



## UNIQUE JOURNAL OF PHARMACEUTICAL AND BIOLOGICAL SCIENCES

Available online: [www.ujconline.net](http://www.ujconline.net)

Research Article

## STUDYING THE EFFECT OF EXERCISE ON MENTAL STRESS REDUCTION OF N.A. CLASS PARTICIPANTS

Sabetghadam Mahsa<sup>1</sup>, Ghasemian Jalil<sup>2</sup>, Yarahmadi Jalal<sup>4</sup>, Afrouzeh Mohsen<sup>5</sup>, Purfazeli Bahram<sup>6</sup><sup>1-5</sup>Department of Physical Education and Sport Science, Marvdasht Branch, Islamic Azad University, Marvdasht, Iran<sup>2</sup>Department of Exercise Physiology, Jahrom Branch, Islamic Azad University, Jahrom, Iran<sup>1</sup>Department Physical Education, Islamic Azad University, Jahrom branch, Jahrom, Iran.<sup>3</sup>Department of sport science, Abadeh Payamnur University, Abadeh, Iran<sup>4</sup>Young Researchers Club, Jahrom Branch, Islamic Azad University, Jahrom, Iran<sup>5</sup>Social Determinants Health Research Center, Yasouj University of Medical Sciences, Yasouj, Iran

Received 20-01-2014; Revised 18-02-2014; Accepted 16-03-2014

\*Corresponding Author: **Sabetghadam Mahsa,**

Department of Exercise Physiology, Marvdasht Branch, Islamic Azad university, Marvdasht, Iran., Tel: +989171921370; E-mail: Sabetghadamahsa@yahoo.com

### ABSTRACT

The present study investigated the effects of exercise participation on mental pressure of N.A. class participant. This study was done as quasi-experimental study using pre-test - post-test with two experimental and control groups. The study subjects were 60 patients in each control and experimental groups, both groups of participants were randomly selected N.A classes from Fars province. Control group attended N.A. classes, but did not participate at exercise activity; experimental group attended exercise three sessions per week. At the end of 8 weeks, mental pressure examined by a questionnaire containing 40 questions, then “exercise participation” independent variable contain fitness training skills, within two months, one session per week and each session 70 to 90 minutes examined to its effect on “mental pressure” dependent variable realized. In the data analysis, Student t –test was used and the following results obtained:

A) There are not statistically significant differences between mean mental pressure scores at control and experimental group in pre-test stage ( $p \leq 0.05$ ). B) There is statistically significant difference between mean mental pressure scores at control and experimental group in post-test stage ( $p \geq 0.05$ ). C) There are not statistically significant differences between mean mental pressure scores at control group in pre-test and post-test stages ( $p \leq 0.05$ ). D) There is statistically significant difference between mean mental pressure scores at experimental group in pre-test and post-test stages ( $p \geq 0.05$ ).

**Keywords:** Psychology, Exercise, Mental Pressure, N.A.

### INTRODUCTION

This study is aimed to introduce exercise as a constituent tool for youth and determent them from vandal factors and also attract respected authorities to this fact that exercise not only cause physical health of youth, but also can be an appropriate tool to positive behavior change. In addition, exercise can improve self- confidence and self- esteem, help to maintain a healthy lifestyle and reduce risky behaviors.

Nowadays, addiction is devastating factor in many countries that contribute to the degradation of the underlying assets i.e. younger generation at any society. Addiction is a biological, psychological and social disease<sup>1</sup>. Since physical and mental health promotion of society’s member is a fundamental matter at each country and certainly addiction threats human’s physical and mental health and causes disorder at human’s life, community’s health causes several mental health plan in the areas of prevention, treatment, rehabilitation.

