

Unveiling The Transformative Effects Of Diverse Workouts On Weight Reduction And Personality Enhancement In Group-Based Overweight Individuals

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Abstract:

The global surge in overweight and obesity presents a critical public health dilemma, intertwining physical health risks with psychological burdens such as diminished self-esteem and self-concept. This study delves into the transformative potential of exercise, specifically group-based workouts, in addressing both weight management and psychological well-being. We investigate the effectiveness of distinct exercise modalities battle rope exercises, jumping jacks, jogging, and high knees over a 12-week period, aiming to shed light on their impact on weight reduction and personality enhancement.

Keywords: Weight reduction, Personality enhancement, Group-based workouts, Overweight individuals, Exercise modalities.

Introduction:

In an era where the pursuit of a healthier lifestyle is increasingly prominent, the connection between physical activity and psychological well-being is gaining more attention (Boehm & Kubzansky, 2012). This study delves into the realm of weight reduction and personality enhancement in group-based overweight individuals, exploring the effects of four distinct workout regimens over a 12-week period. Exercise has long been used as a weight-management and general well-being technique, dating back to ancient cultures (Mullin et al., 2016). Physical fitness was highly prized in both Greek and Roman society (Golden, 1998). They popularized the idea of "gymnasia," a place where people exercised in a variety of ways, such as weightlifting, running, and wrestling (Paganini, 2011). These activities emphasized the

value of group exercise by promoting social contact in addition to physical fitness (Garber et al., 2011). The psychological advantages of exercise grew in popularity as the 20th century went on. Exercise was increasingly being investigated as a way to enhance psychological well-being, body image, and self-esteem in the 1970s and 1980s (Lox et al., 2019). This period broadened the comprehension of exercise as a potent means of improving mental health in addition to being a physical intervention (McAuley et al., 2000). The fitness sector has seen a growth of various training regimens in the twenty-first century. These include dance fitness classes, calisthenics, and high-intensity interval training (HIIT), all of which are represented in the groups in this study. People now have access to a variety of training options thanks to this proliferation, allowing them to choose activities

that best fit their interests and objectives. Exercise programs now have more options and a more enjoyable component, which can improve adherence and results (Mattioli et al., 2017). The exercises selected for the groups in the context of this study were a variety of contemporary workout modalities that have developed over time. Exercises like battle ropes, jumping jacks, jogging, and high knees each have special qualities and advantages, and they all represent the variety of exercises available today. The goals of the study were in line with the historical trajectory of exercise science, which has led to the realization that various workouts can be utilized to accomplish particular fitness and health objectives.

Methodology:

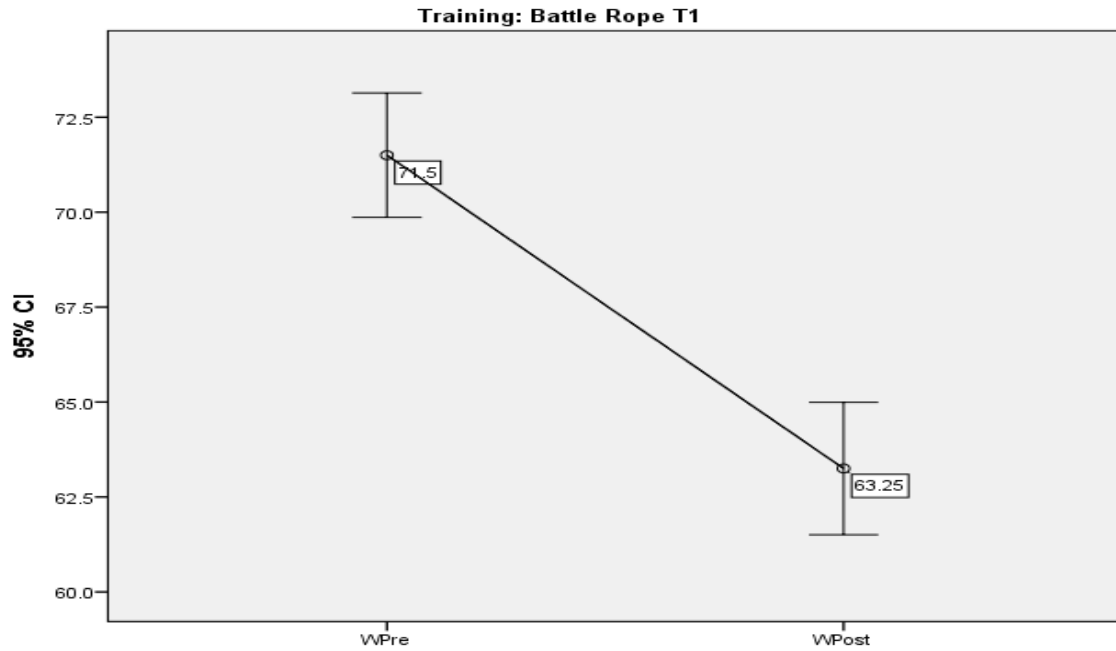
Eighty participants, evenly distributed across four groups each comprising 20 participants (10 females and 10 males), engaged in their designated workout routines. The workout routines varied, with the first group engaging in battle rope exercises, the second in jumping jacks, the third in jogging, and the fourth in high knees exercises, for 2 hours daily, six days a

Figure 1 Error Bar Chart showing the difference between Mean Weight (Kgs) of participants before and after 12-week of Battle Rope Training.

week. Weight and BMI measurements were taken before and after the 12-week program to gauge the physical impact of the different exercises. And it gauged the effectiveness of each exercise modality in achieving weight reduction. Personality enhancement was evaluated through a comprehensive questionnaire comprising 120 questions focused on self-esteem, self-concept, and motivation.

