Correlation between physical fitness level and self-esteem, aggression, anti-social behavior in university male students

Seyyed Hassan Harati[1], Mohammad Nasiri[2] and Mir Hamid Salehian[3]

[1]Department of Physical Education, Naghadeh branch. Islamic Azad University, Naghadeh, Iran
[2]Department of Physical Education and Sport Sciences, Central Tehran branch. Islamic Azad University, Tehran, Iran
[3]Department of Physical Education, Tabriz branch, Islamic Azad University, Tabriz, Iran

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ABSTRACT

The aim of this research was to study correlation between physical fitness level and self-esteem, aggression and anti-social behavior of university male students. So 220 male students (18- 30 years old) were selected from different fields randomly. After serving their health and height, first they were asked to fill self-esteem questionnaires (ASES) (1991), anti-social behavior questionnaire (AGQ) (1990), and aggression questionnaire (subscale pd) (1990). Then, Harvard test was conducted. In the reason of checking after Description from Pearson correlation coefficient significant formula at least $p<0.05$ used in the results, subjects with an average level of fitness (77.24), weak 2.4 percent respectively, averaged normal 5.9 percent respectively, 47.7 good average percent, respectively 32.1 good percent respectively, 11.9 excellent percent respectively were sumptuous. The average rate of self-esteem and aggression 6, 47, 39, 88, 72, 70 was anti-social behavior ordered. Correlation between level of physical fitness and self-esteem ($r = 0.235$) and aggression ($r = 0.195$) and anti-social behavior ($r = 0.252$) observed which were respectively $p<0.000$ and $p<0.002$ and $p<0.000$ were significant.

Key words: physical fitness level, self-esteem, aggression, anti-social behavior
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INTRODUCTION

To create a healthy lifestyle and provide a variety of needs, human beings have always relied on physical and psychological health in order to make progress and growth. In recent centuries, in spite of improved intellectual and developed tools, machine is used instead of labor that it reduces physical work and leads to decline the physical forces and physical health. Main concerns are emotional and psychological problems of living, prevalence of psychosomatic disorders such as peptic ulcer, cardiovascular disease, obesity and physical ill-being and there is evidence that the claim that perceptions saliva and its capabilities have been affected by insecurity and consequently, their behaviors have changed.

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Human cognitive of himself is directly related to his worth and self-esteem. This issue effects on peoples developing character. His self-esteem, self-determination and self-confidence correlate with strong initiative, decision-making power, creativity and innovation, physical and mental health. By assessment and education of a sense of self-esteem and personal and team skills, personality and behavior disorders such as aggression, laziness, apathy can be modified. People with high levels of fitness have valuable thought about themselves and probably may feel more self-concept and self-esteem to others. Some research showed parameters of personality of individuals who exercise. Kumar et al. (1985) observed a significant relationship between type of sport and self- esteem among athletes. Cooper (1976) believed the self-worth as he makes himself, keeps himself in the normal range. Exercise has been considered as a foundation of self-esteem and approval motivation by researchers. Research indicated negative relationship among self- esteem and approval motivation variables. Approval motivation is an incentive plan as positive perception of others. It is defined as a motivation to obtain approval of others to avoid the disapproval of others [7, 9]. Taylor (1995) observed significant difference in gaining self-esteem among athletes and non- athletes. He found that students who exercise exhibit more self-esteem than others. Donahue (2009) also observed higher levels of self-esteem in athletes, and they found significant relation between levels of personal and interpersonal self- perception of athletes, which is sub unit of self-esteem. In other studies, they found that behavior of individuals can be predicted by physical structure, and their behaviors are improved by development of physical structure [8, 3]. Individuals may find an escape way for their aggressiveness desires in some sports such as, football, handball and so on. Aggression which is an indecent in circles and other occasions, it may play an important role in sport situations. Anti-social and aggressive behavior are widely seen among adolescents and young people nowadays.

MATERIALS and METHODS

In this study, the relationship between different levels of fitness and self-esteem, aggression, anti-social behaviors was reviewed.

Statistical Method
Descriptive statistics such as average and standard deviation was used for the relationship between variables. Pearson coefficient was used to find the relationship between variables. Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 16. The criterion for significance was set using an alpha level of $p \le 0.05$.

Participants
 220 university male students participated in this study randomly.

Measure equipment
-   **Harvard step test to assess fitness levels**

In this test, subjects were asked to go up and down 50 cm stairs for 5 minutes 30 times per minute. If one stops continuing the test for 5 minute, his heart rate was measured in sitting position in 1- 1.30, 2-2.30, 3-3.30. Then obtained scores were substituted in equation. The result would be the personal preparing index.

$$The\ preparation = \frac{Time\ to\ move\ to\ second \times 100}{(Three\ counts\ of\ heartbeats\ in\ 30\ seconds) \times 2}$$

Now by comparing obtained scores and standard numbers we can determine a person's readiness index.
Poor readiness= less than 55

Medium readiness= 55 to 64
Well/ Medium prepared= 65 to 79
Well prepared= 80 to 89
Perfect readiness= 90

Table 1. Description of statistical fitness levels, with rates of self-esteem, aggression and anti-social behavior and age of the subjects

