

PHYSICAL EXERCISE TRAINING AND MENOPAUSE: EFFECTS ON BODY COMPOSITION AND QUALITY OF LIFE

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Background: Menopause, defined as the cessation of menstruation for a continuous period of 12 months, marks a significant transition in a woman's life, typically occurring around age 51, characterised by physical and psychological changes that can negatively affect overall health and quality of life.

Objective: This longitudinal study is designed as a non-randomized controlled trial to investigate the effects of a 12-week supervised physical exercise program on body composition, body image perception, and quality of life in a sample of Italian menopausal women.

Subjects and methods: Thirty-seven postmenopausal women were assigned to either an exercise intervention group (n=22), which performed two 60-minute sessions weekly of a combined exercises training, or a non-exercising control group (n=15). Anthropometric data (stature, weight, circumferences, skinfold thicknesses), bioelectrical impedance analysis, and air displacement plethysmography were collected. Body image perception and quality of life were assessed using Thompson & Gray's silhouettes and the MENQOL questionnaire, respectively. The handgrip strength test and the treadmill stress test were performed to assess upper limb muscular strength and aerobic capacity, respectively. Differences between pre-and post- data were assessed by the t-test for dependent samples.

Results: Compared with the control group, the intervention group showed a mild reduction in body fat mass, along with a significant decrease in biceps (p=0.01) and suprailiac (p=0.04) skinfold thickness. Additionally, significant improvements were observed in bioelectrical impedance parameters, with increased reactance (p=0.04) and phase angle (p=0.01), in handgrip strength (right: p<0.01; left: p=0.02), and peak oxygen consumption (p<0.01). Moreover, significant reductions were observed in menopause-related symptoms, particularly in psychosocial (e.g., dissatisfaction with personal life: p=0.01), physical (e.g., back and neck pain: p<0.01), and sexual (e.g., avoidance of intimacy: p<0.01) domains.

Conclusions: A combined exercises training program can significantly improve in body composition, muscle strength, aerobic capacity, and multiple domains of well-being in postmenopausal women. Due to the limited sample size, further studies with larger cohorts are essential to confirm these preliminary results.

Keywords: Menopause; Physical exercise; Quality of life; Body composition.