

Manifestations of aggression in elite athletes

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Published online: March 31, 2021

(Accepted for publication March 15, 2021)

DOI:10.7752/jpes.2021.02099

Abstract.

Purpose: to investigate the manifestations of the characteristics of aggressive and hostile behavior in athletes of different kinds of sports and sports qualifications. **Material:** The Bass-Darkey's technique was used to study the characteristics of aggressive and hostile behavior of athletes. The study involved 149 athletes of different sports and qualifications. **Results:** Our results showed that high level of negativity and resentment in elite athletes link with competition activities. This fact indicates on increasing of aggressive behaviour in combat sport. The analysis of link between level of aggression and qualification in athletes showed non elite athletes have a tendency to a overes parameters of physical, indirect and verbal aggression for concerning to elite athletes. The highest rates of aggressive and hostile behavior, significantly different from other sports, were found in the group of wrestlers and boxers. These results may be related to the specificity of the sports, psychological training and social support by the trainer. The high level of aggressiveness and hostility among low-skill athletes indicate is significantly different in terms of physical and indirect aggression, irritability and offense. **Conclusions:** The specificity of the sport and the orientation of its competitive activity influence the level and peculiarities of aggression and personal conflict of the athlete. Sports, in which aggressive actions are one of the main tools for achieving this goal, suggest the development of high levels of aggression and conflict in athletes. Aggression and hostility are not necessary qualities for high sport achievement, which is confirmed by their higher performance in athletes with low sports qualifications.

Keywords: aggression, hostility, conflictability, athletes.

Introduction

The modern period of development of sports highlights the problem of increasing the reliability and efficiency of competitive activity. The competition proceeds in conditions of high emotional stress due to the complexity and responsibility of sports tasks, the acute nature of competitive struggle, and lack of time (Dudnyk et al., 2009; Kozina et al., 2018). Under these conditions, the athlete's self-awareness is subjected to constant exposure to stress factors that very often cause nervous strain and increased anxiety, which can cause such a primitive form of behavior as aggression (Iermakov et al., 2016; Korobeynikov et al., 2019).

Aggression in sport is determined by the most specific entity of this sphere: high conflict situations, the entertainment of certain sports, the hot character of competition (Alexandra et al., 2015; Chernozub et al., 2018; Lisenchuk et al., 2019). Being one of the natural features of human being, the simplest form of preserving his individuality, sense of self-rate, a way of self-affirmation. In some sports (sports games, martial arts), aggression is one of the instrumental means of achieving the main goal (Korobeynikov et al., 2019; Tushchenko et al., 2019). The constant use of aggressive actions, combined with positive support by the trainer, contributes to increase of aggressiveness (Sympas et al., 2018). Often, athletes are encouraged by the trainer for a tough game, especially if it brings success to the team. Aggression, leading to a positive competitive result, is fixed in the behavior of the athlete. It follows that training in aggressive actions in various contact sports, due to the specifics of activity and constant conflict of situations, leads, as a rule, to an increase in the level of aggression of an athlete and to the formation of a high level of conflict of personality (Petrovska, 1997).

In these conditions, it is very important that the athlete possess those qualities that would allow him to govern and control aggression. According to the published sources, the most effective way to control a person's behavior and activities is to influence his self-rating (Kolumbet et al., 2018; Petrovska et al., 2020). Self-rating, as a stable side of self-awareness, is a potential regulator of a person's mental and practical activity, affects his perception of his successes and failures, the organization of his behavior and activities, and the formation of self-

confidence (Marasescu, 2014). Without adequate self-rating, it is practically impossible to achieve high results in any activity, since it is an important factor in a person's mobilization of his spiritual and physical forces during self-affirmation (Moseychuk et al., 2018). In a competition, an athlete with inadequate self-rating is more susceptible to the effects of stress factors. Any change in the assessment of oneself is acutely felt, perceived as discomfort, a threat to one's "I", for protection of which he may use aggressive actions.

Aggression in contact sports is often considered as the main factor in the preparation and success of competitive activity (Korobeynikov et al., 2020; Chernenko et al., 2020). Training in aggressive actions in various contact sports, due to the specifics of the activity and the constant conflict of situations, leads, as a rule, to an increase in the level of aggressiveness of an athlete and to the formation of a high conflict of personality (Petrovska et al., 2020).

