sociable than the general population, although sincerity was slightly lower in that group. Tušak and Bednarik (2001) have found Slovenian ski jumpers to be more sociable, to have higher masculinity and sincerity in comparison with the general population, with tendecies appearing also in extraversion, dominance and emotional stability. Tušak, Burnik and Robič (2001) have found divers to be more extraverted and calmer than recreational athletes.

Breivik (1999a) conducted several studies in high-risk sports, investigating mainly personality, sensation seeking and some physiological measures. He advocates the idea of a so-called filter system and claims that each area should be investigated by using subjects, who are best in that specific activity. Thus, he used top-level athletes in his studies – the filter system was supposed to exclude those, who were psychologically and/or physiologically inappropriate or did not match the characteristics of the activity (Breivik, Johnsen, & Augestad, 1994). He used the filter system also in his other study (Breivik, 1999c), where he compared top-level alpinists and other alpinists. He found the top-level alpinists to be less worried or anxious, and more stable than the other group. Breivik (1999c) found the evidence for the existence of a filter in the fact that differences between other alpinists and non-athletes are demonstrated in the same direction. He also speaks of two types of alpinists. He describe one type as more introverted, sensitive, with relatively high tension and anxiety – this type is found in English and Italian studies (Jackson, 1976, in Breivik, 1999c; Magni et al., 1985, in Breivik, 1999c). The other type are independent alpinists with less guilt and anxiety – this type was found by Czech and Slovakian researchers. Norwegian alpinists were assigned to the second group (Vanek & Hosek, 1977, in Breivik, 1999c). Breivik also found that alpinists were not an extremely extraverted group (Breivik, 1999c). In a comparison of sky divers, alpinists, students and military recruits (Breivik, 1999d) he found sky divers to have the highest extraversion and psychoticism, whereas alpinists were the most introverted of all the groups. He also found some differences between sky divers and alpinists, mainly in neuroticism and extraversion, which was ascribed to the characteristics of the sports – especially in the case of formation jumping - there is a great need for cooperation. On the basis of this finding he concluded that each high-risk sport should be investigated separately (Breivik, 1999d).

Goma i Freixanet (1991) conducted an extensive study in which she compared the personality traits of alpinists, mountaineers and climbers and extreme skiers, athletes of other high-risk sports (diving, water skiing, motor boat racing, white-water kayaking, flying, sky diving, paragliding, ballooning, motor racing and adventurism) and non-athletes. She found that alpinists were not different from the other group, consisting of mountaineers, climbers and skiers. All these groups had significantly higher scores than the control group. On the basis of her findings Goma i Freixanet believes that all high-risk sports can be investigated and researched as one group. High-risk sports athletes obtained lowest scores in neuroticism (the lowest neuroticism was displayed by alpinists), but the differences were not significant. Her results are congruent with the studies of Eysenck, Nias and Cox (1982), who found athletes to be more extraverted and with higher psychoticism, but less neurotic than non-athletes.

The objective of this research was to examine the differences in personality structure of high-risk sports athletes, non-risk sports athletes and non-athletes, specifically to look for the differences in the personality dimensions in the Big Five Observer Scale (BFO-S). With respect to previous research, the authors have set five hypotheses:

H1: High-risk sports athletes will be more emotionally stable than non-risk sports athletes and also more stable than non-athletes.

H2: High risk sports athletes will be more conscientious than non-risk sports athletes, both groups will score higher in this dimension than non-athletes.

H3: High risk sports athletes will be more extraverted than non-risk sports athletes, both groups will be more extraverted than non-athletes.

H4: High risk sports athletes will score higher in *acceptability* when compared to non-risk sports athletes, the lowest acceptability will occur in non-athletes.

H5: We expect no differences in *openness* betwen high risk sports athletes and non-risk sports athletes, but we expect both groups to score higher in *openness* when compared to non-athletes.

