

CHARACTERISTICS OF PERSONALITY PROFILES OF ELITE WRESTLERS AND BASKETBALL PLAYERS

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Abstract

The aim of this study was to investigate personality of elite wrestlers and basketball players. Participants were 80 male elite basketball players and 47 elite wrestlers from Serbia. Participants had completed a Cattell's 16PF Questionnaire. Data analysis was done with basic descriptive statistics. Significance of differences between two groups was calculated with *t* - test in SPSS16 program. The results confirmed the hypothesis that the wrestlers and basketball players differ in the expression of certain forms of behaviour within certain dimensions of personality. Wrestlers had lower scores at factors: B - Reasoning, E - Dominance, F - Liveliness, G - Rule Consciousness, H - Social Boldness, N - Privatness and Q3 - Perfectionism. In other words they exhibit: lower developed ability of abstract thinking, higher level of reliability and sense of duty to the obligations, lower "super ego" strength, threat-sensitivity, and impulsivity. Basketball players had lower scores only at factor I - Sensitivity, it means that they are more independent, and realistic.

Key words: senior, Catell 16PF, basketball, wrestling, significant difference

Introduction

Structure of athletes' personality was often subject of sport psychologists' researches. Understanding personality structure, basically, is to determine prominent individuals' disposition: specific, which control behavior of one type situation, and general, which are in the base of behavior in broad class situations (Havelka & Lazarević, 1981). Architecture of athletes' personality is significantly different compared with non-athletes. But, it is not been confirmed that individuals with a specific structure or specific set of personality traits more disposed to be successfully engaged in professional sports or a specific structure and organization of personality dispositions acquire and develop during long-term participation in sports activities (Havelka and Lazarević, 1981). In relation to this dilemma is prevalent notion that there is a mutual dependence in relationship between sports and personality structure: some personality traits determine success of the sport, and sport influences as formation and development of specific characteristics, that further behavior become inseparable components of personality athletes (Havelka and Lazarević, 1981). Coaches and sport psychologists, more than half century, discuss about specific psychological structure of athletes' personality. According to Weiberg & Gould (2003), more than 1000 papers in the field of the personality of the athletes were published until 1992. On the other hand, it can be said that in recent years appears unduly small number of studies of athletes' personality, and even notes that studies of athletes' personality should grow from its own ashes (Auweele et al., 2001). Modern sports psychologists are more concerned with specific conditions, mental functions or dispositions, and coping skills that athletes are manifested in various

sports and situations that significantly determine quality of their competition performances. The reason for this is, probably, complexity of personalities make-up as general individual characteristics. Inside sport is a large number of different sports branches and disciplines, which themselves expose athletes to different situations and specific requirements. Especially important is difference between individual and team sports, as well as differences among sports in relation to contact activity and nature contact. Wrestling is a typical representative of individual contact martial art. During the match different catches, turns, holdings and throwing are expressed. Fast and explosive attacks were performed every 6 to 10 seconds (Lansky, 1999). This kind of activities request static and dynamic force generating, explosive power, coordination, flexibility, aerobic and anaerobic endurance (Kraemer, Wescovi & Dihon, 2004). Wrestler's body is exposed to different loads, and wrestler activities request engagement of almost all muscles (Steward, 1998). Also, some psychological dimensions (personality, anger, coping strategies) are important for wrestlers' success (Dwyer & Carron, 1986; Gould, Eklund & Jackson, 1993; Kristiansen, Roberts & Abrahansen, 2008; Robazza, Bertollo & Bortoli, 2006). On the other hand, basketball is a typical representative as sort of team contact sport, where the goal is reached through cooperation and interaction more individuals, and to contact which occurs during game is permitted, as defined and sanctioned by the basketball rules. Basketball has complex demands that require a combination of individual skills, team plays, tactics, and motivational aspects (Trninić & Dizdar, 2000). Also, basketball has a great request for specific energy mobilization, cooperation between players, and responsibility in critical game situations, etc.

