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The Comparison between Zumba dan Body Combat Effects on Mood Response of Adults in Productive Age

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Abstract

A good mood will help a person at a productive age to do a good job producing goods or giving services. This study aimed to evaluate the effect of Zumba exercise and body combat exercise on mood responses. The research method used in this study was the experiment method where, in 6 weeks, Group 1 carried out Zumba training, Group 2 carried out body combat training, and Group 3 carried out exercises that they commonly practiced (control). The samples of this study were 60 fitness members of Helios Fitness Center Bandung who were randomly divided into three groups. The mood instrument used was adopted from The Brunel Mood Scale (BRUMS). This study revealed that both Zumba and body combat exercises could improve the sample mood compared to the control group sample mood with a value of $t = 0.002$ for the Zumba exercise group and $t = 0.004$ for the body combat exercise group. The difference in the effect of these two exercises was not significant, with the value of $t = 0.557$. The results conclude that both Zumba and body combat exercises can be used to improve and maintain a good mood.

INTRODUCTION

The occurrence of the current global pandemic (SARS-CoV-2) resulting in a continuing source of psychological stress (Markofski et al., 2021) has a negative impact on public mental health (Kamara et al., 2017; Neria & Shultz, 2012). The SARS-CoV-2 pandemic increased the symptom of anxiety, depression, fatigue, mood disorders, and stress among individuals worldwide due to the pandemic (Qiu et al., 2020; Salari et al., 2020).

The situation requires solutions to restore public mental health. Sports participation has been associated with a more positive mood state and increased emotional control (Marsh and Kleitman 2003). Currently, there is an increasing number of research examining the effect of exercise on mood swings (Mutrie 1995). The mood-enhancing effect is characterized by increased passion and reduced anger, confusion, depression, fatigue, and tension (Biddle SJH 1993; Berger BG 2000; Peluso et al., 2005). Several studies have shown that physical activity has wide-ranging benefits on health and disease, including reducing mortality (Press et al., 2003; Holtermann et al., 2013). Evidence supporting the physical and mental health benefits of physical activity and exercise accumulates at an accelerating rate (Penedo & Dahn 2005). In particular, we focused on the effect of aerobic exercises on positive mood changes. We hypothesized that participants of the study improved their mood responses by practicing aerobic exercises.

The increased stress since the pandemic has worsened the consequences. Stress is described as an emotionally and physiologically challenging experience. Stress defines a mental or emotional tension state due to adverse or demanding circumstances (Fowler, H. W., & Fowler, F. G, 1931; Koolhaas et al., 2011). Stress affects all aspects of human functions (Rahayu & Ramlis, 2018). The effects of stress include being prone to accidents, failure to grow and develop in children, fatigue, and poor health status. Stress can affect people of all ages, genders, and circumstances. Stress includes emotional discomfort accompanied by predictable biochemical, physiological, and behavioral changes. Sometimes, stress can be beneficial as it provides encouragement and energy to help a person get through certain situations, such as exams or work deadlines (Idea, 2013). However, extreme amounts of stress can have conse-

quences on physical and psychological health, specifically on the nervous, cardiovascular, neuroendocrine, and central nervous systems (Resti, 2014). The effects can manifest in accidents, failure of growth and development in children, feelings of burden, worry, fatigue, and poor health status.

Regular physical activity is believed to be associated with better mental health (Faulkner et al., 2021; Okuyama et al., 2021; Chi, 2021). Zumba and Body Combat are dance therapies involving a mix of Latin rhythms and easy-to-follow movements in various styles, including Salsa, Merengue, Mambo, Rumba, Cumbia, Reggaeton, Hip Hop, and Flamenco (Sayyad & Satralkar, 2021). Based on previous research, Zumba and Body Combat are considered cardiovascular exercises that help strengthen the heart and muscles so that more oxygen is transported throughout the body effectively and provides a higher lung efficiency (Prakash, 2021). Zumba and Body Combat movements help stimulate the secretion of certain hormones, such as serotonin and dopamine, which are needed to improve mood, increase energy, and deal with stress. In addition, the active movements in Zumba and Body Combat stimulate the release of endorphins to suppress the stress hormones, such as cortisol and adrenaline. Zumba and Body Combat can relieve internal and external stress in dealing with any conditions (Salihu et al., 2021). According to the description described previously, the author was interested in investigating the effect of Zumba and Body Combat on the mood of adults at productive age.

METHODS

Participants

This research applied an experimental study using a pre-test, post-test control group design. The samples of this study were 60 fitness members of Helios Fitness Center in Bandung. The samples were randomly divided into three groups. Group 1 practiced Zumba training. Group 2 practiced Body Combat training, while Group 3 was a control group carrying out an exercise program as they usually practiced.

Instrument and Procedure

This research administered two tests (pre-test and post-test). After the pre-test and before the post-test,

participants practiced aerobic exercises. The exercise was carried out for six weeks, consisting of 3 meetings per week and 50 minutes for each meeting, in moderate-intensity (60% to 85% of maximum pulse rate). The procedure was based on (Boidin et al., 2021) that doing a regular exercise for a minimum of 20 minutes carried out three times a week for 8-10 weeks can improve body functions, such as cardiorespiratory, strength, and endurance.

The Brunel Mood Scale (BRUMS), developed by Terry & Lane (2010), was used in this study to measure mood responses (Lan, 2012; Brandt et al., 2016; Wibowo et al., 2018). The scale consists of 24 items, including 20 negative and 4 positive items.