Methods

The sample of subjects consisted of three subsamples:

- 38 male athletes engaged in high-risk sports at top level (alpinists, skydivers, paragliders, divers, white-water kayakers, downhill bikers, motocross riders, downhill skiers, ski jumpers). *Top level* was defined as the world and international class according to the Slovenian Olympic Committee (Olimpijski komite Slovenije, October 1999) and definitions of res-pective associations (age: M = 24.82; SD = 4.53).
- 38 male non-risk sports athletes, equalled in age and education with high-risk sports athletes (swimmers, track athletes, slalom and giant slalom skiers, flat-water kayakers, rowers, sailors, Nordic skiers, sports climbers, karatekas, badminton players), also categorized as top-level athletes according to SOC and respective associations (age: M = 23.55; SD = 4.00).
- 76 male non-athletes, equalled 2 to 1 in age and education with-high risk sports athletes who have never been engaged actively (competitively) in sports and who do not do any recreation more than twice a week (age: M = 24.82; SD = 4.30).

The age differences among the groups were not significant (F = 1.231; p = 0.295).

The ***instrument*** used in the study was the Big Five Observer Scale **(BFO – S) –** Caprara et al., 1997. The questionnaire is composed out of 40 bipolar pairs of adjectives, each pair requires an estimation of a testee on a seven-point scale, where figure 1 represents one pole of a trait and figure 7 its opposite. The scale measures five dimensions:

Dimension ENERGY

It refers to energetic and dynamic activities, talkativeness and thrill, the ability to enforce one's will, to be a frontman and to influence others. It is also mentioned as extraversion (McCrae & Costa, 1994). People who achieve high scores in this dimension are dominant, leader types, they appear to be brave, energetic, extraverted, sociable, communicative and relaxed, whereas people who achieve low scores appear to be subdued, faint-hearted, shy, introverted, lonely, quiet and clumsy.

Dimension ACCEPTABILITY

It refers to aspects of the personality that are connected with the ability to understand and the need to help others, with the ability to engage in effective cooperation, acceptance, trust and openness. It is also mentioned as *pleasantness* (McCrae & Costa, 1987). People who achieve high scores in this dimension appear to be at other people's disposal, not selfish, tolerant, loyal, warm and friendly, whereas people with low scores in this dimension appear to be selfish, mistrustful, intolerant, cold, hostile and unfriendly.

Dimension CONSCIENTIOUSNESS

Refers to reliability, accuracy, orderliness, persistence, toughness and working habits. Thus, people with high scores are orderly, precise, reliable, trustworthy, willing and conscientious. On the other hand, people with low scores are sloppy, appear to have no working habits, they are unreliable, lazy, tired and suffer from a lack of will and enthusiasm.

Dimension EMOTIONAL STABILITY

Refers to being able to control one's emotions, to remain calm and balanced. It usually indicates the absence of negative emotional states and worries. People with high scores are stable, patient, relaxed, satisfied, cheerful, who can deal well with stress. People with low scores, on the other hand, seem unstable, impatient, tense, anxious, nervous, restless and succumb to stress easily.

Dimension OPENNESS

Refers to creativity, originality, curiosity, culture, intelligence and openness to novelties. People who achieve high scores are original, innovative, informed, creative, sensitive, intelligent and bright, whereas people who achieve low scores appear to be conventional, uninformed, traditional, uncreative, unintelligent and insensitive.

The measurement characteristics of the BFO – S: the Slovenian standardization sample of 982 participants of both genders yielded the following α coefficients: energy $\alpha = 0.85$; acceptability $\alpha = 0.67$; conscientiousness $\alpha = 0.83$; emotional stability $\alpha = 0.83$ and openness $\alpha = 0.81$ (Caprara et al., 1997).

