

Investigation and comparing aggression in athletes in non- contact (swimming), limited contact (karate) and contactable (kickboxing) sport fields

Mohammad Ali Boostani, Mohammad Hassan Boostani

Education Organization of Fars Province, Iran

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Summary

Introduction. All of the people dealing with sport, it's inevitable to encounter with the phenomenon named „aggression“. Rarely we can find a subject that is considerable as aggression and violence. To pay attention to above cases, the aim of this research is to perform a survey about aggression rate in some sport fields, compare this fields with each other and compare with non- athletes.

Material and methods. 105 elite athletes in different sport fields, subjects forms 38 persons in Swimming (non- contact sport), 32 persons in controlling Karate (limited contact), 35 persons in Kickboxing (contactable sport) that be in participate in second Iranian Olympiad in 2008, with 105 non- athletes. All of subjects complete aggression questionnaire, of Buss and Perry. After classification of questionnaires with the use of analysis of variance (ANOVA) with the comparison between different types, data obtained from aggression questionnaire.

Results. Finding of research indicates that significant difference be in the different parts of aggression between research types ($p < 0.001$). Tukey test also shows that the most difference be in Kickboxing group and the least difference is in the karate and Swimming. Results shows that except Kickboxing field that is contactable and rough, athletes of other fields doesn't have significant difference from aggression factors of non- athletes and this theory that athletes of non- contactable fields and limited contact with regard to non- athletes has more aggression doesn't accept with the result of this research.

Conclusions. Against it seems that sport activities and especially sports with limited contact (like controlling karate) cause offloading energy and excitement and cause to decrease from aggressive behaviors specially in out- door sport environment, so that result of the research shows, aggression grades in athletes of controlling karate is also lower than non athletes that, this problem indicates modification role of sport activity in behavior's of persons.

Introduction

All of the people dealing with sport, its inevitable encounter with the phenomenon named „aggression“. Rarely we can find a subject that is considerable as aggression and violence.

Aggression general specialties that accept with majority are that first, aggressive behavior should perceive negatively with aggressive person, and secondly, in aggressive behavior the purpose should be harm.

In assertive behavior, athletes use permitted act in the sport role frame. Athlete in instrumental aggression use physical injury as a means of winning the competition. In hostile aggression player is anger and his primary aim is injured to his opponent [1], because hostile aggression is along with physical injuries, the probability of its existence in contact sports is more common than the non-contact sport.

The contact sport is attractive for the player who was aggressive before or taking part in these kinds of sport can

increase aggression [2]. In addition maybe hostile aggression not only in the sport field but also outside the sport field can happen. In fact according to Bandura social learning theory, aggressive behavior can arise from accepting other behaviors and or even he behavior [3]. In the other hand although contact field athletes may be comparatively to non-contact field athletes non sport aggression show more aggression, but some believed that severer active sport causes to be evaluated energy and excitement this process can decreased aggression in daily life [4].

Researches done within this area are of two types. First is the research that confirms the existence of aggression among athletes. Conversely, the second type rejects the existence of this property among athletes. In general, research done within this area supports the theory that athletes in comparison with non-athletes are more affected by aggressive behaviors [5,6]. Fletcher and Dowell (1971) and Valliant *et al.* (1981) studies on college athletes showed that totally athletes

are more aggressive than non-athletes [7-8]. Comparing female athletes and non-athletes, other specialists showed that female athletes are more aggressive than non-athlete ones [9].

Filho et al. (2005) study also demonstrated a significant difference among athletes and non-athletes regarding aggression level, particularly in the material arts [10]. The body of these findings illustrates that involvement in any sport activity is related to aggressive properties [11].

On the other hand, some researchers observed no relationship between involvement in sport and aggression. For example, Morgan and Costil (1996) found that athletes in comparison with non-athletes have even lower levels of aggression [12].

To pay attention to above cases, the aim of this research is to perform a survey about aggression rate in some sport fields, compare these fields with each other and compare with non-athletes.

Material and methods

105 elite athletes in different sport fields, subjects forms 38 persons in Swimming (non-contact sport), 32 persons in controlling Karate (limited contact), 35 persons in Kickboxing (contactable sport), with 105 non-athletes with mean age 23.4 ± 1.8 .

All of subjects complete aggression questionnaire, of Buss and Perry (1992). This questionnaire is contains of twenty nine questions which evaluate four behavior factors, physical aggression (nine questions), verbal aggression (5 questions), anger (7 questions) and hostility (8 questions). These factors are classified under three motor or instrumental components (physical and verbal aggression), affective component (anger) and cognitive component (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%.

Athletes individually and in groups with the help of researches complete questionnaires and non-athletes also individually with a similar method, complete the questionnaires. Also taken some sociological information like age, height, weight, education degree, sport position from all of experiences.

After classification of questionnaires with the use of analysis of variance (ANOVA) with the comparison between different types, data obtained from aggression questionnaire.