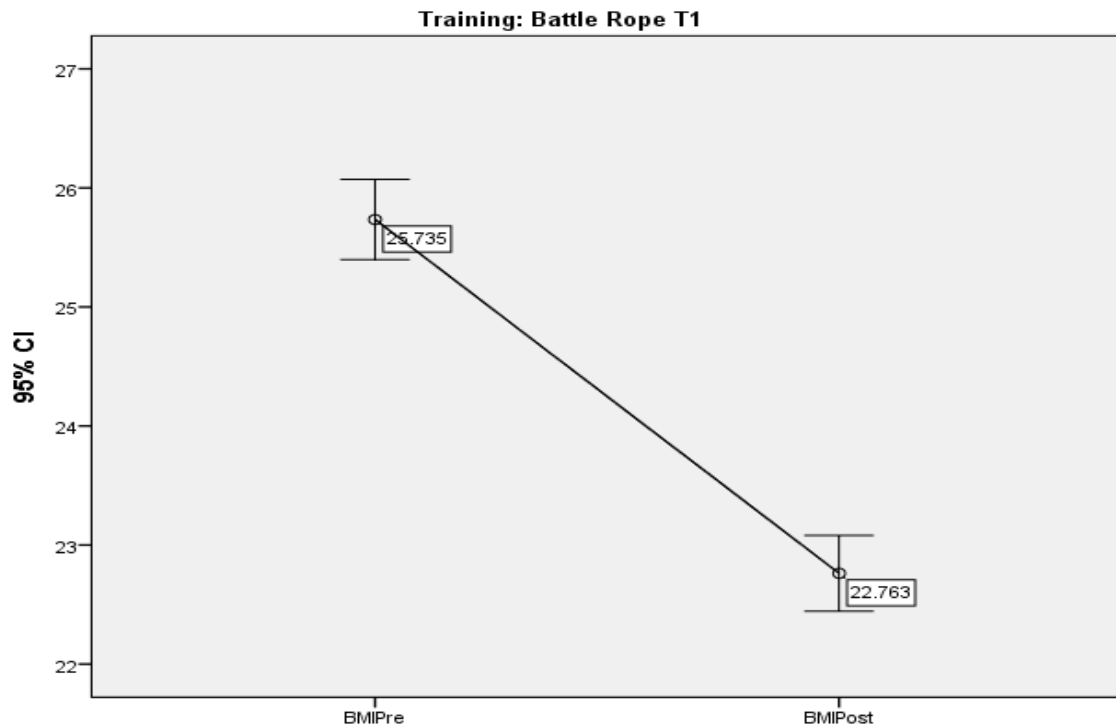
Results:

The results of the study revealed noteworthy changes in both physical and psychological domains. All four groups exhibited a significant reduction in weight and BMI, indicating the efficacy of regular exercise in promoting weight loss among overweight individuals. Personality enhancement, as measured by the questionnaire, showcased interesting trends. Participants across all groups reported positive shifts in various personality traits, including increased self-esteem, enhanced mood, and greater resilience. The combination of physical activity and the camaraderie developed in the group setting seemed to contribute to these psychological improvements.



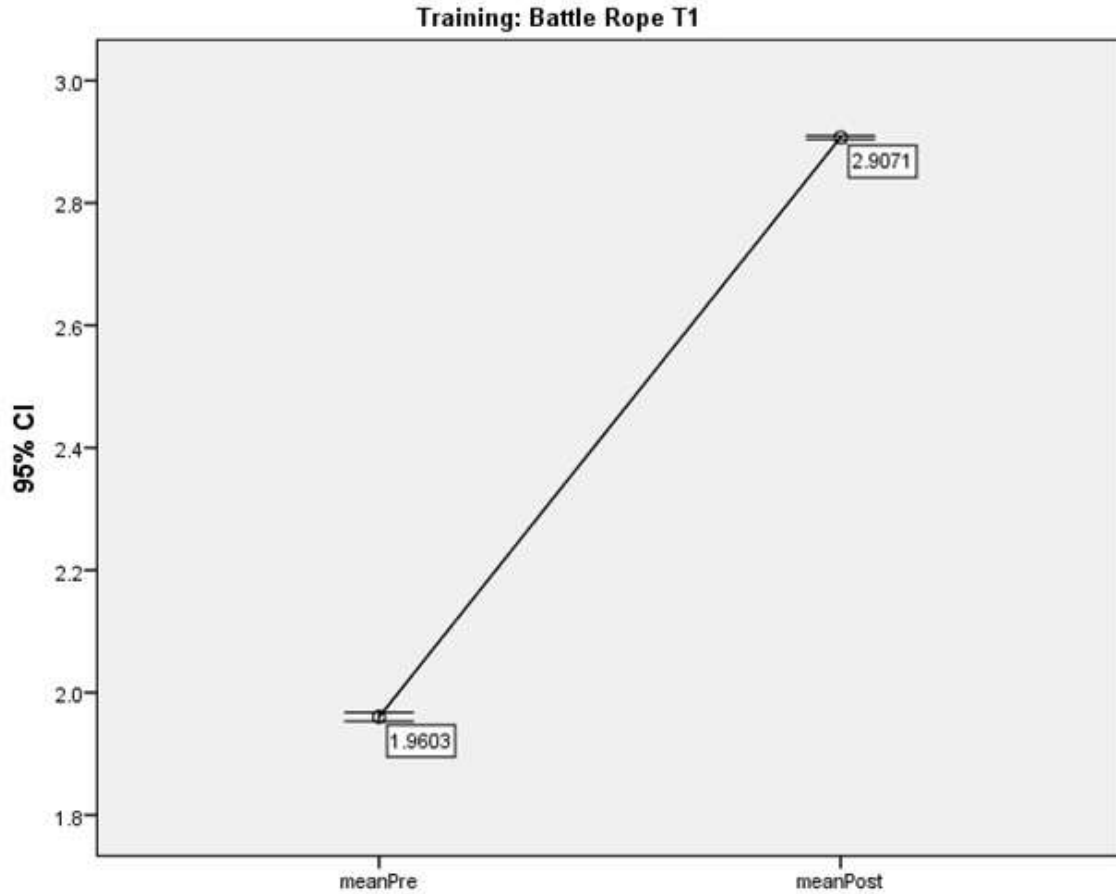
Note. "As shown in this Figure, participants of Battle Rope Training Group experienced a greater difference in mean weight loss (kgs) after 12-week of Battle Rope Training.

