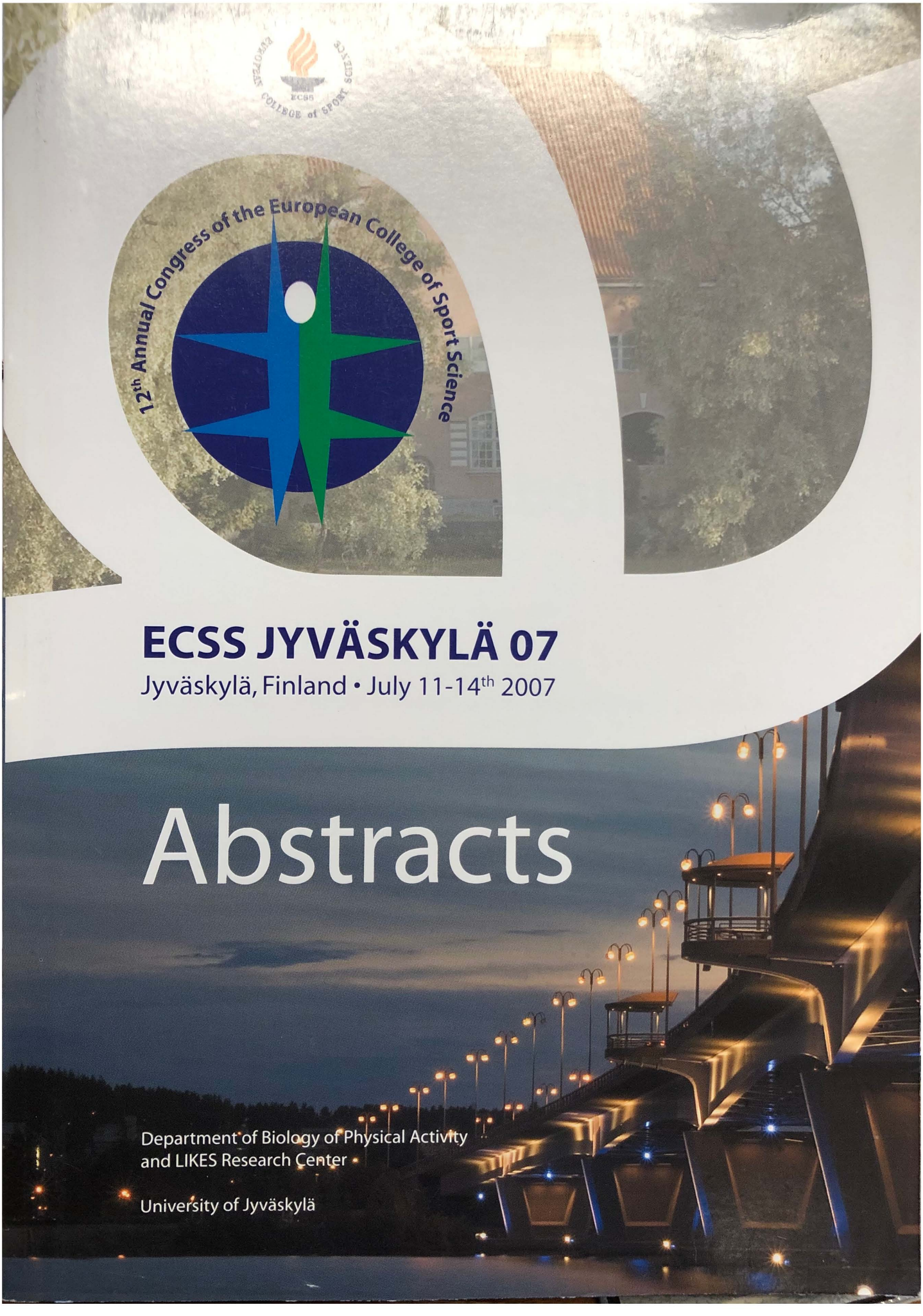

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ing up from a chair and sitting down onto a chair), 3 holding posture actions(upright stand, single leg stand; SLS and keeping in squat position; KS). Electromyograms (EMG) during the PTDL were measured from the vastus medialis, rectus femoris, vastus latelalis, biceps femoris, lateral gastrocnemius, medial gastrocnemius, soleus, and tibialis anterior (TA) muscles. The levels of muscular activity during the PTDL were expressed as the integrated EMG (averaged over time) relative to that during maximal voluntary isometric contraction (MVC). The activity levels of quadriceps (QF) and triceps surae (TS) muscles were expressed as mean values of their three constituent muscles examined. Isometric torques (TQiso) values of knee extension, knee flexion, plantar flexion and dorsiflexion were determined by dynamometers. Muscle thickness (MT) values of plantar flexors, doriflexor, knee extensors and flexors were measured by B-mode ultrasonography. Index of muscle volume (MVindex) was calculated from the equation of $(MT/2)^2 \times pi \times$ limb length.

Results and Discussion

EG showed significantly higher muscular activity levels than YG in the following tasks: NW, 2 changing posture and KS actions for QF, WUS, WUD, AS, DS and SLS for TS and 2 changing posture, KS and SLS actions for TA. The activity levels during most of PTDL in the muscles except for TS were negatively correlated with MVindex per body weight (QF: r=0.396-0.643, BF: r=0.393-0.523, TA: r=0.353-0.534, $p<0.05$). There were negative correlations between muscular activity levels during most of the PTDL and TQiso per body weight (QF: r=0.352-0.650, BF: r=0.424-0.599, TA: r=0.395-0.560, TS: r=0.383-0.685, $p<0.05$). Thus, the present study indicated that the elderly require greater muscular activity during PTDL because of lowering in muscle mass and strength.

Keywords: Ageing, Elderly, Elecrocardiography

Aging 1-12

BODY IMAGE ASSOCIATION AND HABITUAL PHYSICAL ACTIVITY IN INSTITUTIONALIZED ELDERLY.

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Introduction: Research clearly shows that physical activity (PA) is one important factor in developing and maintaining good health and function in older people. Knowledge of the underlying processes that influence the elderly to initiate and maintain lifestyle changes is an important requirement for the development of a PA intervention. The aim of this study is to analyse the variation of the body image at its