Results

After gathering information, obtained results with the use of analysis of variance test (ANOVA) analyzed that results brought in the below table.

As cleared in the table groups were different from each other in all of behavioral factors. Tukey test shows that Kickboxing athletes in anger, physical aggression, hostility factors and total higher grades.

This group in verbal aggression factor is distinguished from Swimming group and Karate and in this factors the grades have significant high.

Also results show that except of Kickboxing group, other sport groups and not distinctive in different factors of aggression from non-athletes group.

Discussion

In this research the rate of aggression studied and considered in non-contact, limited contact and contactable sport field athletes.

Table 1. Statistical criteria of research variables in different groups

| Variables | Index Statistical groups | Mean | Standard deviation | Number of subjects | Degree of freedom | P-value |
|---------------------|-----------------------------|------|--------------------|--------------------|-------------------|---------|
| Anger | Swimming | 13.5 | 3.8 | 38 | 3,206 | 0.001 |
| | Karate | 15.3 | 4.2 | 32 | | |
| | Kickboxing | 23.2 | 6.8 | 35 | | |
| | Non-Athlete | 19.1 | 3.3 | 105 | | |
| Physical aggression | Swimming | 17.2 | 5.7 | 38 | 3,206 | 0.001 |
| | Karate | 21.1 | 4.1 | 32 | | |
| | Kickboxing | 26.9 | 5.9 | 35 | | |
| | Non-Athlete | 21.7 | 6.1 | 105 | | |
| Verbal aggression | Swimming | 13.7 | 4.4 | 38 | 3,206 | 0.001 |
| | Karate | 15.3 | 4.7 | 32 | | |
| | Kickboxing | 19.5 | 5.6 | 35 | | |
| | Non-Athlete | 18.1 | 4.2 | 105 | | |
| Hostility | Swimming | 10.8 | 4.1 | 38 | 3,206 | 0.001 |
| | Karate | 11.2 | 3.6 | 32 | | |
| | Kickboxing | 17.6 | 5.2 | 35 | | |
| | Non-Athlete | 15.3 | 3.9 | 105 | | |
| Total | Swimming | 55.2 | 14.1 | 38 | 3,206 | 0.001 |
| | Karate | 62.9 | 22.8 | 32 | | |
| | Kickboxing | 87.2 | 21.5 | 35 | | |
| | Non-Athlete | 74.2 | 11.1 | 105 | | |

Results shows that except Kickboxing field that is contactable and rough, athletes of other fields doesn't have significant difference from aggression factors of non- athletes and this theory that athletes of non-contactable fields and limited contact with regard to non- athletes has more aggression doesn't accept with the result of this research.

Against it seems that sport activities and especially sports with limited contact (like controlling karate) cause offloading energy and excitement and cause to decrease from aggressive behaviors specially in out- door sport environment, so that result of the research shows, aggression grades in athletes of controlling karate is also lower than non athletes that, this problem indicates modification role of sport activity in behavior's of persons.

Morgan and Costill (1996), Zillman *et al.* (1994) state in their research that athletes in comparison with non-athletes, show lower aggression and anger from themselves [12-13]. Chandler *et al.* (1999) and Young (1990) state that athletes more than non-athletes involve in aggression behaviors [5-14], Dobosz and Beaty (1999) and Maresh *et al.* (1991) with comparison of Track and Field athletes with non-athletes shows that runners has a low aggression level [15-16].

Filho *et al.* (2005) and Fuller (1988) in their studies shows high level of aggression in martial arts [10-17]. In other word, Szabo and Parkin (2001) shows the lower aggression level of martial art athletes in comparison with non-athlete [18].

One of the interesting finding of the present study is the existence of different behavioral model for Iranian athletes in comparison with athletes from other societies. Unlike catharsis theory's [2-19] claim, it seems that sport in Iran society is not used as an acceptable style and means of energy discharge, and aggression reduction in daily lives of people. People in any society have special behaviors in sport and physical activities. Physical activity in form of sport follows culture. As it is stated by Seville statement of violence, aggression is not programmed genetically, but it follows culture factors considerably [20]. It is most likely that in Iran society, sport involvement has moral and human denotations that are used in direction of a person's elevation, both mentally and physically.

Conclusions

1. Sport acuties mainly have positive effect on behavioral factors like aggression, and have a capability to adjustment behavioral characteristics of persons.
2. In some of sport fields that the athletes have higher grades, we should search the cause in culture and specific instruction of that field and existence of psychological and cultural area between athletes and coaches of that sport field. More research in this field can clear the ambiguities of this subject.

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Address for correspondence:

Mohammad Hassan Boostani
 Young Researchers Club, Islamic Azad University
 Arsanjan Branch, Fars, Iran
 phone: +98 (917) 139-77-24, e-mail: boostani_mh@yahoo.com

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