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A109: A Study of the Relationship Between Exercise Adherence and Depression

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A109: A Study of the Relationship Between Exercise Adherence and Depression

Abstract

Purpose: As the social economy rapidly advances, and competition intensifies, university students are confronted with both increased opportunities and significant psychological pressures. Notably, the incidence of depression is on the rise, with approximately 20.3% of university students in China experiencing certain psychological issues. Against this backdrop, this study seeks to explore the interplay between exercise motivation, exercise adherence, and depression among university students. **Methods:** A cohort of 25 subclinical individuals experiencing psychological issues related to depression was chosen to partake in a 2-month exercise intervention study. The intervention involved Salsa dance, with a frequency of approximately 2 hours twice a week. Prior to the initiation and subsequent to the conclusion of the intervention, participants' exercise motivation and depression scores were assessed using the Motivation to Exercise Scale and the Flow Centre Depression Scale, respectively. A repeated measures ANOVA was used to examine the effect of exercise intervention, exercise motivation on depression. **Results:** The ANOVA results showed a significant main effect of the exercise intervention [$F(1,23)=153.59$, $p < 0.001$]. The main effect of motor motivation was significant [$F(1,23)=66.80$, $p < 0.001$]. There was a significant interaction between exercise intervention and motivation to exercise on depression scores [$F(1,23)=45.84$, $p < 0.001$], suggesting that the effect of the exercise intervention on depression changed with changes in motivation to exercise. For the change in mean brain alpha wave frequency after the exercise intervention between subjects with different exercise motivation, the repeated ANOVA showed a significant main effect of the exercise intervention [$F(1,8)=106.91$, $p < 0.001$]. Significant main effects of the exercise intervention [$F(1,8)=106.91$, $p < 0.001$] and motor motivation [$F(1, 8) = 17.13$, $p < 0.001$] were found. Significant interaction between exercise intervention and exercise motivation on alpha wave mean frequency [$F(1,8)=8.73$, $p=0.027$] were also found. It was suggested that the effect of exercise intervention on the mean frequency of alpha waves varied with exercise motivation. **Conclusion:** The results indicated a connection between exercise adherence and depression. Physical activity, serving as a non-impairing behavioral strategy, can offer an alternative or complementary intervention for the treatment of depression. This positions exercise intervention therapy as a promising approach for effectively addressing depression with minimal risk. The findings in this paper are valuable in guiding new directions for the treatment of depression.

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