component parts of perception and satisfaction and the habitual PA in institutionalized old people of both genders who are physically active or not. Methods: The sample (n=33; 77,6 ± 5,75, years) was divided into two different groups, the Physical Active Group (PAG, n =18) and the Physical Inactive Group (PIG, n = 15). The PAG comprises 10 females and 8 males and PIG comprises 6 females and 9 males. The perception of the body image was assessed by the Body Size Estimation Method; the satisfaction with the body image was assessed by the Body Image Satisfaction Questionnaire. The questionnaire Physical Activity Scale for the Elderly (PASE) was used to evaluate the habitual PA. We adopted the following statistical procedures: Descriptive Statistics (mean, standard deviation and frequency distribution) and Inferential Statistic (nonparametric tests for independent samples, Mann Whitney U and Chi- Square test). Results: The following results have shown that in average, no statistics significance was found between the mean of satisfaction with the body image, when comparing genders and the physically active elderly and the physically inactive elderly. Conclusion: The main conclusions are:(i) the perceptions of the body image do not differ between old people, neither in gender nor in PA; (ii) the satisfaction with the body image does not differ in gender neither in PA; (iii) the habitual PA does not differ in gender.

Keywords: Ageing, Applied Sport Psychology, Physical Activity

Aging 1-13

MYOFIBRE ADAPTATIONS AND STRENGTH AND POWER DEVELOPMENT AFTER STRENGTH AND/OR ENDURANCE TRAINING IN 40 TO 65-YR-OLD WOMEN

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Introduction: Volume, intensity, frequency and mode of training, initial training status of subjects, and the way in which the strength and endurance training is integrated have been proposed to interact while training for strength and endurance are performed concurrently (Sale et al. 1990). The purpose of this study was to examine myofibre adaptations and changes in neuromuscular performance following 6 months of strength and/or endurance training in 40 to 65-yr-old women.

Methods: Ninety nine women [mean (±SD) age 52±7 yr] completed a periodized total body training programme (2 exercises for leg extensors) of strength (S), endurance (cycling exercise) (E), concurrent S and E training (SE) or served as controls (C) over a 6-month period with 2 (S and E) or 2+2 (SE) workouts a week. Maximal voluntary isometric force and maximal concentric power were mea-