

# Associations between health-related quality of life and physical fitness in 4-7-year-old Spanish children: the MOVIKIDS study

Redondo-Tébar A.

Ruíz-Hermosa A.

Martínez-Vizcaíno V.

Cobo-Cuenca A.I.

Bermejo-Cantarero A.

Cavero-Redondo I.

Sánchez-López M.

**Purpose:** Health-related quality of life (HRQOL) in childhood is defined as an individual's subjective perception of the impact of health status on physical, psychological and social functioning.

Nowadays, measuring of HRQOL has become an important outcome indicator in evaluating health-care. However, in younger children, the role of cardiorespiratory and other physical fitness components on HRQOL is unclear. The aims of this study were to analyse the association between components of physical fitness and HRQOL, as well as to determine which component of physical fitness was the best predictor of higher HRQOL. **Methods:** This was a cross-sectional study of 1413 schoolchildren (4 to 7 years old) from Spain. HRQOL was evaluated with the KINDL-R questionnaire for parents. Cardiorespiratory fitness, muscle strength and speed-agility were assessed using the ALPHA-Fitness battery. ANCOVA models were used to assess differences in HRQOL across physical fitness categories, controlling for age and BMI, by gender. Multiple linear regression was used to determine the independent association between the different physical fitness components and HRQOL. **Results:** Children with high physical fitness levels had better scores in physical well-being, school and total HRQOL score than those who had low physical fitness levels. The best predictor of HRQOL (total score) was muscular strength in boys and speed-agility among girls.

**Conclusions:** Children with high physical fitness levels have higher HRQOL, although the association between components of physical fitness and HRQOL varies according to gender.

Improving physical fitness could be a good strategy for improving HRQOL in children. © 2019,  
Springer Nature Switzerland AG.

Cardiorespiratory fitness

Fitness

KINDL-R

Muscular strength

Schoolchildren

Speed-agility

agility

analysis of covariance

article

body mass

cardiorespiratory fitness

child

cross-sectional study

female

gender

girl

human

human experiment

male

multiple linear regression analysis

muscle strength

physical well-being

quality of life

questionnaire

Spain

Spaniard

cardiorespiratory fitness

child parent relation

exercise

fitness

health status

muscle strength

physiology

preschool child

psychology

quality of life

school

Cardiorespiratory Fitness

Child

Child, Preschool

Cross-Sectional Studies

Exercise

Female

Health Status

Humans

Male

Muscle Strength

Parents

Physical Fitness

Quality of Life

Schools

Spain

Surveys and Questionnaires