Figure 2 Error Bar Chart showing the difference between Mean BMI of participants before and after 12-week of Battle Rope Training.



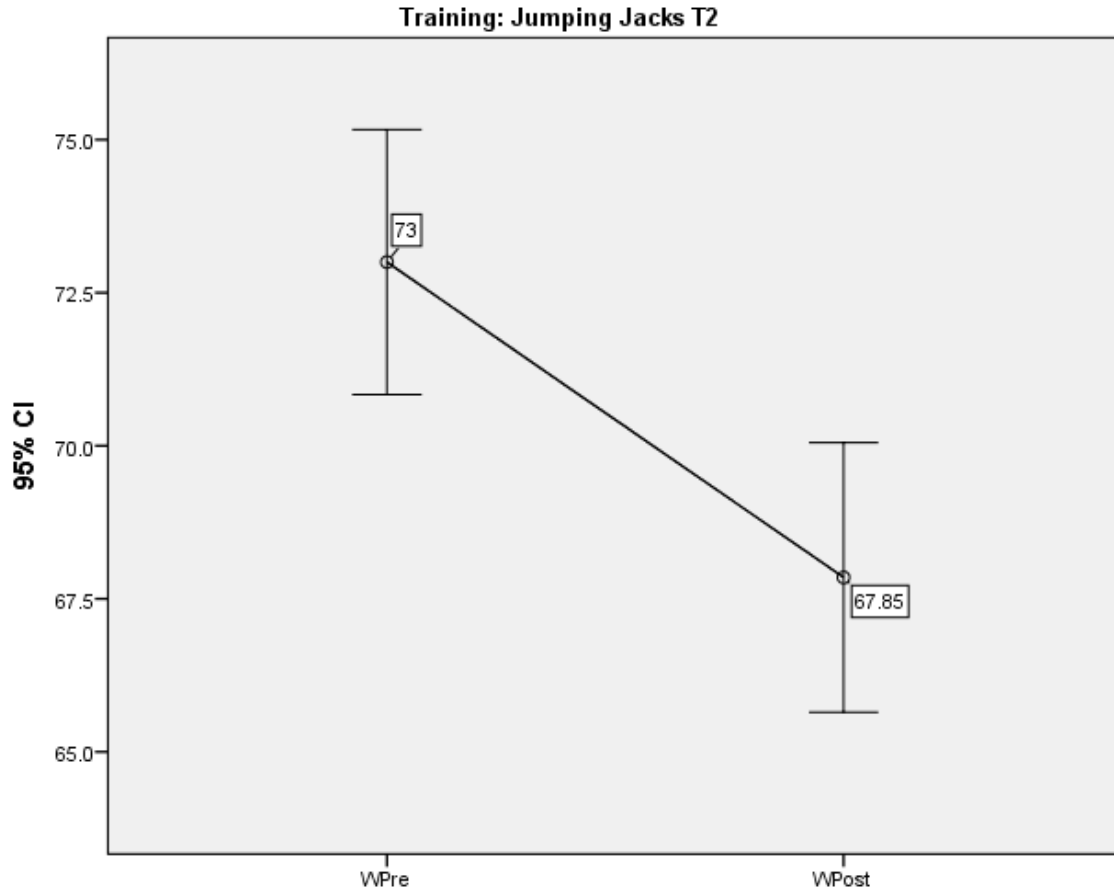
Note. "As shown in this Figure, participants of Battle Rope Training Group experienced a greater difference in mean BMI score reduction after 12-week of Battle Rope Training.

Figure 3 Error Bar Chart showing the difference between Personality Enhancement of participants before and after 12-week of Battle Rope Training.



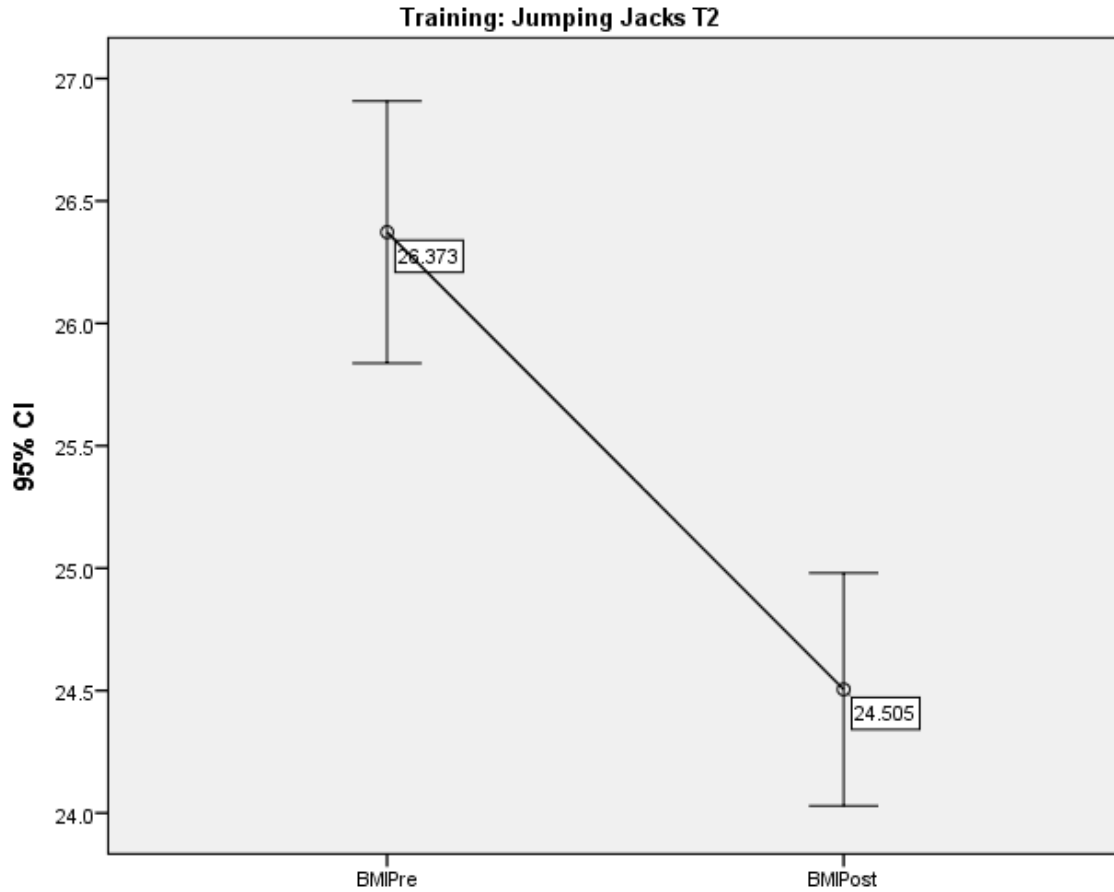
Note. "As shown in this Figure, participants of Battle Rope Training Group experienced a greater difference in Personality Enhancement after 12-week of Battle Rope Training.

