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The impact of competitive and non-competitive activities on children's aggression

***Ja'far Sedaghati[1]; Abdollah Ghassemi[2]; Ma'ssomeh Shojaei[3]**

[1]*PhD. student in motor development and learning, Faculty of Physical Education and Sports Sciences, Islamic Azad University, Science and Research Branch, Tehran, Iran*
[2]*Assistant professor, Faculty of Physical Education and Sports Sciences, Islamic Azad University, Science and Research Branch, Tehran, Iran*
[3]*Associate professor, Faculty of Physical Education and Sports Sciences, Al-Zahra University, Tehran, Iran*

Abstract

Introduction: Regarding to the importance of children and adolescents' aggression in the prediction of problems over the psycho-social adjustments in future, the current study was conducted in order to compare the impact of competitive and non-competitive activities on the aggression of children aged 7-9 and 10-12 years.

Materials and Methods: The statistical community of this clinical trial consists of 2200 boy students of elementary schools in Khalil Abad city through the academic years of 2015-2016. At first, 4 elementary schools were randomly chosen, and 200 students were divided into two competitive and non-competitive groups randomly. The aggression questionnaire for the child aged 7-11 years was given as a pre-test to the participants in the school (teachers' form). The duration of the exercise plan was 12 weeks (twice a week). At the end of the intervention, a post-test was conducted on the groups. The data were analyzed using the multi-variate co-variance test.

Results: The results showed that upon deleting the impact of pre-test of aggression score, the effect of competitive- non-competitive group with the age group on the post-test scores was not significant (P= 0.11 and f (1, 99)=2.47).

Conclusion: Based on the results of this study, it seems that competitive or non-competitive activities do not have various effects on the aggression of students.

Keywords: Aggression, Children, Competition, Exercise

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***Corresponding Author:** Faculty of Physical Education and Sports Sciences, Islamic Azad University, Science and Research Branch, Tehran, Iran
sedaghatijaafar@gmail.com
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Introduction

One common emotion that children and adolescents experience is anger, which is created after their facing obstacles in terms of goals, leading to aggression, as a common reaction to failure of desires (1). It has been long time since researchers have realized the importance of children and adolescents' aggression in the prediction of problems over the psycho-social adjustments in future, so there has been a great deal of research conducted to examine the effective factors on the prevalence of aggressive behaviors in children and adolescents (2). Freud believed that aggression basically results from the death instinct which exists in everybody. According to Freud, the instinct basically destroys itself, but soon goes to others (3). The theories in this regard assume that exterior conditions (especially failure) bring about strong impetus for harming others. This potential aggression, in turn, reveals aggressive actions. Up to now, the most well-known theory of this kind is the Frustration-Aggression theory which states if a person fails in reaching his/her goals, the failure will most probably lead to aggressive reaction. The reason why that happens could be the frustration feeling of children and adolescents upon failing in reaching their goals. The modern theories consider the observance of others' behaviors as the origin of aggression (4).

Based on Piaget's cognitive developmental theory, processes such as people's understanding of events, interpretations and inferences are the main factors resulting in any behavior including the aggressive one. The theory states that aggressive children consider other people's behavior as signs of aggression, and act accordingly. Actually, anger-arousal pattern stems from the six-step pattern of social information processing. In the first step, translate the details of their environment. In the second step, he/she produces the inference followed by the third step in which he/she forms a social goal affecting their response to the environment. The fourth, fifth and last steps are the mental production of some behavioral responses, the assessment of the quality of each response and performing the response respectively. In the phase of assessment, children assess the possible behavioral responses for a specific social context based on several criteria such as the potential results for each response and the trust they have regarding the ability to fulfill each response. The results of this assessment lead to the decision on the response so that the child opts for one response. The results of the research in the process of decision-making shows that aggressive children assess the aggressive behavior such that justifies their behavior, which, to some extent, has positive effects like a higher self-confidence in behaving aggressively compared to the children at their same age (5).

The studies revealed that the fear of failure has a direct relation with aggressive statements. Athletes, having a high degree of failing fear, may avoid challenges or simply take immoral actions (6-8).

The researchers state that competition has several negative outcomes including a) stress, which affects ideal performance, b) the concentration on fighting with others instead of ideal performance, c) the appearance of the feelings of lack of safety and decrease of self-confidence, d) the increase of hatred, prejudice and aggression and, e) the creation of jealousy, inferiority and shame feelings (9,10).

On the other hand, some researchers consider competitive sports as impacting on some psychological aspects of people's characters such as aggression so that it can increase the ability of hardships. Sports events prevent stress and pressure from

expanding, and poeple learn invaluable lessons from hardships of life (11). The communication with others at playing can help the growth of natural social behavior. One of the most important social outcomes of sport events is empowering children to learn appropriate social norms (12). During competitive sports, children can acquire models of social collaboration without trespassing on behavioral norms. Competition prepares the grounds for personal growth and development (13,14).

