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Effect of applying drawing and color activity for students on the immune system

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Abstract

Background: The immune system has an important role in the defense function in the body. Any dysfunction in immune function has a negative impact on human health.

Objective: The aim of the study to investigate the effect of influence relaxation by using the drawing and colors on the immune system.

Subject & Methods: 32 students from the second stage of the Faculty of Arts participated in this study. A blood sample was drawn from all the students. The students were then applying a relaxed by using the method of drawing and color. After two hours of performance, a second blood sample was drawn to see changes in the immune system.

Results: The results showed significant differences in the number of white blood cells between the before and after relaxation for females and males and there is a significant effect on the function of the immune system.

Conclusion: This work has been shown to have a very clear effect on relaxation to improve the effectiveness of the immune system.

Keywords: Immune system, drawing and color activity

Introduction

The immune system is a defense system in the body that contribute to the expulsion of undesirable objects within the body such as harmful bacteria, pathogenic bacteria, infections and viruses, which spread to a range of diseases, including those that are fought quickly. The immune system acts as a complete system of cells and vital processes carried out by organs, cells and particles within living organisms. The purpose is to eliminate diseases, toxins, viruses, cancer cells and foreign objects that may take from the body a home to build colonies that contribute to

the destruction or delay of natural processes(Kawai and Akira, 2010). The reasons for the weakness of the immune system that the level of the immune system of anyone can strengthen and weaken due to a number of factors related to the way of lifestyle, the quality of food and quantity and habits, the level of toxins that enter the body every day, and the state of mental life and thus affect these factors on various aspects Health, production capacity and life directly. In addition, it is the causes of weak immune system hunger, malnutrition and eating foods that are toxic because

they affect the body's biological structure(Kau et al., 2011). The most important factors also affect immunity to physical and intellectual stress and nervous fatigue due to stressful lifestyle, smoking, drugs and alcohol, long-term use of drugs, and negative emotions such as hatred, anger, sadness, anxiety and exposure to electronic devices of all kinds and use for long periods(Happel and Nelson, 2005; Keedwell, 2008; Mehta et al., 2008).

Art education allows students to practice on different types of activities. This practice reaches its highest level at the level of innovation. Art education thus builds the ability of students to understand the relationships and form the different materials to find new and innovative formulas that respond to the human soul with admiration and enjoyment. As a positive adjustment in the behavior of individuals through the formation of different materials and consumers of the environment and access to the art. It is means to reach the hearts of students, alert their senses, move their emotions, and develop their tastes and values in life. In addition, tone their behavior and style to express themselves, and reveal the patterns of their personalities and tendencies and talents(Jensen, 2001).

Subjects and Methods

Collection of samples

Thirty two students from the second stage of the Faculty of Arts participated in this study. A 3 mL

blood sample was drawn from all the students. The students were then applying a relaxed by using the method of drawing and color. After two hours of performance, a second 3 mL blood sample was drawn to see changes in the immune system. A blood collection was applying to complete blood test.

Statistical analysis

The data were statistically analyzed using an ANOVA test with significant P value < 0.05.

Results

The results of the analysis the total number of white blood cells(WBC) and the differential number of neutrophil and lymphocyte number showed significant difference in the number of before and after applying the students to painting activity. The result was appear there is a significant differences (P <0.05) in the number of total WBC in female and male after exposure the student to the paint activity (female was 7.65 ± 1.5 and for male was 6.23 ± 0.94 cell $\times 10^9$ /L , while there is no significant difference between both sex before exposure the student to the paint activity(female was 7.11 ± 1.43 and for male was 7.12 ± 1.76 cell $\times 10^9$ /L as shown in the Figure1