Descriptive characteristics	Fitness	Self-esteem	Aggression	Anti-social behavior	Age
Total	252	252	252	252	252
Average	77.24	7270	3988	647	2314
Error average	0.64	0.73	0.72	0.16	0.84
Standard deviation	10.28	11.59	11.44	2.57	2.87
Variance	10568	13445	13100	660	794
Range	4950	65	60	10	17
At least	50	27	15	3	18
Up	995	82	75	13	30

Table 2. Correlation matrix between variables R

		Fitness	Self-esteem	Aggression	Anti-social behavior
Fitness	Pearson correlation coefficient significant level sample size	1 0 252	0,225 0.000 252	-0.195 0.0025 252-	-0.253 0.000 252
Self-esteem	Pearson correlation coefficient significant level sample size	-0.195 0.000 252	1 0 252	-0.398 0.000 252	0.418 0.000 252
Aggression	Pearson correlation coefficient significant level sample size	-0.195 0.002 252	-0.398 0.000 252	1 0 252	0.344 0.000 252
Anti-social behavior	Pearson correlation coefficient significant level sample size	-0.252 0.000 252	-0.418 0.000 252	344 000 252	1 0 252

According to Table1, the average level of physical fitness, self-esteem, aggression and anti-social behavior order respectively is 45, 78, 73, 76, 72, 41, 32 and 9.

According to Table 2, there is a significant correlation between fitness levels, rates of self-esteem, aggression and antis social behaviors among subjects, Which respectively are r = 0.247, r = 0.163, r = 0.223, that are meaningful at level of p<0.000, p<0.002, and p<0.000. It means that assumptions have been accepted by the research.

DISCUSSION

Based on the study of level of physical fitness and according to test classes at Harvard step, the following results were respectively observed: 2.7 percent low, 6.8 percent moderate, 51.7 percent moderate good, 29.5 percent good and 9.3 percent excellent.

According to research community, consist of youth (by mean age of 22.46), it was naturally s there were a few poor and low level individuals among group; and most individuals were in average level of physical fitness and being healthy, although there was a few excellent individuals, too. In a young and active society, this can be alarm for authorities which it shows lack of individual athletes in our society, because researches show persons who regularly exercise; they should be at good level at least. In other words, if we calculate the percentage of young individuals in our young society, the high and excellent scores (29.5 + 9.3) were observed

only 38.8 percent, while in developed societies such as U.S.A more than 50 percent, include old, young, women and men, regularly exercise. The mean score of self-esteem, aggression and anti-social behavior were respectively 78.7, 41.7, and 9.3, that means the low attitude of subjects to aggression and anti- social behaviors and it is natural to have high level of self- esteem. There was a significant correlation between physical fitness and self- esteem's subjects at level of $p<0.000$.

Cooper (1967) defined Self- esteem as valuable thing to keep himself in a natural level. Kumar, Ptak and Takur (1985) observed a meaningful relationship between type of sport and individual's self- esteem [1]. Keith et al. (1999) studied exercise as a determination of self-esteem and approval of individual's motivation. They observed a significant relationship between the level of the self- esteem between athlete and nonathlete [1].

The same results by Larsen, Martin and Nelson (1976) are also approved. This result was also affirmed by some similar researches. This study confirms the results, too. In this regard, laboratory tests were done for effects of physical exercise in increasing self-esteem, by Asman, et al in1993 and it was confirmed the significant effect [1]. In the other hand, by providing sport facilities and encouraging youth to exercise can enhance their level of self- esteem and self-worth, thereby increasing self-esteem, results other motivational forces such as love, social acceptance, good mental state, safety and success which are basic principals of motivational [1]. Level of physical fitness of subjects and the score of aggression indicated the high negative correlation between physical fitness and aggression at level of $p<0.000$. According to physiologist's finding, regularly exercising can increase fitness levels, thereby and for many reasons, this can reduce aggressive behaviors. Many young people, who have had disciplinary problems, have been helped by providing opportunities to express aggression through sports.

Those problems caused by poverty, rebuke, sexuality, etc., should express themselves as an evolutionary and purposeful ways so as not inconsistent with community and the aim of individuals. Hostile and aggressive behaviors are not always due to failure and the angry person may not know what actual causes and seeking some ways to vacant his aggression.

Some studies support the results of this study, Aqdasi (2002) observed significant differences between athletes and non-athlete in aggression. As physical fitness increases, aggression decreases more. A study showed the effect of a three-month training program on aggression of youth in Tehran and got the result that individuals who exercise can control their aggression and social interaction well. Subjects physical fitness level and the score of antisocial behavior indicated there was high negative correlation between physical fitness and antisocial behavior at level $p>0.000$. By increasing exercise and fitness can be expected to reduce anti-social behaviors of individuals and their behavior is a better alternative [1]. In1972 a survey on the men's physical structure and their behavior was carried by Lorner and Kornz. They concluded that men's behavior can be predicted by their physical structure, and development of physical structure can be improved further their behavior [1].

High correlation was observed between physical fitness level and self-esteem, it can be observed major changes in views and behaviors. Mehri Nia (1997) concluded that individuals with high self-esteem shows a high attitudes [1].

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