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Human Growth in Sickness and in Health

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Abstracts

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tests, Madeira boys and girls show a tendency to lower results in 12 minute run-walk, sit and reach and sit ups in comparison to Belgians, Brazilians, Hungarians and Swiss.

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A Hierarchical Analysis of Aerobic Health-Related Fitness. A Study in Children from the Azores Islands
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Background: In 2002 a large cross-sectional study was conducted in the Azores islands to provide information regarding growth, physical activity, health-related physical fitness, motor coordination and obesity in children aged 6 to 10 years old.
Aim: This study aims, only, at the modelling of correlates of performance in aerobic fitness.
Methods: Sample size comprises 3678 children (6-10 yrs) of the total population of school children of this age range) from 56 schools from 8 of the 9 islands. Aerobic health-related fitness was assessed with the FitTestgram 1 mile run-walk test (time to complete the test). Information was also gathered for BMI, physical activity (with the Godin and Shephard questionnaire), availability of equipment and facilities as well as their quality. Reliability estimates were obtained in 4 sub-samples and the intraclass correlations varied from 0.800 to 0.970. Modelling correlates of performance was conducted within the framework of hierarchical linear models with age, gender, body mass index, physical activity as LEVEL 1 predictors, and equipment and school facilities as LEVEL 2 predictors. HLM 5.05 software was used. A series of nested models were fitted to the data, starting with an intercept-only model, and ending with intercept-and-slopes as outcomes model with all level 1 and level 2 predictors included.
Results: Main results showed that equipment and quality of school facilities are not significant (p>0.05) predictors of performance in aerobic fitness. The same seems to happen to BMI (p>0.05). A model with only level 1 predictors (i.e., at the student level) seems to explain a certain amount of variance in the 1 mile run-walk performance (aerobic fitness): a net effect of increasing age (-0.495), favouring boys (-1.269) and higher levels of physical activity (-0.003).
Conclusion: Since residual variance is still high and statistically significant (p<0.001), an effort is now to be undertaken to consider other potential predictors from other school characteristics, parental, and probably genetic variation to fully understand this heterogeneity of results.

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The Influence of an Exercise Programme on Body Composition, Motor and Cardiovascular Parameters in Pre-School Children. A Longitudinal Study
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During the last decade physical activity and physical fitness in children decreased and the problem of overweight in children is increasing in all industrialised countries including Germany. We conducted a specifically developed effective intervention in 105 children in the control group. The main focus of the study was to examine the effects of the intervention on body composition, motor performance, and cardiovascular fitness. The control group did not receive any intervention. The intervention group participated in a 12-week programme consisting of regular exercise and nutritional guidelines. The results showed significant improvements in body composition, motor performance, and cardiovascular fitness in the intervention group compared to the control group. Overall, the intervention programme had a positive impact on the health and well-being of pre-school children.

P-110
Relationship Between Cardiovascular Disease and Risk Factors for Children's Health
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Background: Cardiovascular disease (CVD) is a leading cause of mortality worldwide, and risk factors for CVD in children and adolescents include obesity, physical inactivity, and poor dietary habits. Understanding the relationship between CVD and risk factors is crucial for the development of effective prevention strategies.

Aim: To examine the relationship between cardiovascular disease and risk factors for children's health.

Methods: The study involved a cross-sectional analysis of data from a large cohort of children and adolescents, evaluating factors such as body mass index (BMI), waist circumference, systolic and diastolic blood pressure, and blood glucose levels.

Results: The study found a significant correlation between cardiovascular disease risk factors and cardiovascular disease in children. High BMI and waist circumference were associated with higher blood pressure and glucose levels, indicating a higher risk of developing cardiovascular disease in the future.

Conclusion: The findings suggest that early intervention strategies targeting risk factors such as obesity and physical inactivity are crucial in preventing cardiovascular disease in children and adolescents.