

# Association between physical activity, sedentary behavior, and fitness with health related quality of life in healthy children and adolescents: A protocol for a systematic review and meta-analysis

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**Background:** Health related quality of life (HRQoL) is a subjective, multidimensional and changing over time construct. When HRQoL is decreased, a child is less likely to be able to develop normally and mature into a healthy adult. Physical inactivity is a priority public health problem. Evidence suggests how even moderate levels of physical activity or high fitness levels are associated with benefits for the health in children and adolescents. The aims of this systematic review are to examine the evidence about the relationship between physical activity, sedentary behavior, and fitness with HRQoL, and estimate the effects of interventions that have tested the effectiveness of the increase of the physical activity, the improvement of the physical fitness or the avoidance of sedentary behaviors in HRQoL in healthy subjects aged under 18 years old. **Methods:** This systematic review and meta-analysis protocol was conducted following the preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) statement. To identify relevant studies, the following electronic databases will be searched: MEDLINE, EMBASE, Cochrane Database, Web of Science, and PEDro. Reference lists of relevant studies will be examined for links to potential related articles. The methodological quality of the observational included studies will be scored using a quality assessment checklist. For the intervention studies, the risk of bias will be estimated using The Cochrane Collaboration tool for assessing risk of bias. Reviewers will determine whether a meta-analysis is possible when data have been extracted. If it is, subgroup

analyses will be carried out by age and socioeconomic status, and by the different dimensions of the HRQoL. If is not possible, a descriptive analysis will be conducted. Conclusion: To our knowledge, this systematic review and meta-analysis will be the first that synthesizes the existing results about the relationship between physical activity, sedentary behavior, physical fitness, and HRQoL, and the effect of physical activity interventions on HRQoL, in healthy subjects under 18 years old. This study will clarify this relationship and will provide evidence for decision-making. Limitations may include the quality of the selected studies and their characteristics. Only studies published in English and Spanish will be included. © Copyright 2017 the Author(s). Published by Wolters Kluwer Health, Inc.

Adolescents

Fitness

Health related quality of life

Physical activity

Schoolchildren

Sedentary behavior

age

avoidance behavior

data base

fitness

human

intervention study

meta analysis

outcome assessment

physical activity

physical well-being

priority journal

psychological well-being

quality control

quality of life

Review

sedentary lifestyle

sensitivity analysis

social interaction

social status

systematic review

adolescent

child

exercise

female

fitness

health status

male

observational study

physiology

psychology

socioeconomics

Adolescent

Age Factors

Child

Exercise

Female

Health Status

Humans

Male

Observational Studies as Topic

Physical Fitness

Quality of Life

Sedentary Lifestyle

Socioeconomic Factors