Figure 4 Error Bar Chart showing the difference between Mean Weight (Kgs) of participants before and after 12-week of Jumping Jacks Training.



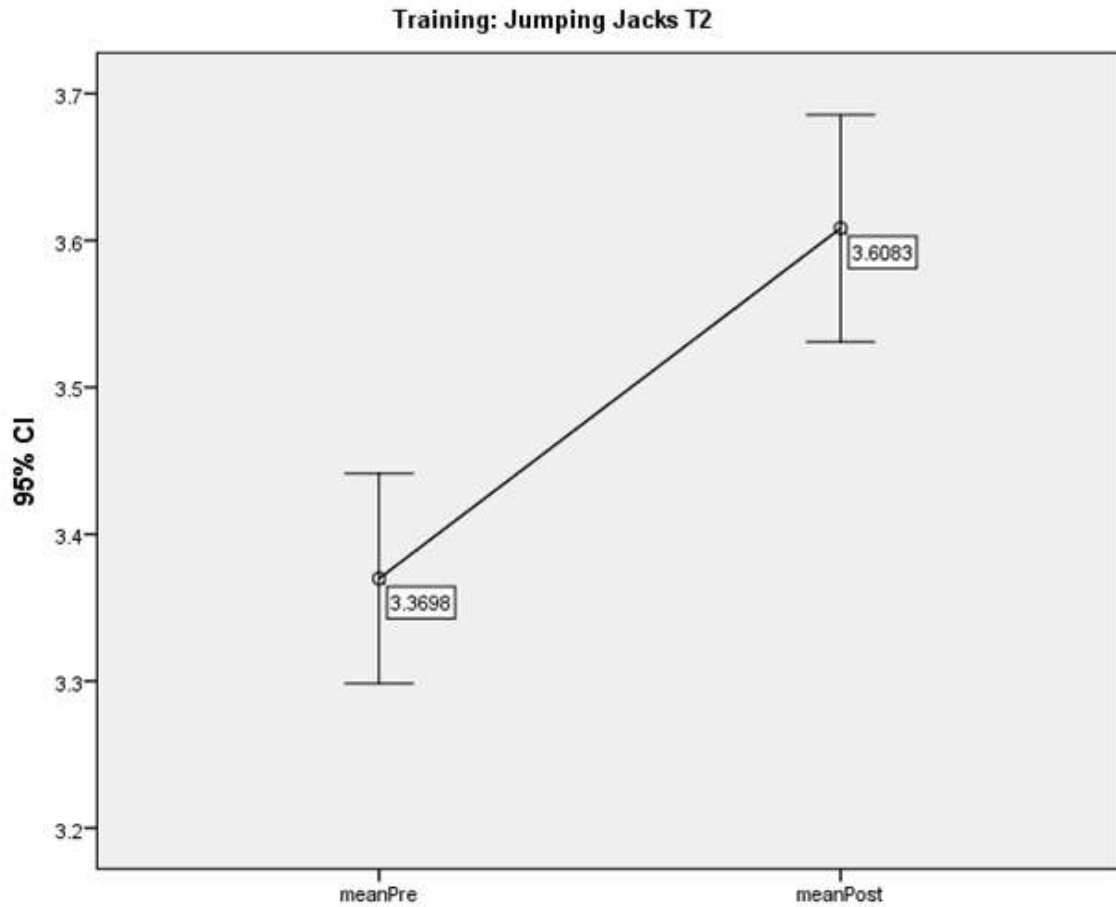
Note. "As shown in this Figure, participants of Jumping Jacks Training Group experienced a greater difference in mean weight loss (kgs) after 12-week of Jumping Jacks Training.

Figure 5 Error Bar Chart showing the difference between Mean BMI of participants before and after 12-week of Jumping Jacks Training.