Procedure: The subjects were tested individually in their homes and at the Faculty of Sport, University of Ljubljana, Slovenia, during the years 2001 and 2002, whereas a part of the data was obtained in a research "Personality and motivation in top athletes", which was conducted by the members of the Faculty of Sport. The data were processed and evaluated by the statistical package SPSS 8.0. Descriptive statistical methods and one--way analysis of variance were used, as well as post hoc tests for the analysis of variance.

RESULTS

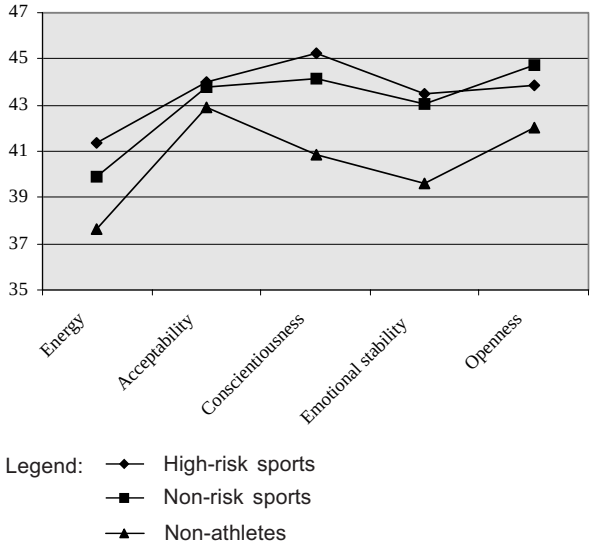

Figure 1. Comparison of means in personality dimensions for all groups.

Figure 1 shows the means of personality dimenions as they were expressed in specific groups. The order (descending) of groups is the same in the following four dimensions: *energy, acceptability, conscientiousness* and *emotional stability*. The highest score es were always obtained by high-risk sports athletes, who were followed by non-risk sports athletes, and the lowest scores were obtained by non-athletes. The latter group obtained the lowest score also in the case of *openness*, but the highest score in this dimension was achieved by non-risk sports athletes. The differences were smallest in the case of *acceptability*. In general, the differences between high-risk sports athletes and non-risk sports athletes seem to be smaller than the differences between either of those two groups and non-athletes.

Table 1 represents the differences between high-risk sports athletes, non-risk sports athletes and non-athletes. Several statistically significant differences were obtained. Four out of five personality dimensions proved to be statistically significantly different in the investigated groups: *energy, conscientiousness, emotional stability* and *openness*, whereas the differences in *acceptability* proved to be insignificant.

Post-hoc analysis of variance shows a slightly more detailed overview of results. It can be seen that with the dimension *energy*, the differences between high-risk sports athletes and non-athletes were significant, with *conscientiousness* and *emotional stability* the same set of differences was obtained. The differences between non-risk sports athletes and non-athletes were also significant in the dimension *conscientiousness. Openness* showed significant differences between non-risk sports athletes and non-athletes. In the case of *emotional stability,* the variances of the groups were non-homogenous, therefore we used the *post-hoc* tests for the non-homogenous samples for this dimension, specifically Dunnett T3 test. Tukey HSD test was used for all the remaining dimensions.

Table 1. Collective results of one-way analysis of variance

Dimension		SS	df	MS	F	p
Energy	Between groups	389.29	2	194.64	3.55	0.03*
	Within groups	8165.52	149	54.80		
	Total	8554.82	151			
Acceptability	Between groups	37.65	2	18.83	0.61	0.54
	Within groups	4568.45	149	30.66		
	Total	4606.10	151			
Conscientiousness	Between groups	571.16	2	285.58	7.96	0.00***
	Within groups	5342.10	149	35.85		
	Total	5913.26	151			
Emotional stability	Between groups	515.91	2	257.96	4.49	0.01**
	Within groups	8554.97	149	57.42		
	Total	9070.89	151			
Openness	Between groups	219.00	2	109.50	3.43	0.03**
	Within groups	4757.21	149	31.93		
	Total	4976.21	151			