Success in basketball depends mostly of the levels of specific basketball motor abilities and skills, but also of the particular psychological factors, like cognitive abilities and personality dimensions (Becker, 1981; Karalejić, and Jakovljević, 2008; Svoboda, 1993). Studies of psychological profiles and personality of athletes is present in many sports (Banana & Mihajlovic 1995; Bačanac, 2001; Bačanac & Juhas, 2004; Han, 1996; Junge, Dvorak, Rösch, Graf-Baumann, Chomiak & Peterson, 2000) and then in basketball and wrestling as well (Becker, 1981; Craighead, Privette, Vallianos & Byrkit, 1986; Dwyer & Carron, 1986; Gould et al., 1993; Maddi & Hess, 1992; Svoboda, 1993). Maddi & Hess (1992) refer about connection between personality hardiness and basketball performance. Svoboda (1993) has shown significant difference in personality characteristics between excellent (stars) and poor quality (feeble) basketball players. Also, Dwyer and Carron (1986) refer about some differences in personality characteristics between excellent and poor quality wrestlers. The aim of this study was to investigate and compare personality characteristics of elite Serbian wrestlers and basketball players due to approve or deny our hypothesis that the personal profiles of elite wrestlers are significantly different from personal profiles of elite basketball players.

Methods

Participants

Participants were 80 male elite basketball players from First League of Serbia (group 1) and 47 elite wrestlers, members of Serbian First League clubs (group 2) from Serbia. The mean age of basketball players was 23.84 years ($SD = 4.02$), and the average senior playing experience in professional basketball, was 5.77 years ($SD = 3.97$). The mean age of wrestlers was 22.27.5 years ($SD = 3.13$), and the average senior competition experience was 4.57 years ($SD = 2.95$).

Instruments and procedure

For the purposes of this study, wrestlers and basketball players were asked to complete Cattell 16PF questionnaire (Fifth edition) based on the Raymond Cattell's theory of personality. This questionnaire was very often used in clinical, counseling, industrial-organizational, educational, and research settings (Cattell and Schverger, 2003). Also, this questionnaire (early editions) was often used in the past few decades in testing athletes' personality in Serbia (Havelka and Lazarević, 1981; Bačanac, 2001; Jakovljević, Karalejić and Lazarević, 2010). Cattell's theory implies existence of different kinds of personality traits, as characteristic individuals' tendency to determine extent and manner of his behavior (Cattell and Schverger, 2003). The primary factors that the Cattell 16 PF test measure are bipolar dimensions of personality: A - Warmth; B - Reasoning; C - Emotional Stability; E - Dominance; F - Liveliness; G - Rule-Consciousness; H - Social Boldness; I - Sensitivity; L - Vigilance; M - Abstractedness; N - Privatness; O - Apprehension;

Q1- Openness to Change; Q2 - Self-Reliance; Q3 - Perfectionism; Q4-Tension. The 16PF global scales have even higher reliabilities; 2-week test-retest estimates ranged from .84 to .91 with a mean of .87, and 2-month test-retest estimates ranged from .70 to .82 with a median of .80 (Cattell and Schverger, 2003).

Data analysis

Standard descriptive statistics was calculated: mean (M), standard deviation (SD), minimal (Min) and maximal (Max) values. Significance of differences between two groups was calculated with Independent Samples t-test for small samples. Data processing was done in statistical program SPSS16.

Results

Table 1 shows descriptive parameter of the results in applied questionnaire for evaluation of personality factors of senior wrestlers and basketball players, and also scale scores of other Serbian elite athletes founded by Havelka and Lazarević (1981). Basically, distributions of results are not different from normal. Values of means of particular variables are almost equal, compare with results of population of top athletes (Bačanac 2001; Havelka and Lazarević 1981). Results shown in Table 1 approve hypothesis that there are in level of expression of particular personal factors among elite wrestlers and basketball players statistically significant differences conditioned by different kind of these two sports and some other socio-cultural factors. In relation with basketball players wrestlers indicate statistically significant lower average values on factors B, E, F, G, H, N and Q3 and higher values on factor I.

