

Assessing health-related physical fitness in the school setting: reliability, feasibility and safety

The ALPHA study

by

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Background: The ALPHA study is a European Union-funded project aimed at providing a set of instruments for assessing levels of physical activity and fitness in European Member countries. Comparable fitness testing methodology across Europe are being developed, tested and agreed upon in order to evaluate the effects of intervention strategies, as well as to identify individuals at risk for the major public health diseases.

Purpose: To examine the reliability, feasibility and safety of the ALPHA health-related fitness battery in the school-setting.

Methods: As a pilot experience within the ALPHA Study, Physical Education teachers are currently administering the ALPHA health-related fitness battery twice one week apart in children and adolescents aged 6 to 18 years. Cardiorespiratory fitness, muscular fitness and body composition are being assessed using the 20m shuttle run, handgrip strength, standing broad jump tests and weight, height, triceps and subscapular skinfolds and waist circumference, respectively. In each school, a trained researcher is closely supervising the assessment process to evaluate its feasibility and safety by means of *ad hoc* questionnaires.

Results: Analysis of the variance (ANOVA) for repeated measures and Bland-Altman method (mean difference, 95 % limits of agreement and presence/absence of heteroscedasticity) will be used to analyze the reliability of the tests. A detailed report of the feasibility and safety items will provide relevant information, such as the adequacy of school facilities, the time employed in each measurement or the presence/absence of possible incidents.

Conclusions: The results of this study will inform about the reliability, feasibility and safety of the ALPHA health-related fitness battery when administered by Physical Education teachers in the school setting.

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