Legend: SS – sum of squares, df – degrees of freedom, MS – mean square,
* - significant differences ($p<0.05$), ** - significant differences ($p<0.01$),
*** - significant differences ($p<0.001$)

Table 2. Results of post – hoc analysis of variance between groups

Dimension	Pair	p
Energy	high risk – non-risk	0.66
	high risk – non-athletes	0.03*
	non risk – non-athletes	0.27
Acceptability	high risk – non-risk	0.99
	high risk – non-athletes	0.59
	non risk – non-athletes	0.70
Conscientiousness	high risk – non-risk	0.68
	high risk – non-athletes	0.00***
	non risk – non-athletes	0.02*
Emotional stability	high risk – non-risk	0.99
	high risk – non-athletes	0.04*
	non risk – non-athletes	0.03*
Openness	high risk – non-risk	0.77
	high risk – non-athletes	0.22
	non risk – non-athletes	0.04*

Legend: * - significant differences ($p<0.05$),
** - significant differences ($p<0.01$),
*** - significant differences ($p<0.001$)

Discussion and conclusions

The results of this study show that *emotional stability* is highest in high-risk sports athletes. They are followed by non-risk sports athletes, while this dimension was much lower in the group of non-athletes. The differences in *emotional stability* are significant, *post-hoc* tests revealed that the differences between the high-risk sports athletes and the non-athletes, as well as between the non--risk sports athletes and non-athletes are significant. High-risk sports athletes thus appear to be more emotionally stable than non-risk sports athletes, who are also more stable than non-athletes – the same findings were found also by several other authors (Burnik & Tušak, 1999; Ogilvie & Tutko, 1966; Tušak & Bednarik, 2001; Breivik, 1999a; Goma i Freixanet, 1991). We can thus accept the first hypothesis and say that high--risk sports athletes are more emotionally stable than non-risk sports athletes and also more stable than non-athletes.

High-risk sports athletes are emotionally stable, which means that they are able to control their emotions; they can remain calm also in risky situations and in the face of sudden changes; they are stable, patient, relaxed; they appear to be calm and satisfied and they can deal with stress optimistically. All those characteristics are essential for them and the activity they are involved in – without those characteristics, they would be unable to reach top levels. The finding can be taken as evidence for emotional stability being a part of a filter that was suggested by Breivik, Johnsen and Augestad (1994). It is hard to imagine an alpinist who loses control of his/her emotions when the weather suddenly changes, or a diver who becomes nervous when he/she encounters a dangerous fish. Somewhat lower, but still high in comparison to non-athletes, is the dimension of *emotional stability* in non-risk sports athletes – top-level sports require a great deal of emotional control, especially in competitive periods and during difficult practice. Thus, the small difference between high-risk sports athletes and non-risk sports athletes in *emotional stability* is not really surprising. Non-athletes have lower emotional control, when we compared them to the other two groups. They can be described as unstable, impatient, often tense and dissatisfied; they often experience nervousness and anxiety; they are often restless and succumbed to stress more easily than the high-risk sports athletes or non-risk sports athletes. When we compare these results with the general population – the results obtained on the Slovenian standardization sample (Caprara et al., 1997), they obtain T scores between 45 and 49, which makes non-athletes from our study average in emotional stability.

A similar picture is displayed in *conscientiousness*. The highest scores were obtained by high risk sports athletes, they were followed by non-risk sports athletes, and the lowest score was obtained by non-athletes. The differences were significant; *post-hoc* analysis revealed that both the high-risk sports athletes and the non-risk sports athletes were significantly more conscientious than non-athletes. Goma i Freixanet (1991) also found that high-risk sports athletes follow social rules. Bruner (1969, in Tušak & Tušak, 2001) found that athletes display a higher level of responsibility and our findings are congruent with that. This finding is in accordance with the second hypothesis – we accept it and say that high-risk sports athletes are more conscientious than non-risk sports athletes, and both groups are higher in this dimension than non-athletes.

