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## Investigation and comparison of aggression in Olympic and Non-Olympic athletes of sport fields

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**Key words:** aggression, Olympic games, Olympic movement, sport psychology, violence

### Abstract

Aggression in sport is defined as a behavior against the legal standards of that sport as an attempt to injure the opponent, referee, teammate or spectators verbally or physically. Many of sport psychological researchers consider aggression and violence as a serious problem in sport especially in contact sports which is followed annually by a lot of harm for athletes. In the some direction this research deals with investigation of aggression situation in Olympic athletes of contact sport fields and non-Olympic, it compares these fields with each other and compares them with non-athletes. 96 elite athletes of different sport fields: taekwondo, judo, wrestling, boxing (as an athletes of Olympic sport fields), karate, wu shu, kickboxing and kung fu (as an athletes of non-Olympic sport fields) with having at least an international place in his field, along with 96 non-athletes have taken part in this research. Findings of research show significant difference in different components of aggression among research groups ( $p < 0.001$ ). A significant difference was seen among Olympic athletes in contact sport fields and non-Olympic and also non-athletes, generally from an aggression point, and aggression components. Research findings shows that Olympic athletes in sport fields have less aggression from non-Olympic athletes in sport fields, which shows great effects of Olympic movement purposes in sports and moral, mental and psychological characteristics of elite athletes of Olympic sport fields. Just as an important purpose of Olympic movement, is promoting and developing moral and physical characteristics of individuals and education of youth through sport, according to results of this research and similar researches find that Olympic games are something greater than holding a number of competitions every four years in part of a world. In fact, in depth of it, hidden moral, basic aims and education of Olympic movement and philosophy at the international level.

Also this theory that contact sport fields athletes with regard to non-athletes having more aggression was not confirmed by the results of this research. On the contrary, it seems that sport activities cause emptying energy and excitation among individuals and can cause decreasing excessively aggressive behaviors especially outside the sport environments.

Considering all the facts the results of this research and the same researches show that sport activities mainly have a positive effect on behavioral factors like aggression and they are able to balance the habitual characteristics of individuals. Also, in some of sport fields where athletes have higher grades, one should seek a cause in culture and special education of that field and moral, mental and cultural environment between athletes and coaches of that sport field. More research in this area can clear ambiguities of this subject.

### Introduction

Sport as a behavior, is part of life and for some of people is all the life. Sport as a behavior, has psychological dimensions and what is important is that sometimes this behavior affects personality and nature of one person so far as existing characteristics, from the person to society and even go far from the borders of one culture and one country; Sport has a closer connection with excitations and several psychological characteristics

of a person and all the individuals proceed to a sport, especially professional and championship sport, they have to confront with a phenomenon that is named “aggression” [Arvin, Rezaei 2008]. Rarely one can find a subject that is as considerable as much as aggression and violence.

Aggression in sport is defined as a behavior against the legal standards of that sport as an attempt to injure to the opponent, referees, teammate or spectators verbally or physically. Many of sport psychological researchers consider aggression and

violence as a serious problem in sport especially contact fields that follow annually a lot of privation and harms for athletes [Rezaei, Hosseini 2008].

All of those that somehow deal with sport, whether as a spectator, as a coach or an athlete, have to face a phenomenon that is named aggression. Upper levels of excitations and severe arousal that sometimes lead to quarrel and regrettable abnormality, observed repeatedly, by all three groups especially by athletes. It is likely this phenomenon in the course of hyper-sensitive sport competitions, transmitted from athletes to spectator and/or from coach to other two groups and obtained unpleasant consequences [Boostani, Boostani 2010].

As far as the martial arts are concerned, few studies about involvement in the martial arts and aggression have been carried out. Interest in such studies, particularly karate, grew in 1970s and 1980s by publishing works about masters of the martial arts' characters [Duthie *et al.* 1978; Kroll, Carlson 1967; Kroll, Crenshaw 1970]. These researches focused on properties such as control and vulnerability in karate [Madden 1990], self-esteem [Richman, Rehberg 1986], and anxiety [Layton 2000; Williama, Elliott 1999].

Results of few researches on aggression and tendency to the martial arts are contradictory. While researchers such as Fuller [1988] showed that athletes of the martial arts are more aggressive than non-athletes, other researchers – e.g., Szabo and Parkin [2001] – showed lower aggression level among athletes of the martial arts.

In their research on athletes of different sportive fields, Maxwell [2004] concluded that aggressive behavior had a significant difference among the athletes. Also, there was a significant relationship among the athletes' aggression and type of sport.

In their study, Rezaei and Hosseini [2008] concluded that there is not a significant difference among athletes in fields of karate, boxing, wushu, and taekwondo, but the difference between athletes and non-athletes is significant.

Many of the accomplished researches support this hypothesis that athletes especially athletes of contact fields in comparison to non-athletes, more are involved in aggressive behaviors. In the some direction this research deals with investigation of aggression situation in Olympic athletes of contact sport fields and non-Olympic, compare these fields with each other and compare with non-athletes.

