

Does anthropometric and fitness parameters mediate the effect of exercise on the HRQoL of overweight and obese children/adolescents?

Perez-Sousa M.A.

Olivares P.R.

Garcia-Hermoso A.

Gusi N.

Background: There is sufficient evidence about the effects of physical exercise programs on health-related quality of life (HRQoL) in obese and overweight children. **Objectives:** The purpose of this study was to observe the effects on physical fitness and HRQoL in overweight and obesity children and their parents and find out whether the effect of intervention on anthropometric and physical fitness parameters mediated the improvements found in the proxies? perception of participant quality of life. **Methods:** 151 overweight and obese children (106 intervention and 45 control) participated in a public exercise program. Anthropometrics characteristics, physical fitness, and HRQoL (EQ-5D-Y) were measured. Analysis of Covariance and effect size were performed to analyze the improvement. Mediation analyzed with bootstrap to observe whether anthropometric or physical fitness improvements mediate of the changes in the proxies? assessment of HRQoL.

Results: Significant improvements were found in waist circumference, physical fitness, and HRQoL. The improvement of waist circumference showed a significant indirect effect on the change in the proxy perception of quality of life. **Conclusion:** The reduction of waist circumference mediates the change on proxies? perception of quality of life and not by the improvement in physical fitness. **Trial registration:** ISRCTN97887613. © 2018, Springer International Publishing AG, part of Springer Nature.

Fitness

HRQoL

Mediation

Obesity

Overweight

Proxy

adolescent

adolescent obesity

anthropometry

Article

child

childhood obesity

controlled study

exercise

female

fitness

human

major clinical study

male

priority journal

proxy

quality of life

waist circumference

anthropometry

exercise

fitness

obesity

pathology

procedures

psychology

quality of life

Adolescent

Anthropometry

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Obesity

Overweight

Physical Fitness

Quality of Life