Purpose was to investigate the manifestations of the characteristics of aggressive and hostile behavior in athletes of different kinds of sports and sports qualifications.

Materials and methods

The Bass-Darki technique was used to study the characteristics of the aggressive and hostile behavior of athletes. The study involved 149 athletes who, for comparison, were divided into four groups, taking into account the generally accepted classification of sports: group 1 - rhythmic and sports gymnastics, sports acrobatics; 2nd group. sport games; 3rd group. - cycling, speed skating, 4th group, contact wrestling, boxing. To solve another problem, these athletes were divided into two groups for qualifications level: V-th group - elite athletes; VI group - non elite athletes. From all of athletes was consents of data use for scientific research according to recommendations of biomedical research ethics committee.

Results

An analysis of the experimental data in these groups made it possible to determine that there are significant differences in the demonstration of aggression and hostile behavior in different sports.

So, the lowest rates were found among gymnasts and acrobats (Table 1). They have a combination of average values of indicators of aggression, irritability and guilt. These indicators reliably differ from the results of other groups.

The most significant reason for this may be that the specificity of competitive activity in these sports does not require the athlete to display high aggressiveness, and psychological preparation involves the development of a high level of self-control, a subtle perception of the beauty of movements, which helps to reduce the overall level of aggressiveness (Cynarski et al., 2015). At the same time, the high indicators of negativity and resentment in this group are explained, in our opinion, by the peculiarities of performance in competitions: subjective assessment of judges, and recognition at an early age, which contributes to the formation of a high sense of individuality, the uniqueness of "I".

Table 1. Peculiar features in demonstration of aggressive and hostile behavior in athletes of different sports

Types of aggressive and hostile behavior	Demonstration of aggression in group of athletes n=149			
	I group n=31	II group n=41	III group n=43	IV group n=34
	Rhythmic gymnastics, sport.acrobatics	Sports games	cyclic and speed-power sports	Wrestling and box
	x±m	x±m	x±m	x±m
Physical	4,8± 1,1	6,8± 1,4	6,8± 1,5	7,4± 1,2
Indirect	5,1± 1,1	5,8± 1,6	5,4± 1,8	6,4± 2
Verbal	7,3± 2,1	7,7± 2,1	8,5± 2,2	8,4± 1,4
Suspension	5,7± 1,8	6,2± 1,5	6,3± 1,5	6,6± 1,2
Negativity	3,9± 1,2	3,6± 1,3	4,1± 1,1	3,9± 1
Irritability	4,8± 1,4	5,2± 1,9	5,3± 1,9	6,7± 1,7
Offense	5,2± 1,9	5,2± 2	4,3± 1,7	4,6± 1,7
Guilt	4,6± 1,4	5,3± 1,8	5,3± 1,6	4,1± 1,4
Aggression index	17,5± 2,8	20,3± 3,8	20, 7± 3,9	24,76± 3
Ihostility index	11,2± 3,1	11,4± 2,9	11,0± 2,4	11,0± 2,3

Note: x is the arithmetic mean of indicators of aggressive and hostile behavior; m is the standard deviation, n-number of people.

The highest, significantly different from all groups, indicators of aggression were found in boxers and wrestlers (4th group). They have a tendency to combine a high level of aggressiveness, irritability and suspicion. The specifics of contact sports involves the development of a high level of aggressiveness, through the use of physical aggression in each fight, combined with positive support by the trainer (Chernozub et al., 2018; Korobeynikov et al., 2020; Petrovska et al., 2020). This entails an increase a high level of aggressiveness

according to the theory of the social teaching of aggression. Competitions taking place in conditions of varied conflict situations, due to lack of time, the danger of causing serious injury to the rival, also contribute to increase the level of negativity, suspicion and hostility. It is very important that the athlete has adequate self-rate, level of claims, which contributes to a high level of development of self-control and prevents the transference of excessive aggression from the sphere of sports to everyday life (Ahmadi et al., 2011; Korobeynikov et al., 2020).

