

ABSTRACT

The research project developed during the PhD course falls within the Agreement dated 10th August 2012 between the Council of Ministers (Department for Regional Affairs, Tourism and Sport) and the Ministry of Education, Universities and Research. This programme aimed at implementing a pilot project for the dissemination and practice of physical activity among the elderly. The University of Salerno, in particular, the Department of Human Sciences, Philosophy and Education was identified as the implementing body of the program.

The aim of the research was to investigate the effects of an experimental educational programme of Adapted Physical Activity (APA), integrating the potential of motion analysis technologies (BTS G-Walk Motion Analysis) in traditional performance tests (SPPB) validated for the elderly.

The experiment was carried out in two institutions for senior citizens located in the province of Salerno: Casa Albergo "Immacolata Concezione" and the Multipurpose Social Center for Elderly "Francesco Petraglia". The sample consisted of 33 elderly aged between 69 and 97 years of age (81.53 ± 7.02). The experimental phase consisted in the implementation of the APA teaching protocol, with meetings twice a week. At the end of this 18-week programme the output tests were administered. From the comparison of the results of study 1 obtained through validated motor evaluation instruments (SPPB), and the results from study 2, which were acquired through technological means of gait analysis (BTS G-Walk) in parallel during the acquisition of the traditional tests, a correspondence was found in both with regards to improvements in motor performance after the APA programme (balance skills; strength of the lower limbs; gait speed, stride length and gait symmetry). The implementation of the motion analysis technology made it possible to quantitatively and objectively investigate aspects that cannot be investigated with conventional motor performance tests validated for seniors.