Data Analysis

Calculating each test result is displayed in the form of means and standard deviations. In addition, an independent t-test was performed to determine significant differences. The level of significance was set at $p < 0.05$. While the Mann-Whitney test was used to compare between body combat exercise and zumba exercise. Statistical analysis of this study was done using statistical software SPSS version 21.

RESULT

Table 1 shows the result of mood responses from the 3 Groups after six weeks of exercise showed a difference in the average pre-test and post-test scores. The difference in the Zumba training group was 5.35; in the Body Combat group was 3.95 and in the control group was 1.6.

Table 1. Descriptive pre-test post-test data by group

| Group | Test | Mean | Gain |
|-------------|-----------|------|------|
| Body Combat | Pre-test | 52,1 | 5,35 |
| | Post-test | 46,7 | |
| Zumba | Pre-test | 54,8 | 3 |
| | Post-test | 51,8 | |
| Control | Pre-test | 55 | 2,45 |
| | Post-test | 52,5 | |

According to figure 1, 30 men and 30 women in this study had different mood response pre-test and post-test scores after practicing the treatment. The changes in males were 53.06 for pre-test and 49.06 for post-test; thus, the difference was 4. On the other hand, the differ-

ence in female were 54.6 for pre-test and 41.6 for post-test; hence the difference between the two was 3.

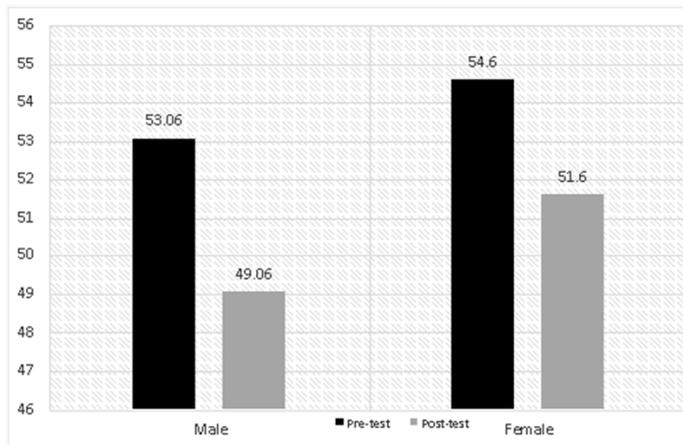


Figure 1. Pre-test and post-test mood responses by gender

Table 2. Descriptive pre-test post-test data by group

| Group | t | df | Sig. (2-tailed) |
|-----------------------|-------|----|-----------------|
| Body Combat – Control | 3,332 | 38 | 0,002 |
| Zumba – Control | 3,101 | 38 | 0,004 |

Table 3. Table 3. Mann-Whitney U Test

| | Body Combat – Zumba |
|------------------------|---------------------|
| Mann-Whitney U | 187,500 |
| Wilcoxon W | 418,500 |
| Z | -0,587 |
| Asymp. Sig. (2-tailed) | 0,557 |

Table 2 shows the test of the effect difference of the Body Combat group compared to the control group resulted in a Sig value (2-tailed) of $0.002 < 0.05$, while the result of the Zumba group compared to the control group was a Sig value. (2-tailed) of $0.004 < 0.05$, meaning a difference in effect between the experimental and control groups. Tabel 3 shows The difference test of the effect between Body Combat exercise and Zumba exercise showed no significant difference with the Sig value. (2-tailed) of $0.004 < 0.557$.

DISCUSSION

Exercise, physical activity, and interventions have beneficial effects on physical and mental health outcomes (better functional capacity and better mood

states) (Penedo and Dahn, 2005; Fitriana et al., 2021). Moderate exercise for 150 minutes per week is highly recommended for mood improvement. A general trend in research findings suggests that exercise has a mood-enhancing effect (Lane and Lovejoy 2001). The psychosocial aspect of health also shows encouraging results that Zumba interventions can be further explored as a therapeutic tool in complementary and alternative medicine to improve health and prevent diseases caused by unhealthy lifestyles (Sharma, Saini, and Suri 2017).

Zumba is an aerobic dance fitness program combining upbeat world rhythms and easy-to-follow choreography for fun and energizing full-body workout (Toscano, Ladda, and Bednarz 2014). Body Combat with music increases sensations of happiness and joy, spiritual aspect, activity, energy, and lightness. It also promotes the tiredness feeling in the absence of music and reduces sadness and the feeling of unpleasant, worthlessness, shame, and fear (Kommers et al. 2019). The positive effect of physical activity on the positive mood is essential for the positive mood and emotion during the pandemic; thus, increasing or maintaining the same level of physical activity during the SARS-CoV-2 pandemic is essential (Markofski et al., 2021). Furthermore, physical activity interventions may be particularly beneficial in reducing the risk and the disease brought by comorbid conditions (such as obesity and cardiovascular disease among cancer patients) by reducing fatigue and physical role limitations as well as improving mood and physical functions (Penedo and Dahn, 2005; Tamher et al., 2021).

CONCLUSION

Aerobic exercise has a significant effect on mood responses of adults at productive age. The difference between the pre-test and post-test results showed a better score after the aerobic exercise. Zumba and Body Combat exercises have a positive impact on improving mood responses. However, there was no difference between the two exercises in which exercise better affects mood responses.

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CONFLICT OF INTEREST

The authors declared no conflict of interest.

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