The experimental data of the 2nd group (sports games) show that here, against the background of high rates of physical and verbal aggression, negativity, average values are observed for other types of aggression and hostile behavior. In sports games, the specifics of training and performance in competitions involves the use of physical aggression as a tool to achieve the goal. Psychological training in these sports involves the development of the proper level of instrumental aggressiveness, but the conditions for performance in competitions occur in varied and conflict situations that promotes the formation of a high level of negativity. The indicators of aggression in the second group do not significantly differ from the indicators of the third one (Table 1), although sports games require a greater demonstration of aggressive qualities to achieve the goal. The reason for this may be that the 3rd group included such sports as speed skating, cycling, athletics, which strongly developed sense of competition, leadership, which against the background of intense competition, increased emotional stress, extreme physical exertion stimulates an increase in the level of physical, verbal aggression and negativity.

A comparative analysis of the indicators of aggression and hostility in behavior among athletes of various specializations revealed the dependence of the level of aggressiveness and the features of its demonstration from the specifics of the sport and the direction of competitive activity in it. The sports, in which aggression is one of the main tools to achieve the goal, involves the development of a high level of aggressiveness, as a result of which athletes increase its level. And, on the contrary, if aggressive actions do not directly solve the main competitive problems in a particular sport, then athletes experience a decrease in the overall level of aggressiveness.

The same tendencies are observed in the demonstration of personal conflict among athletes according to the results of the method of A. Lebedev, which allows revealing the level of personal conflict (Lebedev 1992). According to experimental data, athletes involved in contact and game sports (football, basketball, wrestling, boxing) there is a relatively high level of personal conflict in comparison with athletes specializing in other sports (athletics, skiing, sport and rhythmic gymnastics), where the rules of the competition do not provide physical contact with the rival (Petrovska et al., 2020).

Comparative analysis of experimental data on the results of the Bass-Darka method between groups of athletes of various qualifications (group V - elite athletes, group VI- non elite athletes) allowed to determine a number of significant differences and features in the demonstration of aggression and hostile behavior in them.

So, among highly qualified athletes, medium and high indicators of physical, indirect, verbal aggression, irritability, and feelings of offense were revealed combined with a high level of negativity. Non elite athletes have a tendency to a combination of overestimated indicators of physical, indirect, verbal aggression, irritability and feelings of offense, suspicion and negativity. The differences between these groups on the scales of aggression: irritability, feelings of offense, suspiciousness are significant (table. 2).

Table 2. Peculiar features in demonstration of aggressive and hostile behavior in athletes of different qualification

№	Type of aggression	Groups of sportsmen		t- Student's criterion
		V group n=88	VI group n=61	
		elite athletes x±m	non elite athletes x±m	
1	Physical	6 ± 1,7	7,1 ± 0,6	5,3***
2	Indirect	5,1 ± 1,5	6,3 ± 1,9	3,3**
3	Verbal	7,7 ± 2,2	8,4 ± 1,7	2,1*
4	Suspension	6 ± 1,8	6,4 ± 1,4	1,6*
5	Negativity	3,8	3,8	0
6	Irritability	5 ± 1,7	6,2 ± 1,8	4,3***
7	Offense	4,6 ± 1,8	5,4 ± 1,6	2,8**
8	Guilt	4,9 ± 1,7	5,2 ± 1,5	1,1
9	Aggression index	10,6 ± 2,9	11,8 ± 2,3	2,7**
10	Ihostility index	18,4 ± 3,6	21,1 ± 3,4	4,9***

Note: x is the arithmetic mean of indicators of aggressive and hostile behavior; m is the standard deviation; n- number of people;

Student t-test, significance of differences with probability p: * - p < 0.05; ** - p < 0.01; *** - p < 0.001.

The level of aggressiveness and hostility among unskilled athletes is much higher than that of highly qualified athletes. Differences indicate that athletes of various qualifications differ significantly, both in terms of the combination

of certain types of aggression and hostile behavior, and in the level of hostility and aggressiveness. According to the results of studies, this quality is a characteristic feature of athletes. It is developed in connection with the most specific essence of the sports sector — conflict of activity, unpredictability of competitive situations, constant overcoming of difficulties and frustration arising in connection with this (Petrovska 1997). Elite athletes showed a tendency to a predominance of an independent, self-confident, leading position in behavior, readiness for independent decision-making (Table 3). The combination of such qualities allows the athlete to maintain primacy in a competitive situation. The indicators of aggressiveness and incredulity are at an average level and significantly lower than that of non elite athletes .