Addicting self-groups (Narcotic Anonymous) or (NA) are self-help groups that are formed by addicts to support each other, discussion, guide and offering solution to each other and have been developed in all countries of the world recently<sup>1</sup>. Addiction in relatively advanced stages causes that an addict be without any goal and program. One of the main ways to combat boredom in addicts is physical exercise and purposeful activities and engaging in work and recreation. Physical activity can improve quality of life for everyone at all stages. Sports psychology is a branch of psychology that studies the behavior of athletes and coaches and understanding the causes of their behavior<sup>1</sup>. It contains accurate selection and athlete motivation so that each athlete can compete at the highest level of his ability. What ensure education teachers, researchers and coaches is that sports psychology branch is a science<sup>4</sup>. Since exercise and mental health literature review can examine the correlation between these two phenomena from prevention and treat dimension. According to exercise

teachers and many psychologists and sociologists, physical education and sport is not only an entertainment device, but pursues educational, training, mental – social goals that these goals can play an important role in social and personality of people. Participation in exercise allowing individual to have direct contact and real interaction and satisfy his mental needs such as competition, friendship, attention, acceptance, conflict, excitement express and control, record breaking, adventure and security. Mental health is a subject that can be achieved by participation in physical activities; such activities provide best position to engage mental health criteria. If we define mental health as feel comfortable toward oneself, its criteria will be success, emotional balance, realism, adaptability, sociability and self-worth. So, exercise not only helps physical health by activation of such measures, but helps mental health. The positive effects of exercise on addicts are more, in fact, exercise causes anxiety and depression reduction by sweating and increased heart rate and also causes enzyme leakage endorphins, Enkephalin and Daporphin that has sedation property.

Sport that causes perspiration and increases heart rate and forces the body to secrete enzymes that can reduce anxiety and depression. Regular exercise can decrease depression by increasing the spirit of joy and to somewhat be replace of outside calmative materials that enter body from outside. Generally, when a person has joyful spirit and can overcome his anxiety and depression, does not need narcotic<sup>1</sup>.

It is important for whole individuals feel valued and sports activities may help person feels positive by different ways. Some researchers believe that exercise is a factor for integration within the community and provides the possibility of subsidence tensions arising from life. In fact, it helps a person to being a good citizen, obeying the law and respecting the principles and fortifies sense of self-mastery and bolster homeland worship. Researches have shown other positive and beneficial effects of regular physical activity<sup>1</sup>.

It is important to study the addicts' problems that want to quit drug consuming. Timely identification of mental health problems increases the resolving possibility of these problems. Narcotic quit career has many difficulties that effect on people's compatibility and mental health unavoidably. On the other hand, realizing their problems allowing health systems that recognize weakness of plans and ways and also thinking about reforming them. The partial and timely reforming causes increasing the efficiency of activity and elimination of addicts' turmoil. With advances in psychology science, mental skills in performing the functions of sport is important, however previously stressed the importance of physical preparation. Nowadays, exercise psychologists, coaches and athletes emphasize on mental preparation. Today, considerable progress in the performance of elite athletes, Olympic and university levels are achieved by the use of psychological skills<sup>2</sup>. Researchers have discovered that often mental deficiencies prevent elite athletes from run optimally in practice and competition not physical mistakes and deficiencies<sup>2</sup>.

Studies have shown that participation in sports often has therapeutic effect on children and adolescents who are experiencing emotional disturbance or developmental

disabilities. And also, Children, teenagers, and even adults through the sport gain the opportunity to enhance their physical, psychological and social communication. For example, Mac Mahone (1990) does many studies on the benefits of physical exercise and concluded that vigorous aerobic exercise causes improving self-esteem and depression reduction<sup>2</sup>.

Skelton et.al (1991) investigates the role of taekwondo belt ranks on the aggression level in 9-11 years old children. The results revealed that the level of aggression is reduced by raising the warlike levels, its cause can be found during taekwondo training<sup>1</sup>. Brock and Hime (1996) do a primary research on 16 children who infected asthma and concluded that people who participate exercise, have little stress and accept their disease well in comparison to people who do not participate at exercise<sup>2</sup>.

Cox and Kalyn (1998) reported that there is linear relationship between self-confidence and skills, i.e. high quality performance of motor skills, self- confidence will be increased. Salebazzami (1995) divided 13-15 years old no athlete students to experimental and control group and control group do karate for 3 month. It was found that karate practice for 3 month has positive effect on aggression reduction<sup>2</sup>.