Table 1 - Means, standard deviations, minimal and maximal values of the results on 16 Personality factors of senior wrestlers and basketball players with t-test results and results of other top Serbian athletes

Cattell	Wrestlers (N=47)				Basketball players (N=80)			t test	Other athletes
	Mean±SD	Min.	Max.		Mean±SD	Min.	Max		
A	11.28±3.34	3	18	11.59±2.68	6	17	0.58	14.45±2.90	
B	6.70±3.11	1	16	8.22±2.01	1	12	**3.35	8.02±2.15	
C	15.50±4.30	6	24	16.19±2.71	10	21	1.09	16.98±4.31	
E	13.53±3.21	6	20	15.29±3.15	8	22	**2.98	14.01±3.94	
F	14.28±3.58	4	22	15.89±3.62	7	24	**2.44	15.18±3.89	
G	13.08±3.88	3	20	15.06±2.73	8	20	**3.36	14.09±3.56	
H	13.25±4.28	2	23	15.49±4.35	2	24	**2.81	13.11±5.05	
I	7.79±2.68	0	12	6.61±2.68	0	13	*-2.38	7.75±3.29	
L	10.55±3.17	5	18	10.90±2.79	4	18	0.64	10.50±3.26	
M	11.49±4.00	2	19	10.89±2.74	4	17	-1.01	12.14±3.44	
N	9.45±2.62	4	15	10.46±2.49	6	15	*2.18	10.38±2.43	
O	10.17±3.00	3	16	9.37±3.83	1	18	-1.22	10.20±3.85	
Q1	8.91±2.64	4	16	9.24±2.43	3	16	0.70	10.29±2.49	
Q2	9.17±3.29	2	16	10.10±2.48	3	16	1.80	10.16±3.19	
Q3	11.49±3.27	3	18	12.64±2.61	5	18	*2.17	11.81±3.54	
Q4	11.48±4.00	3	20	11.47±3.65	2	20	0.01	11.83±4.78	
**Sig. (p<0.01)									
*Sig. (p<0.05)									

Discussion

Observing the average values of personal factors we can say that personal profiles of the elite wrestlers and basketball players are highly compatible with personal profiles of other Serbian elite athletes, compared with data from Bačanac (2001) and Havelka and Lazarević (1981). Wrestlers had lower scores at factor B - Reasoning. They exhibit lower developed ability of abstract thinking, understanding of ideas, speed of learning and problem solving compared to basketball players. Essentially, nature of all sport games sets up highlighted demands for quick recognition and analysis of the current situation as well as fast adequate respond on the current situation. There are similar demands for wrestlers during the fight. Still it is necessary to emphasise significant difference in the way of information reception related to the current situation during the wrestling fight. In fact, great number of information during the fight, body position and rival performed activities, a wrestler gets through tactile sense and proprioception. This kind of reception and information processing is extremely specific and it is not in correlation with indicators of general intelligence, with reference to general ability in quick navigate in situations when information is received by audio and visual senses. Wrestling is sport that demands extremely motorical intelligence and many studies shows that motorical intelligence is not significantly related with general intelligence. Basketball demands good cooperation and communication among players, understanding of needs, intentions and motives of others - essential component of social intelligence and Cattell's B - factor of Reasoning. Wrestlers achieved statistically lower score on a scale E. In other words, basketball players are more self confident, feistier, perform stronger need for drawing attention of others, asking for admiration, like to impose, to dominate, to manage and organize others. On the other hand, wrestlers are more modest, obedient, steady, loyal to the leader, less seditious and obtrusive. Though in every sport there is aspiration for recognition and self-confirmation as one of the essential premises of success, in wrestling it is not manifested in the same way like in basketball. More chance to be successful have those wrestlers with less desire to dominate, impose and to be listened by others, but they are more forbearing, focused on their goals, more prepared to confirm themselves through long and patient work. On the other hand, a basketball player can own significant qualities, but simply he does not fit the coach conception of the athlete who can obtrude and that way get the real chance to show his qualities. On the scale F professional basketball players showed more readiness for cooperation, they are more energetic, carefree and impulsively lively than wrestlers. Wrestlers are less ready for teamwork and collaboration and are upset. Basketball as team sport provide possibility to basketball players to share their responsibilities and problems with their co-players, i.e. there is a possibility that team to bear and take up all potential problems.