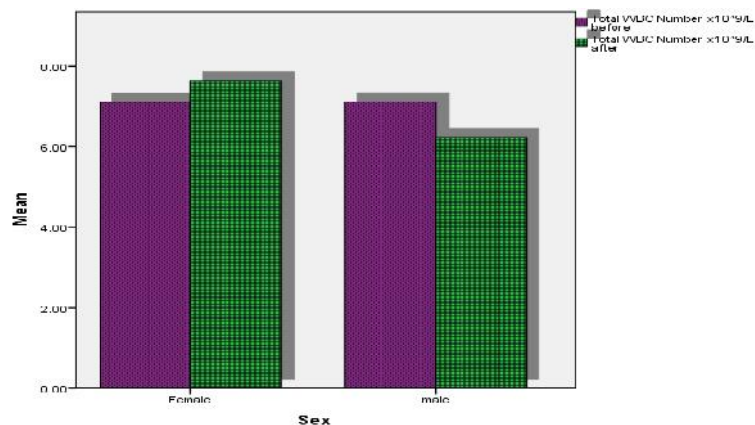


Figure 1: The total number of white blood cells in females and males before and after before students' effectiveness in painting activity.

The result was appear there is a significant differences (P <0.05) in the number of Neutrophil number in female and male after exposure the student to the paint activity (female was 4.77 ± 1.35 and for male was 3.56 ± 1.15 cell $\times 10^9$ /L. while, there is no significant

difference between both sex before exposure the student to the paint activity(female was 4.32 ± 1.3 and for male was 4.21 ± 1.76 cell $\times 10^9$ /L as shown in the Figure 2.

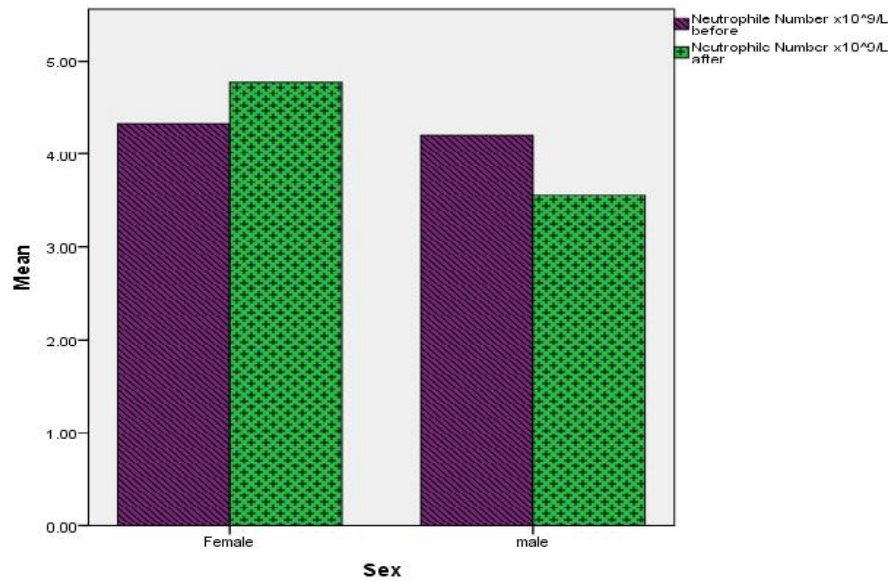


Figure 2: The total number of neutrophil cells in females and males before and after students' effectiveness in painting activity.

The result was appear there is a significant differences ($P < 0.05$) in the number of lymphocyte number in female and male after exposure the student to the paint activity (female was 2.19 ± 0.49 and for male was 1.97 ± 0.65) cell $\times 10^9 /L$. while, there is no significant

difference between both sex before exposure the student to the paint activity(female was 2.24 ± 0.53 and for male was 2.11 ± 0.59 cell $\times 10^9 /L$ as shown in the Figure 3.