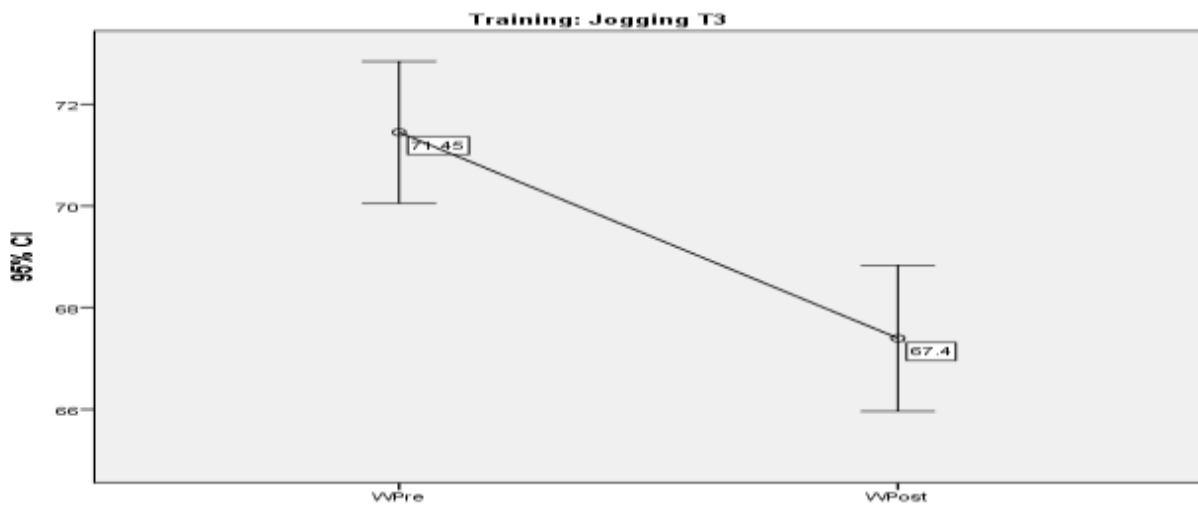
Note. "As shown in this Figure, participants of Jumping Jacks Training Group experienced a greater difference in mean BMI score reduction after 12-week of Jumping Jacks Training.

Figure 6 Error Bar Chart showing the difference between Personality Enhancement of participants before and after 12-week of Jumping Jacks Training.



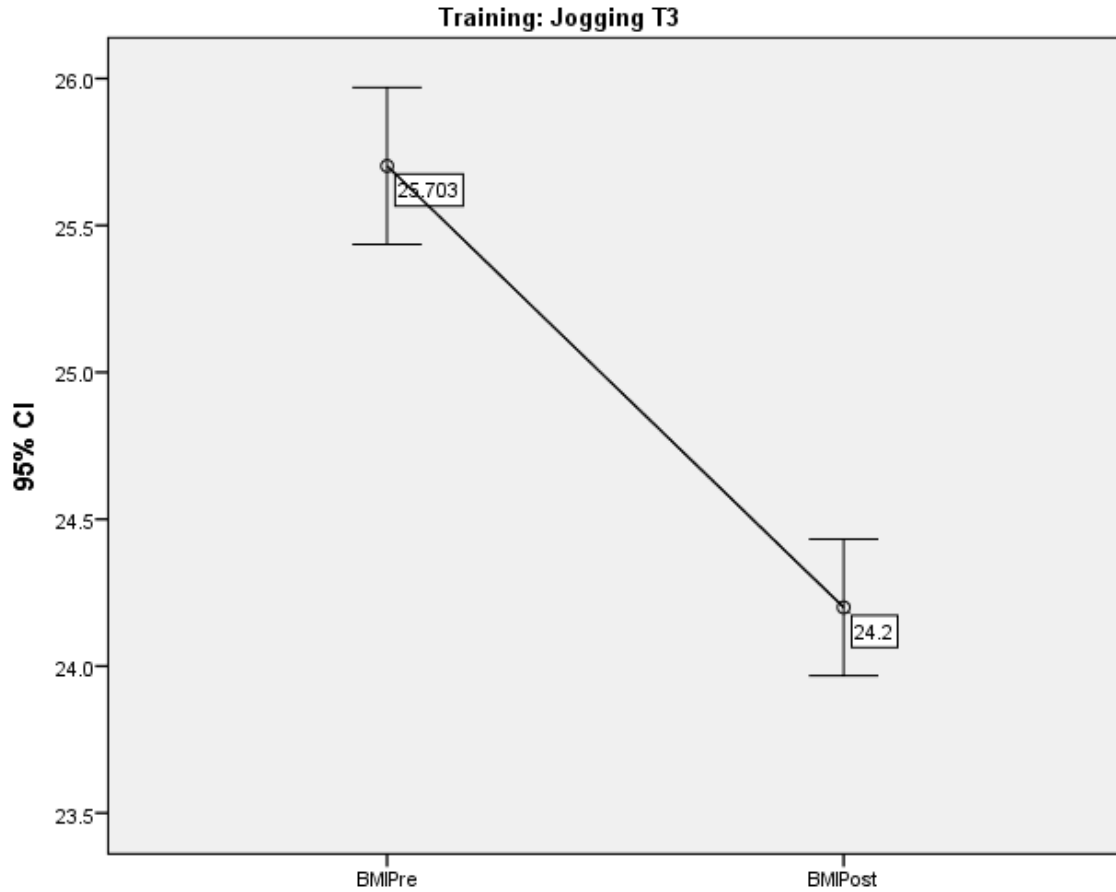
Note. "As shown in this Figure, participants of Jumping Jacks Training Group experienced a greater difference in Personality Enhancement after 12-week of Jumping Jacks Training.

Figure 7 Error Bar Chart showing the difference between Mean Weight (Kgs) of participants before and after 12-week of Jogging Training.