Naturally, the sport success is taken together too! On the other side, wrestlers are alone and there are little possibilities to share any kind of responsibilities or problems with others and then, success in result is dominantly individual. Basketball players compared to wrestlers, have statistically significant higher level of "super ego" strength (factor G). It can be related to the fact that basketball as team sport request high level of confronting with demands and rules. Since this scale examines the personality traits that are responsible for moral behavior or, according to the interpretation of the Cattell's personality theory, - "reliable character", we may say that basketball players compared to wrestlers, exhibit significantly higher level of diligence, perseverance, reliability, responsibility, sense of duty to the obligations, thoughtfulness towards other people, etc. Basketball requests from all players to be responsible and to fulfill their tasks in purpose for good team cooperation. Hence consciousness is more emphasised in basketball, responsibility toward oneself and toward others, commitment and confronting with social rules, whereas in wrestling this level of characteristics is lower, but still satisfied, as this characteristic will not provide direct consequences. And on the factor H basketball players gained significantly higher scores than wrestlers. Characteristics of basketball players is higher eagerness, heartiness and social non inhibited attitude, certainly related to the characteristics of the sport they practice. In basketball and other team sports there is highly emphasised need among team co-players for good united and harmonic relationship. These model of behaviour are in compatibility with higher eagerness of basketball players in the game. Still, wrestlers does not have to be communicative or open-armed to be very successful. It is not rare that some elite wrestlers and competitors in other individual sports focus their concentration on fight and need half isolated conditions. Namely in individual sports ambitions and goals of competitor form the same team does not have to be identical. In team sports co-players share responsibilities of eventual failure and in individual sports that kind of allocation is not possible. Score on a scale I shows that wrestlers exhibit a "tender temper". Based on the interpretation of this result, it means that basketball players are more independent, tough, realistic, self reliant, and emotionally mature, they manage feelings, they are unsentimental to the rival in competitive situations, they are more practical in achieving the set tasks compared with wrestlers. Characteristics of basketball players are maturity and realisticness. They are solid financial effects of training this sport provide them independence. On the other side, wrestling is sport that is more chosen by those whose priorities are not in financial favour which is reached by successful training of some profitable sport (wrestling is, certainly, not), but those who are emphasised art interests, who enjoy in improving their wrestling skills, who their sport skillfulness experience more like art achievement than like tool by which they can solve some practical problem.

Then, somehow, is logical why wrestlers in comparison with basketball players are more obliging, estetically picesome, introspective, creative, sentimental, dependant on attention and support of the others and more sensitive. Also, on the scale N is noticed statistically important difference. Basketball players gained distinctively higher results on this scale than wrestlers. That makes them socially more scrupulous, sprier, more polite in communication with others, more sordid, emotionally more distant and calculated. This behaviour is motivated by strong desire for social raise and promotion and it is favoured by their developed communicative skills, higher level of education, ambitiousness, flexibility in viewpoints and emphasised material and machiavellian orientation. Differences in these personal characteristics are caused by essential determination of basketball players to practice basketball as a profession while wrestlers practicing sport is only a few pages in their life stories. Elite basketball players are aware of the fact that in period of active playing basketball is solution for their life existence, so any kind of sentimentality is not expected. Scores on the factor Q3 also indicate on specificity of basketball players and wrestlers personal profiles. While basketball players are characterized by higher level of sense for self-esteem, emphasised need for social image, perfectionism, self-control and strong will, those characteristics are less emphasised in wrestlers. Wrestlers do not attach significance for demands posed by social environment, but they are more likely to pursue their own needs, attitude of others is less important to them cause they don't ask for social recognition and importance. They are not much occupied what kind of impression they left on others, they do not care much about social rules, they do not draw attention to themselves. We could say that the nature of wrestling, as a typical representative of one of hardest Martial Arts, is precisely the challenge of attracting people who find some kind of balance between the personal satisfaction in perfecting wrestling skills by themselves on one side and the confirmation of social sentiment of self-esteem on the other side.