Table 3. The features of demonstration of the interaction strategy in athletes of different qualifications

№	Strategy of interpersonal interaction	Groups of athletes		
		Vgroup n=88	VI group n=61	t- Student`s criterion
		CMS, MS	1, 11 category	
		x±m	x±m	
1	Leading	8,8 ± 2,6	8,0 ± 2,6	2,1**
2	Independent dominant	8,1 ± 3,1	7,5 ± 2,1	1,5*
3	Aggressive	7,5 ± 2,5	9,7 ± 2	5,5***
4	Suspicious	5,9 ± 3,2	8 ± 2, 2	5,1***
5	Shy	4,9 ± 2,2	5,6 ± 2,2	1,9*
6	Obedient	5,3 ± 2,3	5,4 ± 2,3	0,27
7	Conventional	7,1 ± 2,4	10 ± 2,6	5,6***
8	Responsible magnanimous	7,8 ± 2,2	9,8 ± 2,1	5,4***

Note: x is the arithmetic mean of indicators of aggressive and hostile behavior; m is the standard deviation; n- number of people; Student`s t-test, significance of differences with probability: * - p <0.05; ** - p <0.01; *** - p <0.001.

Discussion

The essence of aggression is not determined only by open forms of aggressive behavior, but includes a peculiar mental state of a person, which has cognitive, emotional and strong-willed components (Petrovska et al., 2020; Tyshchenko et al., 2020). Cognitive provides orientation of the person in the current situation, as well as highlighting the object of potential danger. This component acquires special significance when aggression was caused by a threat. The emotional component of aggression forms a certain evaluative attitude to the rival's intentions and choice of response (Romanenko et al., 2018). In anger and other affects, the weakening of control and self-control is observed, which leads to emotional disorganization and, as a result, to more primitive forms of liberation from excessive tension and aggression (Kozina et al., 2017). In an aggressive action, there are components of strong-willed qualities: purposefulness, persistence, tenacity, as well as all components of strong-willed actions: the formation of a goal, the designation of a program of action, overcoming obstacles and results evaluation (Sobchik 2001; Volodchenko et al., 2019). Most studies that address the issue of aggressiveness in sports are primarily related to contact sports, as they are the most controversial (Chernozub et al., 2018; Lyzohub et al., 2019). The results was showed that high level of negativity and resentment in elite athletes link with competition activities. Were observed that high level of aggression was revealed in boxers and wrestlers. This fact indicates on increasing of aggressive behaviour in combat sport (Chernozub et al., 2018; Korobeynikov et al., 2019). The analysis of link between leve of aggression and qualification in athletes are showed non elite athletes have a tendency to a overes parameters of physical, indirect and verbal aggression for concerning to elite athletes (Korobeynikov et al., 2020). This indicates that the level of negativity remains consistently high in both groups (no significant differences were found).

However, when analyzing the demonstration of personal conflict in athletes of high and low qualifications according to the results of the methodology of A. Lebedev, (Lebedev 1992), opposite results were found. According to the results of studies, elite athletes have an indicator of personal conflict much higher than athletes with non elite athletes. Such an integrative quality allows to maintain primacy, leadership, advantage in a situation of equal competition due to motivation, perseverance, stress resistance, will, game thinking and other qualities (Petrovska 1997). This gives reason to think that aggression does not always give victory in equal rivalry. These data are confirmed by our studies on the comparative characteristics of the behavioral strategies of athletes of different sports qualifications, using the methodology of diagnosing interpersonal relationships.

Conclusions

1. The specificity of kinds of sport and direction of its competitive activity affect the level and characteristics of the demonstration of aggression and personal conflict in athlete.
2. Sports in which aggressive actions are one of the main instrumental means to achieve the goal, suggest the development of a high level of aggressiveness and conflict among athletes.
3. Aggression and hostility are not the key to high sports achievements, as evidenced by their higher performance among athletes with low sports qualifications.

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