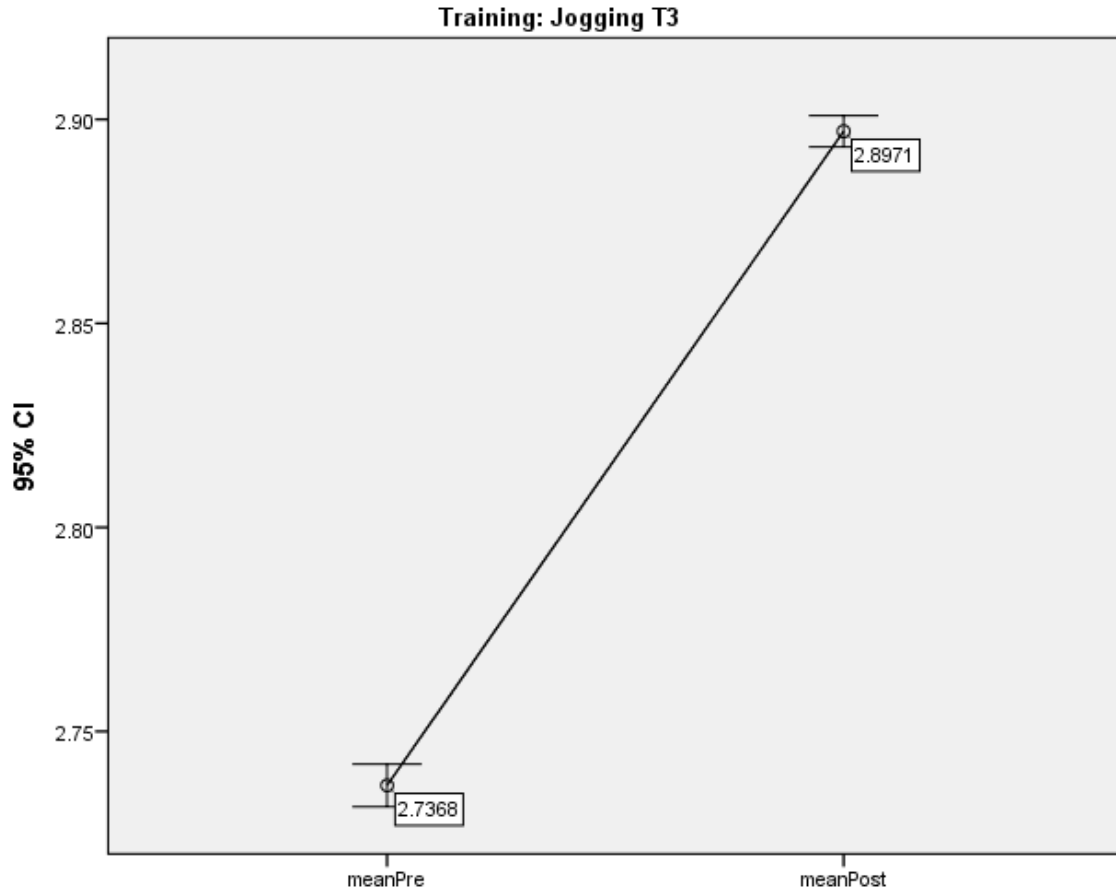
Note. "As shown in this Figure, participants of Jogging Training Group experienced a greater difference in mean weight loss (kgs) after 12-week of Jogging Training.

Figure 8 Error Bar Chart showing the difference between Mean BMI of participants before and after 12-week of Jogging Training.



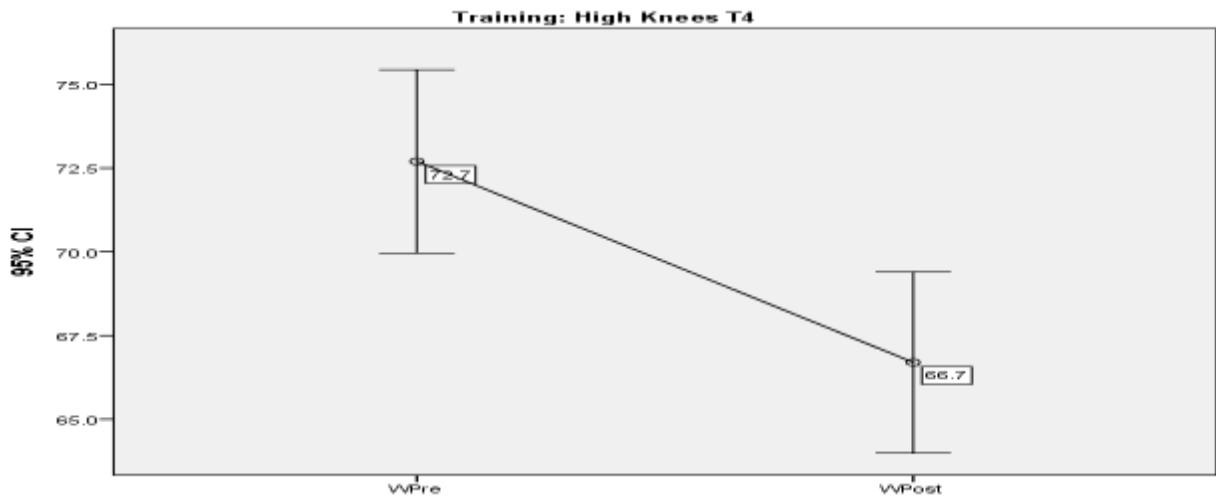
Note. "As shown in this Figure, participants of Jogging Training Group experienced a greater difference in mean BMI score reduction after 12-week of Jogging Training.

Figure 9 Error Bar Chart showing the difference between Personality Enhancement of participants before and after 12-week of Jogging Training.