High-risk sports athletes are able to maintain good control of their socially unacceptable impulses. According to Freud we could say that their Super-ego is highly developed (Hogan & Ones, 1997). High-risk sports athletes can handle and maintain good relationships with members of the group they belong to, they are responsible and trustworthy, the key elements of conscientiousness, and they can function successfully in a group which can therefore be high in cohesion. High cohesion can be extremely important in a group, where the very lives of people depend on being able to rely on each other. An alpinist must be able to trust the

person he/she is climbing with, and he/she can only do that when he/she knows that his/her partner is trustworthy and responsible and when he/she knows that his/her partner will expect the same characteristics from him/her. A downhill biker must be able to trust the person who is taking care of his/her bike, so that he/she will be able to ride along steep mountainsides without the fear of his/her bike failing him/her. A conscientious person is orderly, persistent, hardworking, determined and restless at completing his/her task. We can easily see why this dimension is important also for the athletes, engaged in non-risk sports – the same characteristics are important for good training and performance. With non-athletes this dimension is lower and we can assume that non-athletes often appear disorderly, sloppy, lazy and often display a lack of will. C*onscientiousness* is important to achieve success in any area of engagement. We suppose that high conscientiousness could be found also in top-level managers, artists, scientists, etc. We also found that high-risk sports athletes are more extraverted than non-risk sports athletes, and both groups are again higher in extraversion than non-athletes. Thus we accepted the third hypothesis.

Our assumption is based on the scores in *energy* – the scores were highest in the group of high-risk sports athletes. They were followed by non-risk sports athletes, and the score was lowest in non-athletes. The differences between the groups were significant, especially those between the high-risk sports athletes and non-athletes. The high risk sports athletes thus appear to be dynamic and energetic; they are often thrilled with events, forceful, dominant, brave, sociable and communicative and they influence others. We can explain that by the high need for concentration, calmness and serenity in extreme sports. These athletes are often deprived of communication and contacts with others, which they afterwards try to compensate and express in the communication they receive in their everyday lives. This energy and sociability is displayed also in non-risk sports athletes, although it is slightly lower, whereas this dimension is not highly expressed in non-athletes and they often appear subdued, shy, introverted, quiet, prefer to be by themselves, and appear to be clumsy. Similar results were obtained by Eysenck (1982, in Tušak & Tušak, 2001), O'Sullivan, Zuckerman and Kraft (1998), Burnik and Tušak (1999), Tušak, Burnik and Robič (2001), Breivik (1999b), Goma i Freixanet (1991) and Eysenck, Nias and Cox (1982). Somewhat different results about high-risk sports athletes' extraversion were obtained by Markič (1990, in Tušak & Burnik, 1999), Jackson (1976, in Breivik 1999c) and Magni and associates (1985, in Breivik 1999c), where the alpinists were more introverted than the general population – similar was obtained in this research in the dimension *openness.*

In the dimension *acceptability* the same order of groups was displayed - the highest scores were obtained by high-risk sports athletes, they were followed by non-risk sports athletes and the lowest score appeared in non-athletes. The differences, however, were not significant and the fourth hypothesis must be rejected. Thus we cannot confirm that high-risk sports athletes are unselfish, trustful, warm and kind. Those characteristics should be slightly less obvious in the group of non-risk sports athletes and we had expected non-athletes to be stricter, colder and less trustworthy friendly. We cannot claim, that high-risk sports athletes can be called more pro social personalities who are motivated by altruism, social recognition and rewards (Goldberg, 1992, in Graziano & Eisenberg, 1997).

