

Physiological and psychological effects of a physical activity programme in a group of elderly people

FAINA Marcello^{1,2}, MIRRI Giovanni¹, GALVANI Christel², MONDONI Maurizio²

¹Institute of Sport Medicine and Sport Science, Italian National Olympic Committee, Rome, Italy

²Motor Science, Catholic University, Milan, Italy

INTRODUCTION

Functional capacity declines with age but decrease varies widely according to lifestyle characteristics, influencing both self-efficiency and self-efficacy. Regular physical activity produces measurable physiological improvements and also positively affects cognitive function, depression and perceptions of control in elderly people (Mazzeo et al 1998). The aim of the present study is to verify the effect of a short training programme based on motor skills rehabilitation in a group of elderly community-dwelling people.

METHODS

Thirty-two elderly people (age 66.19±6.92 years, BMI 31.30±4.08 kg/m²) volunteered to participate in the study and underwent the following tests before and after a 10-week training programme: 6 min. walking test to evaluate cardiovascular efficiency (V'O₂max); 30 sec. chair stand and 30 sec. arm curl muscular endurance tests to study strength endurance; chair sit and reach and back scratch tests to measure flexibility property; eight feet up and go test to examine muscular power; body satisfaction scale -BSS- (Slade et al 1990) and self-rating depression scale -SRDS- questionnaires to assess psychological aspects. The training programme was based on cardiovascular, stretching, proprioceptive and free weight multijoint exercises and was carried out in an environment with no particular logistic structure.

RESULTS

Cardiovascular, muscular and flexibility qualities significantly increased. Results of some of the physiological parameters are shown in Table 1.

Tab. 1: Physiological parameters before and after 20 training sessions (*=p<0.001)

6 min. walking test (m)		Chair stand/Arm curl (reps)		Chair Sit&Reach/Back Scratch (cm)		6 feet up and go (s)	
pre	post	pre	post	pre	post	pre	post
512.3±41.3	551.3±41.9*	16.0±3.1	19.1±2.7*	-2.3±9.1	2.8±8.1*	6.2±0.7	5.5±0.5*
		18.5±3.8	21.8±1.9*	-8.9±9.4	-6.5±8.4*		

BSS and SRDS values significantly decreased. Results are shown in Figure 1.

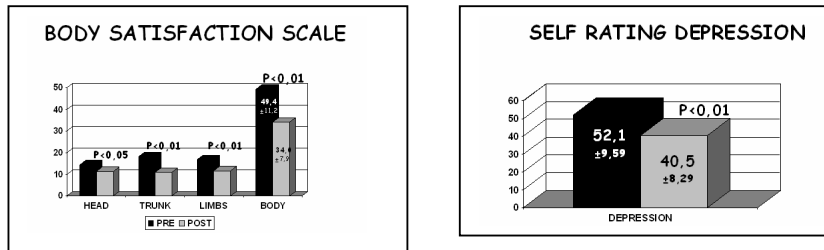


Fig. 1: Psychological parameters after 20 training sessions.

DISCUSSION

This study demonstrates the efficacy of a 10-week training programme, based on motor skills rehabilitation and organised with the involvement of peripheral authorities and local social cooperatives, on the improvement of both physiological and psychological qualities. It also underlines the important role of physical activity in modifying body image and self-efficacy (Hallinan 1993). This intervention seems to represent a prophylactic remedy that merits further research in order to become a public health approach.

REFERENCES

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