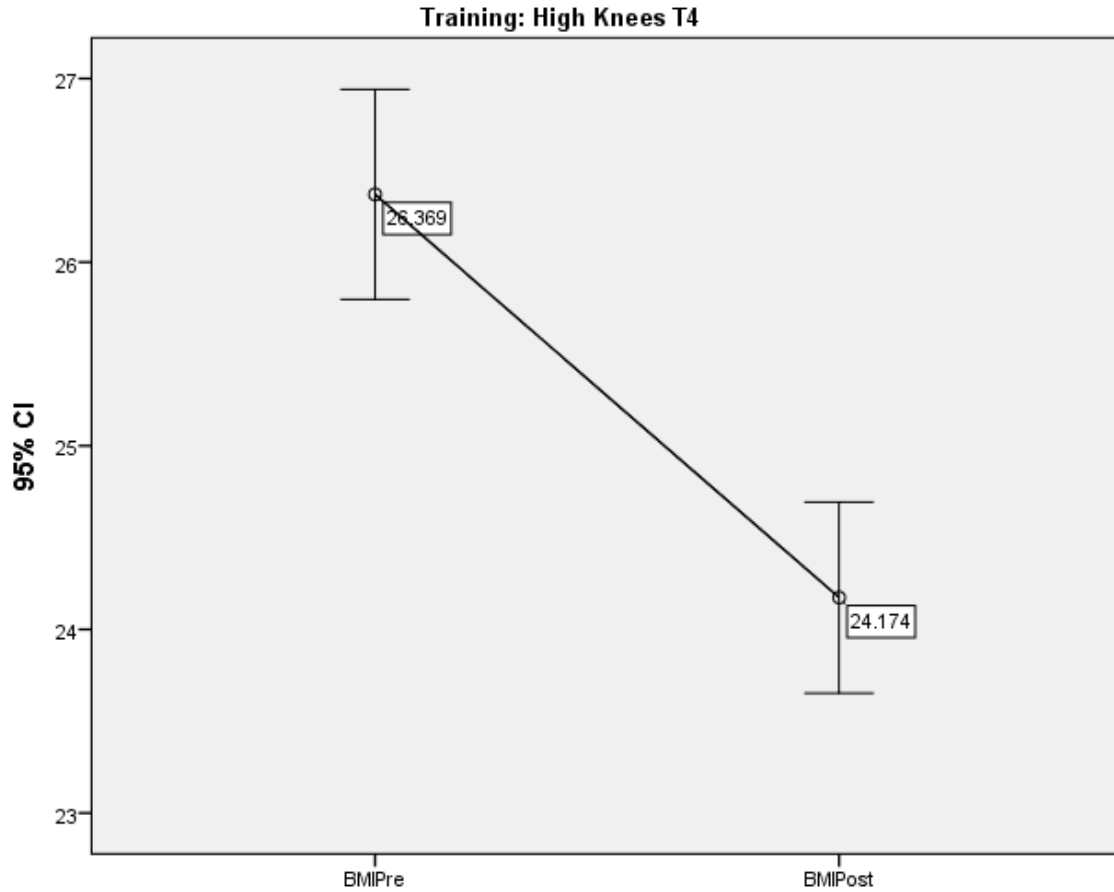
Note. "As shown in this Figure, participants of Jogging Training Group experienced a greater difference in Personality Enhancement after 12-week of Jogging Training.

Figure 10 Error Bar Chart showing the difference between Mean Weight (Kgs) of participants before and after 12-week of High Knees Training.



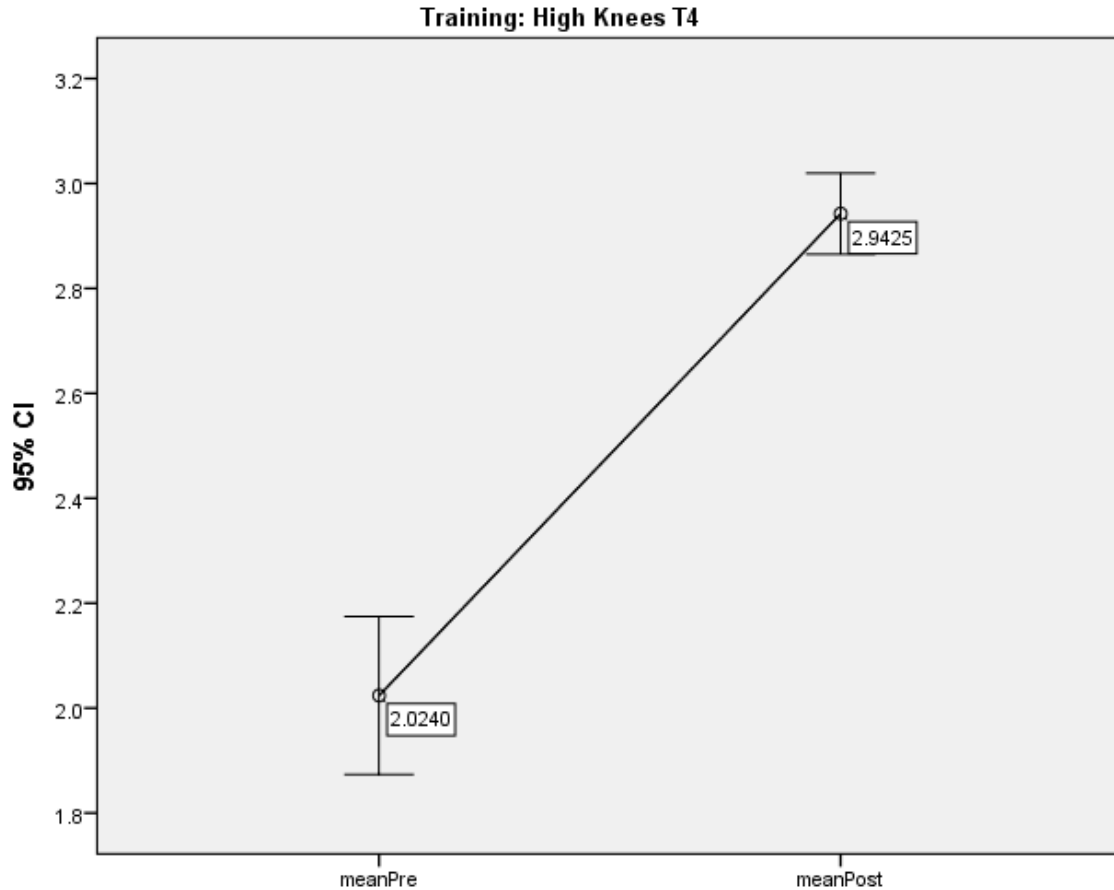
Note. "As shown in this Figure, participants of High Knees Training Group experienced a greater difference in mean weight loss (kgs) after 12-week of High Knees Training.