Study Plan

The general aim of this study was to investigate the effect of exercise on stress of participants in N.A. class. And specific objects are:

- 1- Determining the amount of stress in participants prior to attending a training course
- 2- Determining the amount of stress in participants after attending a training course
- 3- Effect of exercise participation on stress reduction of participants.

## MATERIALS AND METHODS

Since the objective of this study was to investigate the effect of exercise on stress reduction in N.A. class participants, so the present study was done as a quasi- experimental study with two groups, the experimental and control groups with pre-test and post-test stages.

### The population and sampling

30 people of control group were among the N.A. class participants of Fars province with an average age of 30/43 were randomly selected and tested.

### Research Tools

The study included two questionnaires: 1- demographic questionnaire (confidential) and 2 - Inventory of personal stress was measured.

### Methods of data collection

To data collection and questionnaire distribution, the researcher distributes the questionnaire by direct presence at N.A. classes and pre-test stage and after completion was collected. Both groups were interviewed before questionnaire distribution that none of them participate in regular exercise based on the statements. So, experimental group practice 16 sessions and each session 70-90 minutes and at last session, questionnaire was distributed for post-test stage and was collected after completion.

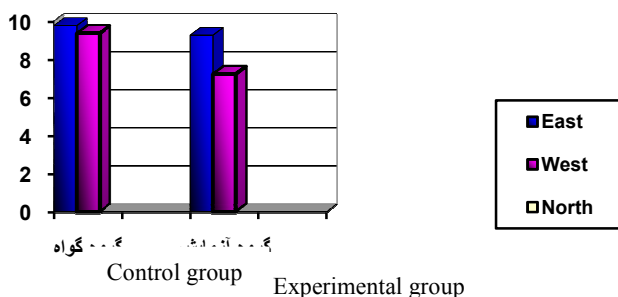
**RESULTS**

Since this study in conducted as quasi-experimental study with two groups, the experimental and control groups with pre-test and post-test stages. Information obtained from the mental stress questionnaire converted quantitatively after scoring and

has been studied using descriptive statistics (mean and standard deviation) and inferential statistics (Student t test). According to the results of Table 1, the first hypothesis is not statistically significant; hypothesis 2 is significant and is confirmed. The third hypothesis is rejected and fourth hypotheses are confirmed.

**Table 1: Pre-test statistics in the experimental and control groups**

	Group	$\sum X$	N	X	S	T
Hypothesis 1	Control	293	30	9.77	3.52	0.495
	experimental	278	30	9.27	4.27	
Hypothesis 2	Control	281	30	9.37	3.39	2.338
	experimental	217	30	7.23	3.67	
Hypothesis 3	Control	293	30	9.77	3.52	0.747
	experimental	281	30	9.37	3.39	
Hypothesis 4	Control	278	30	9.27	4.27	4.169
	Experimental	217	30	7.23	3.67	



**Figure 1: Mean scores for control group and the experimental group stress in pre-test and post-test stages**

As shown in Figure 1, control group mean scores at pre-test and post-test are (9.77,9.37), respectively and experimental group are (9.27,7.23), respectively.

**DISCUSSION**

The present study investigates effects of sports participation on psychological pressure of N.A. class participants. The results and data analysis by t-test show that sport involvement has significant effect on mental pressure reduction at N.A. class participants that has 95% confidence. Participation in sports activities in addition to a valuable tool for physical health; it is closely related with mental health especially in the prevention of mental disorders. It seems that the cause of a few mental pressure reductions of N.A. class participants at experimental group in comparison to control group is their regular physical activities that resulted in balancing physical and mental feature in people. Exercise causes the discharge of joyful emotions and certain vitality and can be used as a factor to reduce the psychological differences. Involvement in exercise activities can cause mental pressure reduction. So, it

is useful to education authorities perform it at N.A. classes, prisons, narcotic quit institutions, etc. And since regular planning causes increase motivation to exercise involvement, so it should be regarded as an important matter by education authorities and narcotic quit institutions and N.A. groups<sup>3,4</sup>.

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Source of support: Nil, Conflict of interest: None Declared