The improvement of self-control ability as a strategy for controlling aggression is included in competitive sports (15). One main issue is the child's ability to overcome anger and aggressive view, which can be fulfilled by a sports teacher's teaching. Aggression, to some extent, is needed and bearable in some sports. Much research reveals that athletes acquire better habits for self-control during anger times (16).

Weak executive performance is related to the increase of anti-social behavior and aggression. During competitions, individual behavior among teammates is constructed. From among anti-social behaviors which is criticized in sports is trying for hurting the opponents and insulting teammates (17).

The improvement of cognitive ability may oppose the arousal which results in aggression, so the intense of aggression in athletes will decrease during competition (18).

The researchers stated that athletes are not usually more aggressive than non-athletes. Most of the research conducted so far on aggression has shown that there are various aspects to anger and aggression during sports events, which have various affecting factors (19). Two factors which affect aggression include intent and consent of action. The athletes' satisfaction with aggressive behavior during matches is important (20). The research revealed that the impact of strong prejudice on aggression in athletes is nearly weak (21).

Emotions inherently affect the behavior and communication among athletes during competitions. Moreover, it has been confirmed that emotions play a significant role in interpersonal relations as a source of emotional intensives against others. The researchers believe that there is a significant negative relation between emotional intelligence and aggression so that the rise in the first leads to the decrease in the second (22).

They believe that in a sports community (such as children aged 10-14, adolescents, the youth and adults) the rise in age brings about more aggression. Considering the competitive nature of some sports, we can assume that at the moment sport is a factor of aggression because during competitions athletes try to oppose the opponent's desires for victory. It has been confirmed that athletes' aggression increases in the sports with a great level of contact (23). Those involved in such sports opt for stronger responses compared to participants in sports with low level of contact (24). Aggression in some sports such as boxing and hockey is a natural part of competition and a prerequisite for success. Even sometimes aggression is hidden in the rules of a game (25). The athlete's position in the athletic field affects the extent of his aggression; for example, in a sport such as soccer, the defense players are more aggressive than the attack ones (26). The results showed that there is a significant difference in athletes' aggression in contact or non-contact sports. The researchers argue that the attacking behavior may increase the possibility of future aggression. This, in turn, reveals that aggression could trespass on outside borders of sports into the society (27).

Now, considering the importance of the issue and the ambiguities on various effects

of competitive sports, this question is raised that how the positive or negative effects of competitive sports are compared to those of non-competitive sports. The current study seeks to find out the impact of competitive or non-competitive activities on the aggression of students aged 7-9 and 10-12 years.

Materials and Methods

This clinical trial was carried out among two competitive and non-competitive sports along with a pre-test and post-test design of random groups. The statistical population of the study consists of all the male elementary students in Khalilabad city during 2015-2016 academic year, who were nearly 2200 people. The number of participants in the study is 200 based on Cochran's formula for the calculation of sample size (50 students in each experimental group based on age and exercise plan). In this regard, four elementary schools of Khalilabad city were first selected followed by the division of first to sixth grade students in two schools into competitive and the other two schools into non-competitive groups. Upon referring to the health records of the students, any record for suffering from psycho-mental diseases and the competitive, emotional intelligence of them were assessed based on the athleticism or athletic motivation questionnaire and Petrides and Farnham's emotional intelligence questionnaires. The number of children in family as well as the social-economic status of students was considered as entrance and homogenization criteria of the study. The data gained from students without the entrance qualifications were not analyzed. The aggression questionnaire for children aged 7-11 (teacher's form) was given to the participants in the school as a pre-test. The competing groups in both age groups got to warm-up, practice and cooling-down for 10 minutes, 35 minutes and 5 minutes respectively per each session. At the end of each session, the winners were exempted from doing assignments based on the teacher's opinion, and their names were attached to the walls of the class until the next session as encouragement. The non-competitive groups in both groups got to warm-up, practice and cooling-down for 10 minutes, 35 minutes and 5 minutes per each session respectively. However, this group was not encouraged or socially compared. The exercises in all groups were similarly planned. The period of practices was 12 weeks (2 sessions per week). At the end of the interference, all the groups were given a post-test. In order to prevent from experienced frustration in the loser group of the competitive section, the people were re-organized for each practice session.

Research instrument

A) The Child's Aggression Questionnaire for Children with 7-11 Years Old in the School (Teacher's Form): This questionnaire was designed in 1990 by Taghavi Larijani. The test contains 20 questions. The questionnaire consists of 4 components namely practical aggression, verbal aggression, withdrawal and collaboration. It is scored on a range of 1 (very low), 2(low), 3 (median), 4 (high) and 5(very high). The content reliability has been confirmed upon the approval of the specialists. The reliability after one week has been 0.80 (28). In the current study, the Cronbach's alpha coefficient was obtained as 0.84.