In the dimension *openness,* the order of the groups, evident in other dimensions, is reversed – the highest scores were obtained by non-risk sports athletes, they were followed by high-risk sports athletes and the lowest scores occurred in non--athletes. We can conclude that non-risk sports athletes are those, who are the most creative, original, who are the most curious and open to novelties, who appear to be the most informed, innovative and intelligent, whereas these characteristics are shightly less evident in high-risk sports athletes. In the past it was informational and cultural breadth that caused this dimension to be called *culture* (Tupes & Christal, 1961, & McCrae & Costa, 1997). It was also linked to social status. It should be strongly connected with motivation and the need to be different from others and with active search for experience, so we would have expected it to be highest in high-risk sports athletes. Therein could lie a peculiar paradox – alpinists were described as shy, calm and introverted (Markič, 1990, Tušak & Burnik, 1999; Jackson, 1976, Breivik 1999c; Magni et al., 1985, & Breivik, 1999c), and this could be the reason why they obtained such results – if they appeared to be shy and calm, then they would not strive to display their (otherwise existing) knowledge, innovativeness, intelligence and sensitivity. The fifth hypothesis can also be accepted – both groups of athletes scored higher in *openness* than the non--athletes.

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LIČNOST SPORTAŠA U VISOKORIZIČNIM SPORTOVIMA

Sažetak

Uvod

Ovo istraživanje bavi se ličnošću sportaša visokorizičnih sportova. Definirali smo ličnost kao relativno stabilan i jednoznačan kompozit mentalnog zdravlja te bihevioralnih i tjelesnih obilježja osobe (Musek, 1988) – ličnost predstavlja sustav osobina karakterističnih za pojedinca, za njegovo psihofiziološko funkcioniranje, osobito onih koje su njemu primarno važne. Ličnost sportaša koji se bave visokorizičnim sportovima, sportovima u kojima je rizik neizostavan i sastavni dio same aktivnosti, plijeni znatnu pažnju.

Osnovni cilj našeg istraživanja bio je ispitati razlike u dimenzijama ličnosti skale BFO-S, koja se temelji na samoopisivanju ispitanika, i to između grupe sportaša visokorizičnih sportova, grupe sportaša koji se bave ne-rizičnim sportovima i kontrolne grupe ispitanika koji se ne bave sportom.

Metode

Uzorak ispitanika čini 76 slovenskih sportaša, podijeljenih u tri grupe. Prvu grupu čine sportaši rizičnih sportova (N=38), koji se bave: alpinizmom, padobranstvom, padobranskim jedrenjem, kajakom na divljim vodama, ronjenjem, motociklizmom, biciklističkim krosom, skijaškim skokovima i skijaškim spustom. Drugu grupu čini 38 sportaša ne-rizičnih sportova: plivača, atletičara, slalomaša i veleslalomaša, kajakaša na mirnim vodama, veslača, jedriličara, skijaških trkača, sportskih penjača, karataša i igrača badmintona. Drugu, komparabilnu, skupinu čini 76 ne-sportaša koji su s pripadnicima ostalih grupa izjednačeni po dobi i obrazovanju.

Uzorak varijabli čini pet dimenzija 5-faktorskog upitnika ličnosti (skala samoprocjene) (Caprara, Barbaranelli, Borgogni, Bucik i Boben, 1997): ekstraverzija, ugodnost, savjesnost, emocionalna stabilnost i otvorenost iskustvu.

Rezultati i rasprava

Dobiveni rezultati pokazuju da je emocionalna stabilnost najviša u sportaša koji se bave rizičnim sportovima, potom slijede sportaši ostalih sportova, a najniža razina emocionalne stabilnosti dobivena je u skupini ne-sportaša. Utvrđene razlike između skupina statistički su značajne, što se također pokazalo i u radovima nekih drugih autora (Burnik i Tušak, 1999; Ogilvie i Tutko, 1996; Tušak i Bednarik, 2001; Brievik, 1999a; Goma i Freixanet, 1991).

