

Systematic review of physical activity and exercise interventions on body mass indices, subsequent physical activity, and psychological symptoms in overweight and obese adolescents

Childhood obesity is considered one of the most pressing public health challenges of the 21st century, in both developing and developed countries. Globally, 41 million children under the age of 5 are estimated to have been living with overweight and obesity. Global levels of physical inactivity are rising, putting children at risk of developing obesity, impeding their academic progress, and increasing the likelihood of chronic diseases later in life. The systematic review examined the effects of physical activity and exercise interventions on body mass index (BMI), subsequent physical activity (PA), and psychological symptoms in overweight and obese 12–18-year-olds.

Three electronic databases were searched for randomised controlled trials conducted between January 1950 and August 2013. Of the 7834 studies found, 14 were deemed eligible for inclusion in the analysis. Interventions were complex, primarily delivered face-face, ranging from 12-24 weeks long.

Supervised exercise interventions are more effective in reducing the BMI of adolescents with overweight or obesity. Interventions leveraged behavioural management skills, engaged in motivational interviewing, and provided material, informational, and social support.

With or without supervision, promoting PA using these techniques had a positive effect on health behaviours. When combined with supervision, PA promotion can also positively affect physical self-perception, body satisfaction, and improve eating disorder symptoms amongst children and adolescents. Most studies included in the review taught behaviour management skills through group or individual discussions. The findings of the review further emphasise the multifaceted and challenging nature of PA promotion. There is a need for complex, multi-component interventions to address obesity and physical inactivity.

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