B) Petrides and Farnham's Questionnaire: This questionnaire consists of 30 components, each of which was assigned a score in a range of 1-7 (absolutely disagree to completely agree). The aforementioned questionnaire assesses the emotional intelligence in four fields of 1) understanding own and other's emotions, 2) control over emotions, 3) social skills (the regulation of relations with other people)

and 4) optimism and positive views. In Hoveida and Homaee's study (2011) which was carried out on children aged 4-6, the reliability coefficient was calculated to be 0.84 (29).

C) The Athleticism or Athletic Motivation: This questionnaire offers a measure of competitive inclination, containing 25 questions which assess the inclination towards athleticism. The athleticism questionnaire consists of three sub-sections, namely competition (13 questions), winning orientation (6 questions) and goal orientation (6 questions), scored based on 5-point Likert scale. The sum of sub-section scores shows the total score. The questionnaire was designed by Gill (1988) while Bahram et al. reported the reliability coefficient of the questionnaire to be 0.90 in a research entitled "the determination of athleticism questionnaire reliability among students and athletes" (30).

In order to describe the data, the mean and standard deviation were calculated. Also, in order to examine the significance of differences between groups as for the dependent variables, the inferential statistical methods of multi-variate co-variance were used.

Results

In Table 1, the descriptive indexes of aggression have been shown in the competitive-non-competitive groups and the age groups of 7-9 and 10-12 years.

Table 1. Descriptive indexes of aggression

	Aggression score		Total
	7-9 year-old	9-12 year-old	
Competitive group	45.01± 5.70	39.13± 5.30	42.07 ± 6.22
Non-competitive group	46.29± 6.48	37.60 ± 5.11	40.45± 6.76
Total	44.15± 6.13	38.37 ± 5.24	

Based on the results of multi-variate co-variance analysis (Table 2), after removing the pre-test effect of aggression score, the effect of communication between competitive-non-competitive group with an age group on the post-test scores is not significant (P=0.11, $F_{(1,199)}$=2.47); It means the competitive and non-competitive activities do not have different impacts on the students' aggression aged 7-9 and 10-12 years.

Table 2. The co-variance analysis results

Variable Index	Sum of Squares	DF	Mean Squares	F Amount	Significance	Effect Size (ETA)
Pre-test	4311.80	1	4311.80	401.72	0.001	0.67
The competitive-non-competitive group	180.60	1	180.60	16.83	0.001	0.80
7-9 years and 10-12 years	422.47	1	422.47	39.36	0.001	0.17
The communication of competitive-non-competitive group in the age group	26.52	1	26.52	2.47	0.11	0.01
Error	2135.96	199	10.73			
Total	3556.56	204				

Discussion

In the present study, the aggression levels of students in two competitive and non-competitive groups in relation to the age groups 7-9 and 10-12 years were compared. The results revealed that the competitive or non-competitive activities do not have significant impacts on students' aggression.

The results are against the Stephen's research findings (23) which argue the rise in age leads to the rise in aggression. The researchers such as Jensen et al. (25), Kimble et al. (24), Kumar (26), Trivedi and Pinto (27), with emphasis on the impact of contact or non-contact type of activity on aggression, consider individual goals, type of activity or sport, hidden rules in them or even the post of athletes in the athletic field as the factors which influence aggression.

This implies that Piaget's theory of cognitive development or the very age group of participants is important. So, it can be concluded that based on the results of athleticism test, the children at the age group of 7-9 years have not understood the aspects of competition well because the inner goals of people are various and changeable. They sometimes consider non-competitive activities as the competitive ones and react to them. On the other hand, in the age group of 10-12 years, according to the findings of Stanger et al. study (18), increasing the inhibitory effect of empathy against aggression and the mediating role of sins may, to some extent, oppose the arousal leading to aggression by improving the cognitive ability. Therefore, although the effect of competitive activities on aggression in both age groups was significant, and the effect of non-competitive activities on the aggression among the age group of 7-9 years was significant and not significant for the age group of 10-12 years, the interacting effects of these activities on the age groups were not significant.

Sophia and Cruz (15), Stanger et al. (18) posed the self-control potential and the increase of cognitive ability as a strategy to control aggression in competitive sports, which is one of the main roles of a sport teacher to train these strategies.

It is recommended that the future studies conducted on larger sample size and different gender or age groups.

Conclusion

Due to the fact that competitive and non-competitive activities performed by the age groups of 7-9 and 10-12 years, did not have any significant impact on students' aggression, there should not be a mere single model for various age groups without the supervision of sports teacher and his/her teaching.

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