Slična slika dobivena je i za dimenziju savjesnosti. Najviši rezultat dobiven je za grupu sportaša rizičnih sportova, potom slijede sportaši, a najniže vrijednosti dobivene su za grupu ne-sportaša. Utvrđene su razlike statistički značajne. Goma i Freixanet (1991) također nalazi da sportaši rizičnih sportova slijede socijalna pravila. Naši rezultati sukladni su Brunerovom nalazu (u Tušak i Tušak, 2001) koji navodi da sportaši pokazuju višu razinu odgovornosti.

Također smo utvrdili da su sportaši koji se bave rizičnim sportovima ekstravertiraniji od ostalih sportaša, a obje su skupine sportaša znatno ekstravertiranije od ne-sportaša. Utvrđene su razlike statistički značajne, a slične su rezultate dobili i Eysenck (1982, u Tušak i Tušak, 2001), O'Sullivan, Zuckerman i Kraft (1998), Tušak i Burnik (1999), Tušak, Burnik i Robič (2001), Breivik (1999b), Goma i Freixanet (1991) te Eysenck, Nias i Cox (1982). Nešto drugačije rezultate dobili su Markič (u Tušak i Burnik, 1999), Jackson (1976, u Brievik, 1999c) te Magni, Rupolo, Simini, De Leo i Rampazzo (1985, u Brievik, 1999c) prema kojima su alpinisti introvertiraniji u odnosu na opću populaciju. U našem je istraživanju takav rezultat dobiven za dimenziju otvorenosti prema iskustvu.

U dimenziji ugodnosti dobiven je jednak redoslijed grupa - najveći rezultat dobiven je na uzorku sportaša rizičnih sportova, zatim ostalih sportaša i potom ne-sportaša. Razlike se, međutim, nisu pokazale statistički značajnima, pa prema tome ne možemo tvrditi da su sportaši koji se bave rizičnim sportovima u većoj mjeri prosocijalne ličnosti, motivirane altruizmom, socijalnim uvažavanjem i nagradama (Goldberg, 1992, u Graziano i Eisenberg, 1997).

U dimenziji otvorenosti prema iskustvu dobiven je obrnut poredak skupina – najviše rezultate imaju sportaši ne-rizičnih sportova, slijede sportaši koji se bave rizičnim sportovima, a potom ne-sportaši. Moguće je zaključiti da su sportaši koji se bave manje rizičnim sportovima kreativniji, originalni, iznimno znatiželjni i otvoreni za nova iskustva, najinformiraniji, inovativni i inteligentni, dok su sve navedene osobine u nešto manjoj mjeri zastupljene kod sportaša koji se bave rizičnim sporto-

vima. U starijim istraživanjima informiranost i kulturna širina dovele su do toga da se ova dimenzija nazivala kultura (Tupes i Cristall, 1961, u McCrea i Costa, 1997) i bila je povezana sa socijalnim statusom. Ta bi varijabla također trebala biti snažno povezana s motivacijom i s potrebom da se razlikuju od drugih, kao i s aktivnim traženjem iskustava, pa bismo očekivali da najviše rezultate u toj dimenziji postižu sportaši rizičnih sportova. U ovom segmentu očigledno postoji čudan paradoks – alpinisti se opisuju kao sramežljivi, mirni, introvertirani (Markič, 1990, u Tušak i Burnik, 1999; Jackson, 1976, u Breivik, 1999c; Magni, Rupolo, Simini, De Leo i Rampazzo,1985, u Brievik, 1999c), pa bi to mogao biti razlog ovakvog nalaza – ako jesu sramežljivi i mirni, neće stremiti ka iskazivanju (inače postojećih) obaviještenosti, inovativnosti, inteligencije i osjetljivosti.

Zaključak

Ovim istraživanjem utvrđene su razlike u strukturi ličnosti slovenskih sportaša visokorizičnih sportova, sportaša koji se bave manje rizičnim sportovima i ne-sportaša. Na temelju dobivenih rezultata potvrđene su četiri od pet istraživačkih hipoteza.