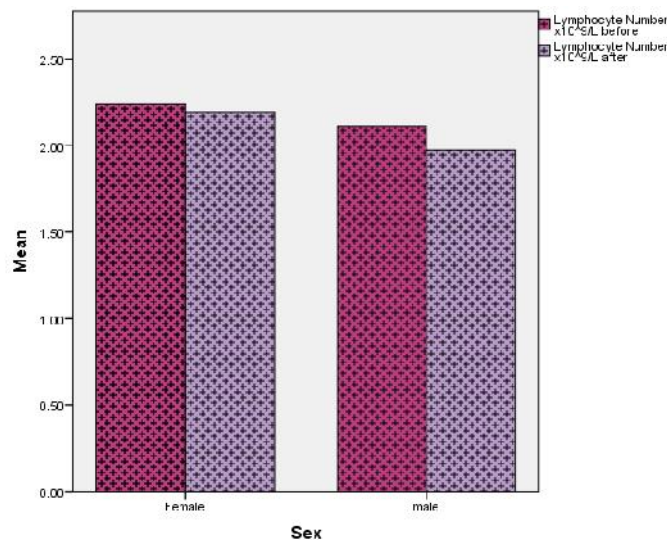


Figure 3: The total number of lymphocyte cells in females and males before and after before students' effectiveness in painting activity.

Discussion

In the present study, it is shown that a short, mild psychological stressor can influence on the immune component as the total number of WBC, neutrophil and lymphocyte count with significant effect before and after applying the student to the painting activity.

The effect of stressor was verified on the experimental(Thaker et al., 2006). The outcome of this study was approved in previous study through applying fifty male to effect of a short lasting psychological stressor on the increase number of NK cells after the stress period(Brosschot et al., 1992).

The correlation between psychological events and immunological function. The psychological effect like stress, sleep deprivation and noise (Segerstrom and Miller, 2004). Effective response to social stress housed male mice induced an accumulation of neutrophils and monocytes in the circulation and spleen (Engler et al., 2004). In the previous study was approved that academic examination stress induced changes in number polymorphonucleocyte count, which indicate immune activation (Maes et al., 1999). The effect of stress significant effect on the immunoprotective and immunopathology. The timing of stressor or stress hormones exposure relative to the time of activation and time course of the immune response. Immunoenhancement is observed when acute stress is experienced at early stages of immune activation (Dhabhar, 2009). Over the past 20 years, the results of recent studies and research have shown that psychological stress and erroneous nutrition negatively affect the body's immune system, and that the best way to build a strong immune system is done from a young age and immune cell, like any other cell in the body that is damaged and oxidized by Free radicals. We must move away from all the effects that increase them, leading to their elimination, with all that keeps their immune systems in a strong, sound and effective state. Studies have shown that psychological stress increases the intracellular loads and the formation of free radicals that damage the immune cells. A specific injury can take a faster time in healing in the event of a person's psychological comfort than being in a bad psychological state. When there are two patients with the same degree of disease, one self-assured and the other sad, the first is the degree of recovery faster than the other. Therefore, psychologists and researchers in the fields of art education dealt with the connection between the drawing of man and his character. He stressed that many of the drawings bear the characteristics of personality and their original characteristics. Therefore, drawing may be a key to study the character through painting (Rothe, 2017). Drawing is what is the means of expressing human emotions and emotions, that is, a personal expression of intellectual or visual experience in the form of lines and gradient chromatic, drawing concentration and hand and eyes only natural equipment to transfer this focus on the material to be painted to express what is going on in the same artist), As he designs his feelings in coherent verbal structures as well as transform the graphic impressions of the forms and colors are coordinated by special tools used in drawing. Every kind of unconscious expression is of a possible value not only as an outlet of emotion but

a most important method for diagnostic as well as therapeutic use. The art of planning, which is the real basis for any artistic production, whether it is still life, a portrait, a composition, or a planning subject. A kind of artistic expression, based mainly on pencil drawing and charcoal, (TONE), and has a single tone of color (Out_Line). Planning also radically depends on the exterior and artistic layout, interprets the emotion and sensations of the person and his feelings to others and carries with it an artistic beauty that translates the spirit of the times by a true image of the components of mental life and Behavior in humans, and shows the interaction of people with the environment (Germain, 2001).

Conclusion:

The outcome of this study was approved the effect of mode enhancement of human to lessen the stress on the modulation of immune system and may be this important to use any mode enhancement as psychological therapy to boost immune response.

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