

with isotonic and cardiovascular, 1 lab for functional activity with free weights and proprioceptive equipment, 1 gym for aerobics and 1 lab for functional evaluation and assessment. The activities started with two basic project on children and healthy elderly and now it has been enlarged progressively to chronic diseases (diabetes, cardiac failure, cardiac ischemia, BPCO, Parkinson, ictus).

Since 2010 other project started: “Fitness Center” that offers a variety of activities’ choreographic with music; the center of training for individual sports (maraton e triathlon) and the center of training for teams sports (basket, rugby, futsal), the summer center for children continued and improved.

The project “Metti la tua salute nel Movimento” for elderly people, implemented the position stands ACSM 2011, and introduced, to consolidate users loyalty, different opportunity of physical activity: swim, adapted aerobic with music exercise rehabilitative and analgesic, NW and trekking, Fit class course for very fit users, fitness holidays.

For each group a specific exercise program has been defined following this process: review of the existing knowledge, experimental protocol, pilot study, definition of the model to be delivered. Specific evaluation is set up for each group and repeated at the beginning and at the end of the training period.

**Results:** In 2012–13 academic year more than 750 persons aged from 4 to 89 years were included in the UFC programs and a total number of 8000 hours of ts were very often in not stable health condition. 8 courses, at bachelor as well at master levels, used the UFC for educational activities during which an overall amount of 6000 hours student allowing the student supervised exercise was administered. Attendance in UFC was about 75 % of the prescribed even if the participant to verify on the field methods, exercises and their application to the different subject.

**Conclusion:** The presence of a specific center dedicated to the exercise program for health appears to improve the attractiveness of the University for the community and it allows to manage the education path for the students in this area very closed to the needs of future job employment.

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### Physical education should be taught by ‘squadre’ or ‘classi’ methods? The students’ opinion

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**Aim:** The aim of this study was to analyse the student feeling about physical education (PE) and its teaching with two different methods: ‘classi’ or ‘squadre’.

Originally, PE in the high school using student gender separation (‘squadre’) was thought.

However, since 1997 any single school chooses a different method, introducing the ‘classi’ method, lessons with male and female together. During this age, boys and girls have the most important growth, with physical and psychological changes, which are sometimes lived as problematic. This process ends with the complete maturation in men and women, with the well-known physiological and anthropometrical differences.

**Methods:** 515 students in their 4th and 5th years of three scientific high schools have been enrolled in the study. 169 practiced PE with

‘squadre’ methods (SQ), 168 with ‘classi’ but had a previous experience with ‘squadre’ (SC) and 178 with ‘classi’ (CL).

Student’s feeling about PE was collected by questionnaire with open and closed questions that examined positive and negative aspects of PE ‘per se’ and in relation to its teaching method. Aspects related to fatigue have been separately examined because it can be positive and/or negative. Statistical analysis has been performed on percentages using G test.

**Results:** Most of the students consider PE useful, but percentages are statistically different in the groups (96 %SQ, 81 %SC, 70 %CL,  $p < 0.001$ ), the positive feeling are more frequent than negative (68 %SQ, 81 %SC, 70 %CL), whereas CL presents the highest number of negative (24 %  $p < 0.001$ ). The fatigue sensation has been reported more in SQ than in CL (22 %SQ, 7 %SC, 6 %CL  $p < 0.001$ ). PE returned an increase in wellness (68 %SQ, 52 %SC, 39 %CL,  $p < 0.001$ ), motor skills (79 %SQ, 54 %SC, 63 %CL,  $p < 0.001$ ) and friendships (75 %SQ, 72 %SC, 77 %CL). Motivation, indeed, is more increased in SQ 62 % than 46 %SC and 40 %CL ( $p < 0.001$ ). The positive aspects reported by students regarding their PE methods were 80 %SQ, 51 %SC, 62 %CL, whereas the negative were 20 %SQ, 49 %SC, 38 %CL ( $p < 0.001$ ), respectively.

**Conclusion:** Students considered PE useful and with many positive aspects, but ‘classi’ students reported minor gain in motor skills and motivation than SQ, this last aspect could cause a negative approach to sport activity out of the school. SQ and CL students thinking to PE wrote more positive aspects than negative, even if qualitatively different. Instead, SC student reported the same percentage, where the negative were the positive considering the previous ‘squadre’ experience. Fatigue was more present in SQ answers, probably because given tasks and workouts can be harder when working with the same gender. In light of these results PE taught by ‘squadre’ seems to be more appropriate for students learning and satisfaction.

#### Reference

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## SPORT AND PHYSICAL EDUCATION

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#### The jump float serve: how to teach it starting from the rhythmic component

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**Aim:** The proposal for this study was to identify specific exercises in order to let the athletes of an under-18 volleyball team learn the extremely important basics of the jump float starting from the rhythmic component. The study allows us to deduce an effective protocol to learn a typology of serve important to contribute to the success of the game.

**Methods:** 14 girls from 16 to 18 years old, subdivided in working team (EG) and controlling group (CG) have taken part in the task.

Both groups have carried out three physical tests, at the beginning and at the end of the work (the Sergeant test, a test on the jump serve and one on the precision). The task has been divided in three steps equally distributed in the space of 4 months (2 weekly training of 2 h each): the first was based on exercises intentionally studied for the execution variable and with different rhythmic and coordination applications,