

## LETTER TO EDITOR

### PHYSICAL FITNESS AND MOTOR COORDINATION MONITORING DURING ENRICHED SPORT ACTIVITIES IN A SAMPLE OF CHILDREN LIVING IN EUROPE. THE ESA PROGRAM

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Enriched Sport Activities Program (ESA) is an Evidence-based Practice Exercise Program cofounded by the Erasmus+ Programme of the European Union (Key action: Sport - 579661-EPP-1-2016-2-IT-SPO-SCP). It aims to enhance social inclusion, equal opportunities and psycho-physical well being in school-age children with typical development and special needs through sport activities enriched by cognitive tasks. A multidisciplinary approach has been employed; in detail, health - and skills-related physical fitness components, as well as developmental psychology and neuroscience research are the theoretical basis to implement an evidence-based program suitable to increase sport compliance in 7 different countries. A growing body of studies has identified sport and physical activities (PA) as key factors to contribute to well-being and health in children and youths with typical and atypical development<sup>(1)</sup>.

It is becoming increasingly clear that a sedentary lifestyle shows a risk for enlarged rates of psy-

chosocial impairments, onset or aggravation of medical diseases, welfare assistance, use of medical services, all resulting in extremely high economic health costs. However, data derived from the Special Eurobarometer 412 (March 2014) on the issue "Sport and Physical Activity" sum up following issues: 59% of Europeans play sport never or seldom; European Women engage in sport less than men; European living in Southern countries engage less in sport.

The "lack of motivation" is stated by 20% of European Citizen as the main barrier preventing from practice of PA<sup>(2)</sup>. The findings also show significant results as regards the percentages of inactivity for the countries: Portugal 64%, Italy 60%, Spain 44%, Lithuania 46%, Germany 29%. Nevertheless, these data were collected on sample aged more than 15 year-olds<sup>(2)</sup>. Lacking are epidemiological data on children and pre-adolescents in European countries. If a linear developmental trend is employed, similar lack of motivation in

childhood with major rates in girls and those coming from low socioeconomic status (SES) can be hypothesized. Higher levels of inactivity and lower sport motivation are conjectured in population with special needs with the consequent risk to intensify actual clinical diseases and develop health-related complications such as motor functional deteriorations.

Moreover, low levels of muscular strength and power in children and adolescents can generate consequent functional limitations not caused by neurologic or muscular disease, but just because of the lack of movement<sup>(3,4)</sup>. Physical fitness, motor skills or basic motor competencies play a central role in the process of the development of physically active lifestyle. Children and adolescents must have basic motor competencies and adequate physical fitness in order to take part in sport and exercise. Consequently, it is important to have a reliable instrument to measure these skills and physical fitness<sup>(1)</sup>.

According to the ESA Program aims the TEG (Technical Expert Group) in charge with the Thematic Area 1 (TA1- Sport practice, children, inactivity, children's physical fitness and development) will focus on a systematic literature review in order to define the most appropriate field based physical fitness tests able to predict and monitor physical fitness and motor coordination in a population target of children (6-14 years) living across Europe. Starting from previous successful experiences, the TEG will try to confirm and/or update the ASSO-FTB<sup>(5)</sup>, a fitness test battery designed to evaluate physical fitness in adolescents within the school context.

The questions still unanswered are:

- Does ASSO-FTB fit also on a different target population?
- Is the focus on children's motor abilities enough for physical fitness monitoring?
- Can maximal aerobic fitness tests be implemented in a reliable and valid way in this age group?

Recently, many authors tried to investigate about field-based physical fitness tests for children and adolescents in general and with intellectual disabilities<sup>(6-11)</sup>. The ESA program aims to endorse best practices in the pediatric environment with the wish to help educators and healthcare professionals to promote healthy lifestyles among children and adolescents.

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