## Methods

96 of elite athletes of different sport fields, taekwondo, judo, wrestling, boxing (as an athletes

of Olympic sport fields), karate, wu shu, kickboxing and kung fu (as an athletes of non-Olympic sport fields) with having at least international place in his field, along with 96 non-athletes take part in this research.

All of subjects complete Buss and Perry aggression questionnaires. This questionnaire evaluates four behavioral factors: anger, physical aggression, verbal aggression and hostility.

Validity of original questionnaires form out by makers of this questionnaires which in this order was reported physical aggression, verbal aggression, anger and hostility 80%, 76%, 72% and 72%.

After classification of questionnaires with the use for analysis of data, the analysis of variance (ANOVA), Tukey test, multiple logistic regression analysis and T-test were used.

## Results

After gathering information, obtained results with the use of analysis of variance test (ANOVA) were analyzed and the results were presented in the below table 1.

Findings of research show significant difference in different components of aggression among research groups ( $p < 0.001$ ). As it is clear in the table groups were different from each other in all of behavioral factors. Tukey test shows that kickboxing, kung fu athletes and non-athletes in anger, physical aggression, verbal aggression, hostility factors have higher grades.

## Discussion and conclusion

Research findings show that Olympic athletes in sport fields have less aggression from non-Olympic athletes in sport fields, that this important to show great effects of Olympic movement purposes in sports and moral, mental and psychological characteristics of elite athletes of Olympic sport fields. Just as an important purpose of Olympic movement, is promoting and developing moral and physical characteristics of individuals and education of youth through sport, according to results of this research and same researches find that Olympic games are something more than holding a number of competitions every four years in part of the world. In fact, in depth of it, hidden moral, basic aims and education of Olympic movement and philosophy at the international level.

Also this theory that contact sport fields athletes with regard to non-athletes having more aggression was not supported by the results of this research.

**Tab. 1.** Statistical criteria of research variables in different groups

Variables	Sport fields	Index	Mean	Standard deviation	Number of subjects	Degree of freedom	P-value
<b>Anger</b>	Olympic athletes	Taekwondo	9.5	2.1	15	8, 183	0.001
		Judo	7.7	1.3	10		
		Wrestling	10.2	3.2	11		
		Boxing	11.3	1.8	8		
	Non-Olympic athletes	Karate	11.6	3.5	22		
		Wu shu	13.1	2.2	12		
		kickboxing	20.4	1.8	8		
		Kung Fu	21.2	3.9	10		
Non-athletes	21.8	5.1	96				
<b>Physical aggression</b>	Olympic athletes	Taekwondo	17.2	1.4	15	8, 183	0.001
		Judo	14.9	1.7	10		
		Wrestling	14.2	2.5	11		
		Boxing	15.3	2.1	8		
	Non-Olympic athletes	Karate	20.8	1.7	22		
		Wu shu	21.3	1.6	12		
		kickboxing	24.9	2.2	8		
		Kung Fu	26.5	2.4	10		
Non-athletes	23.7	4.3	96				
<b>Verbal aggression</b>	Olympic athletes	Taekwondo	11.2	2.3	15	8, 183	0.001
		Judo	10.9	2.1	10		
		Wrestling	12.1	1.9	11		
		Boxing	12.9	2.2	8		
	Non-Olympic athletes	Karate	13.1	1.4	22		
		Wu shu	13.3	3.5	12		
		kickboxing	18.9	2.8	8		
		Kung Fu	19.2	3.7	10		
Non-athletes	19.9	4.3	96				
<b>Hostility</b>	Olympic athletes	Taekwondo	9.5	1.2	15	8, 183	0.001
		Judo	8.8	1.9	10		
		Wrestling	10.2	1.4	11		
		Boxing	11.3	3.7	8		
	Non-Olympic athletes	Karate	10.1	2.1	22		
		Wu shu	13.4	2.6	12		
		kickboxing	16.9	4.3	8		
		Kung Fu	17.3	5.9	10		
Non-athletes	16.4	4.6	96				
<b>Total</b>	Olympic athletes	Taekwondo	47.4	7.1	15	8, 183	0.001
		Judo	42.3	6.9	10		
		Wrestling	46.7	9.2	11		
		Boxing	50.8	9.8	8		
	Non-Olympic athletes	Karate	55.6	8.7	22		
		Wu shu	61.3	9.9	12		
		kickboxing	81.1	11.1	8		
		Kung Fu	84.2	15.9	10		
Non-athletes	81.8	18.3	96				

In contrary, it seems that sport activities cause emptying energy and excitation among individuals and can cause decreasing excessively aggressive behaviors especially in out of sport environments. Results of this study showed a significant difference between athletes of the martial arts and non-athletes in terms of the number and mean of their scores on the aggression scale. This result contrasts the finding of Chandler *et al.* [1999] and Cellini [1983]. In their studies, these researchers demonstrated higher levels of aggression among athletes. They had synthesized, unlike non-athletes, athletes totally got higher scores in aggression and aggression items.