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Conclusion

Results of the 16 PF test show that the elite wrestlers are significantly different from elite basketball players. These differences are basically consequence of characteristics of wrestling, as individual sport, and basketball as team sport. Although the psychological profiles of wrestlers and basketball players show normal levels of development of all 16 factors of personality that is very similar to the results of other elite athletes, they are still statistically significantly differ on 8 of 16 personality factors (B, E, F, G, H, I, N, Q3). Wrestlers achieve average, but compared to basketball players slightly lower values of factors: B, E, F, G, H, N, Q3. This means that they: prefer concrete thinking, are less assertive, intrusive, aggressive; they are more restrained and less ready for team work; they are more sensitive, sentimental, refined, and more anxious; they are more socially naive, natural, open, spontaneous, less subtle and less calculated; they less take into account their social image, they are not primarily directed to confirmation and recognition of social environment, but follow their needs and interests. Basketball is characterized by tendency of emphasized abstract thinking, higher level of verbal skills, a stronger need for dominance, managing and organizing others, greater respect and appreciation of social rules and norms of teamwork, and no-sentimental utilitarian approach, more pronounced integration with the social standards, a stronger sentiment of self-esteem and emphasized the need for social recognition. The study results confirm that the psychological profiles of elite wrestlers and basketball players are not uniformed, but to possess significant characteristics which are at the very beginning that individuals with certain psychological characteristics opt for one or the other. Therefore, in the process of sport orientation, primary and secondary selections, as well as pedagogical and psychological work with athletes, we should bear in mind the compatibility of their psychological traits with specific requirements for successful achievement in a chosen sport.

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KARAKTERISTIKE PROFILA LIČNOSTI ELITNIH HRVAČA I KOŠARKAŠA

Sažetak

Cilj ove studije je bio istraživanje i usporedba karakteristika ličnosti elitnih hrvača i košarkaša. Istraživanje je sprovedeno na uzorku od 80 profesionalnih košarkaša, prosječne starosti 23.84 godina (grupa 1) i 47 elitnih hrvača, prosječne starosti 22.27 godina (grupa 2) iz Srbije. Iskustvo košarkaša u vrhunskom sportu je, u prosjeku 5.77 godina, a hrvača 4.57 godina. Ispitanici su popunili Catellov 16PF upitnik (peto izdanje). Značajnost razlika između dvije grupe ispitanika je dobivena primjenom t-testa (Independent Samples t - Test) u okviru statističkog programa SPSS16. Rezultati potvrđuju hipotezu da se hrvači i košarkaši razlikuju u iskazivanju pojedinih formi ponašanja, odnosno, u pojedinim dimenzijama ličnosti. Hrvači pokazuju statistički značajno niže prosječne vrijednosti na faktorima: rezoniranje (B), dominacija naspram potčinjavanja (E), surgencija naspram desurgencije (F), snaga „super ega“ (G), neustrašivost prema strašljivosti (H), prostodušnost naspram prepredenosti (N) i nedisciplinirani self konflikt naspram dobre samokontrole (Q3). Drugim rječima, u odnosu na košarkaše, hrvači su: manje skloni apstraktnom mišljenju; pouzdaniji su, sa većim osjećajem odgovornosti, imaju manju snagu „super ega“ i impulsivnosti. Košarkaši su imali niže skorove samo na faktoru oštra narav naspram meke naravi (I), što znači da su oni nezavisiniji i realističniji.

Gljučne riječi: seniori, Catell 16PF, hrvanje, košarka, značajna razlika

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