Figure 11 Error Bar Chart showing the difference between Mean BMI of participants before and after 12-week of High Knees Training.



Note. "As shown in this Figure, participants of High Knees Training Group experienced a greater difference in mean BMI score reduction after 12-week of High Knees Training.

Figure 12 Error Bar Chart showing the difference between Personality Enhancement of participants before and after 12-week of High Knees Training.



Note. "As shown in this Figure, participants of High Knees Training Group experienced a greater

difference in Personality Enhancement after 12-week of High Knees Training.

Table 1 Comparison of Weight, BMI and Personality Enhancement Questionnaire (PEQ) of all four training groups (n=80) before and after 12-week of Training.

Trainings (Pre and Post)	Mean ± Std. Deviation	Median Interquartile Range	± Mean % Diff
Battle Rope Training - Weight Pre	71.50 ± 3.50	70.00 ± 6.00	6.12
Battle Rope Training - Weight Post	63.25 ± 3.72	62.50 ± 5.75	
Battle Rope Training - BMI Pre	25.73 ± 0.72	25.39 ± 1.25	6.12
Battle Rope Training - BMI Post	22.76 ± 0.67	22.76 ± 1.09	
Battle Rope Training - PEQ Pre	1.94 ± 0.01	1.94 ± 0.02	19.83
Battle Rope Training - PEQ Post	2.90 ± 0.006	2.90 ± 0.01	
Jumping Jacks Training - Weight Pre	73.00 ± 4.62	74.00 ± 5.75	3.65
Jumping Jacks Training - Weight Post	67.85 ± 4.70	68.50 ± 6.50	
Jumping Jacks Training - BMI Pre	26.37 ± 1.14	25.95 ± 1.89	3.67
Jumping Jacks Training - BMI Post	24.50 ± 1.01	24.34 ± 1.31	
Jumping Jacks Training - PEQ Pre	3.36 ± 0.14	3.39 ± 0.02	3.44
Jumping Jacks Training - PEQ Post	3.60 ± 0.16	3.64 ± 0.02	

Jogging Training - Weight Pre	71.45 ± 2.98	71.50 ± 5.00	2.91
Jogging Training - Weight Post	67.40 ± 3.06	67.00 ± 5.00	
Jogging Training - BMI Pre	25.70 ± 0.56	25.68 ± 1.20	3.00
Jogging Training - BMI Post	24.20 ± 0.49	24.11 ± 0.87	
Jogging Training - PEQ Pre	2.73 ± 0.008	2.73 ± 0.02	2.84
Jogging Training - PEQ Post	2.89 ± 0.008	2.90 ± 0.01	
High Knees Training - Weight Pre	72.70 ± 5.84	72.50 ± 6.75	4.30
High Knees Training - Weight Post	66.70 ± 5.76	66.50 ± 7.00	
High Knees Training - BMI Pre	26.36 ± 1.22	25.95 ± 1.61	4.33
High Knees Training - BMI Post	24.17 ± 1.11	23.95 ± 1.55	
High Knees Training - PEQ Pre	2.00 ± 0.32	1.93 ± 0.01	19.02
High Knees Training - PEQ Post	2.94 ± 0.16	2.90 ± 0.02	

The table provides a comprehensive overview of the impact of four different exercise regimens on weight, BMI, and personality enhancement among overweight individuals before and after a 12-week training program. Specifically, the table shows the mean values with standard deviations, medians with interquartile ranges, and mean percentage differences for each exercise group. Notably, the "Battle Rope Training" group exhibited a substantial 6.12% reduction in both weight and BMI, indicating significant improvements in physical health. Equally noteworthy is the remarkable 19.83% increase in personality enhancement questionnaire scores for this group, suggesting a profound positive impact on psychological well-being. The "Jumping Jacks Training," "Jogging Training," and "High Knees Training" groups also showed improvements in weight, BMI, and personality scores, albeit to varying degrees. These findings collectively underscore the efficacy of exercise programs in not only aiding weight reduction and improved BMI but also in fostering positive psychological outcomes for individuals dealing with overweight concerns. The variations between the exercise groups further highlight the potential for tailoring fitness regimens to suit specific goals and individual preferences.

Discussion:

The diversity in workout routines allowed for a comparative analysis of their impact on weight reduction and personality enhancement. While all groups experienced positive outcomes, the nuances in results suggest that different exercises may have unique psychological benefits (Craft & Perna, 2004). The battle rope group, for example, exhibited significant improvements in stress management and emotional well-being, possibly due to the intensity and coordination required in this exercise (Anderson et al., 2001). Jumping jacks, known for their cardiovascular benefits, contributed to increased energy levels and overall vitality among participants (Haskell et al., 2007). Jogging, a classic aerobic exercise, demonstrated improvements in focus and concentration (O'Connor et al., 2010). High knees exercises, emphasizing agility and coordination, appeared to enhance participants' sense of discipline and determination (Jakicic et al., 2001).

Conclusion:

This study provides valuable insights into the multifaceted benefits of group-based exercise programs for overweight individuals. The combination of targeted workouts and regular social interaction not only led to substantial weight reduction but also contributed to positive changes in personality traits. As the demand for holistic well-being continues to grow, these findings emphasize the importance of tailored

exercise regimens in promoting both physical and psychological health. The integration of diverse workout routines can offer individuals a comprehensive approach to achieving their fitness goals while simultaneously fostering positive changes in their personalities.

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