The result of the present study is not in line with Fullers' [1988] findings. He had shown that in comparison with non-athletes, athletes had higher levels of aggression. On the other hand, the results are consistent with findings of some researchers such as Szabo and Parkin [2001]. In their studies, they had also shown lower levels of aggression among athletes of the martial arts in comparison with the non-athletes.

People in any society have particular behavioral models in sport and physical activities. Physical activities in a form of sport follow culture. As it was stated by Seville Statement of Violence [1986], aggression follows cultural factors considerably. Bandura [1973] synthesizes that culture of a society can increase the number of aggressive people of a society by giving value to aggressive behaviors and offering successful aggressive models and giving assurance that aggressive behaviors have rewarding results, the converse is also true. That is, culture of a society can minimize the aggression level as well as the numbers of aggressive people.

All in all, the results of this research and similar researches show that sport activities mainly have a positive effect of behavioral factors like aggression and is able to balance the habitual characteristics of individuals. Also, in some of sport fields that athletes have higher grades, should seek a cause in culture and special education of that field and moral, mental and cultural environment between athletes and coaches of that sport field.

Based on the results of the present study, seemingly, it is most likely that there is a relationship between personality and becoming aggressive in sport matches. Identifying this relationship can be effective in athletic success and function. Yet, more researches should be carried out within this area. Accordingly, it is suggested that similar studies should be conducted on other Olympic and non-Olympic fields as well as on female athletes more extensively.

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## **Badanie porównawcze problemu agresji wśród olimpijskich i nieolimpijskich sportowców z różnych dziedzin sportowych**

**Słowa kluczowe:** agresja, sporty olimpijskie, ruch olimpijski, psychologia sportu, przemoc

### **Abstrakt**

Agresja w sporcie jest definiowana jako zachowanie wbrew prawnym standardom danego sportu, jako próba zranienia przeciwnika, sędziów, członka własnej drużyny albo kibiców werbalnie albo fizycznie. Wielu badaczy psychologii sportu uważa agresję i przemoc za poważny problem w sporcie zwłaszcza sporcie kontaktowym, co corocznie prowadzi do wielu kontuzji wśród sportowców. Jednym z celów niniejszej pracy jest zbadanie występowania agresji wśród sportowców olimpijskich i nieolimpijskich w sportach kontaktowych, porównanie tych sportowców z niesportowcami. W badaniu brało udział 96 najlepszych sportowców z różnych dziedzin sportowych: taekwondo, judo, zapasów, boksu (jako przedstawiciele olimpijskich dziedzin sportowych), karate, wu shu, kickboxingu i kung fu (jako przedstawiciele nieolimpijskich dziedzin sportowych) zajmujących wysokie miejsce w danej dziedzinie oraz 96 niesportowców. Rezultaty badania wykazują znaczną różnicę w pewnych składowych agresji w badanych grupach ( $p < 0.001$ ). Znaczącą różnicę w zachowaniu agresywnym zaobserwowano wśród olimpijskich i nieolimpijskich sportowców biorących udział w sportach kontaktowych oraz niesportowców.

Rezultaty badania wykazują, że sportowcy olimpijscy byli mniej agresywni niż nieolimpijscy. To stwierdzenie wskazuje na ogromny wpływ ruchu olimpijskiego na sportowe, moralne i psychologiczne cechy najlepszych sportowców olimpijskich. Ważne jest promowanie i rozwój fizycznych cech jednostek i edukacji młodzieży przez sport. Według tych samych badań igrzyska olimpijskie to coś więcej niż zawody odbywające się co cztery lata w różnych częściach świata. W rzeczywistości, w głębi ukryte są podstawowe, moralne i edukacyjne cele ruchu olimpijskiego i filozofii na międzynarodowym poziomie.

Ponadto teoria dotycząca sportowców biorących udział w sportach kontaktowych, mających w sobie więcej agresji w porównaniu do niesportowców nie została w tym badaniu potwierdzona. Wprost przeciwnie, wydaje się, że sport wpływa na wyładowanie nadmiaru energii i ekscytacji wśród pojedynczych osób i może znacznie ograniczać zachowanie agresywne zwłaszcza w sytuacjach pozasportowych.

Podsumowując rezultaty niniejszego badania i jemu podobnych autorzy wykazują, że aktywność sportowa ma pozytywny wpływ na czynniki behawioralne takie jak agresja i jest w stanie zrównoważyć zwyczajowe cechy jednostki. W niektórych dziedzinach sportowych, gdzie sportowcy są wyżej notowani, powinno się szukać przyczyny w kulturze i szczególnej edukacji w danej dziedzinie oraz moralnym, mentalnym i kulturowym środowisku między sportowcami a trenerami. Więcej badań w tej dziedzinie pomoże wyjaśnić niejasności pozostające w tym temacie.