POLICY BRIEF
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Socio-economic differences in overweight and obesity among European adolescents – lack of evidence of effective interventions

Overweight and obesity rates among adolescents vary considerably between countries, by gender, and by socio-economic status. There is a similar pattern in dietary behavior and physical activity, and the trends shows little improvement over the last decade. An overview of summarized research reveals that there is lack of evidence of effective interventions targeting overweight and obesity among adolescents.

Background

Among young people in Europe, one in every seven adolescents aged 15 years is overweight or obese (1). By 2025 overweight is expected to affect more than 16 million children in the European community (2). Within Europe, overweight and obesity rates among adolescents vary considerably between countries, by gender, and by socio-economic status.

The Health Behaviour in School-aged Children (HBSC) survey is a WHO collaborative cross-national study that monitors the health behaviours, health outcomes and social environments of boys and girls aged 11, 13 and 15 years every four years (3). The most recent (2013/2014) survey was conducted in 42 countries across Europe. Self-reported data on height and weight from the study revealed that the prevalence of obesity is higher among, younger adolescents and those with lower affluence. The inequalities in obesity observed have persisted in most of the countries over time (3).

The primary causes of overweight and obesity are energy-related behaviours – physical activity, sedentary behaviour, eating behaviour and sleep – which contribute to an energy imbalance between calorie intake and energy expenditure. In addition, the obesogenic environments have been identified as the key driver for low levels of physical activity and intake of energy-dense foods by encouraging sedentary lifestyle and offer ready availability of energy-dense, nutrient-poor food (4). The HBSC study also shows differences in dietary behaviours and physical activity between European countries and socio-economic groups.

The majority of European adolescents do not meet the dietary recommendations. Daily consumption of fruit and vegetables are low, and the inequalities between socio-economic groups remained unchanged. The trend for physical activities among European adolescents is similar. The proportion of young people achieving the recommended 60 minutes of moderate to vigorous physical activity (MVPA) daily in 2014 was low across all countries and regions in boys (25%) and girls (15%). In addition to the gender differences, adolescents from higher-affluence families reported to be more physically active than adolescents from lower-affluence families (3).

The WHO-Europe Childhood Obesity Surveillance Initiative (COSI) collect objectively measured height and weight data among 6-9-year-old boys and girls using data collected within most countries of the European Region (5). COSI data shows that children's BMI vary across the different parts of the WHO European region. Higher prevalence of overweight, obesity and severe obesity is reported in boys compared to girls.

COSI data indicate that there is heterogeneity in the association between parental socio-economic status and children's BMI (6). Positive as well as negative associations between socio-economic indicators and overweight and obesity has been observed within the European region. In most countries, the distribution of overweight and obesity by parental socio-economic status has remained stable during the time period 2007-2017 (unpublished data from COSI).

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Review of current research

The obesity epidemic is driven by determinants in the physical, social, economic, commercial and cultural environments. Individual level interventions requiring high levels of personal agency may contribute to widening of social inequalities, including inequalities on overweight and obesity.

A recent review of the evidence of effective interventions targeting overweight and obesity among adolescent showed little or no effect on body mass index, or physical activity levels of adolescents, while results from a couple of reviews suggest possibly beneficial effects of public health interventions on dietary behaviours (i.e. consumption of sugar-sweetened beverages). There were a dominance of school-based interventions targeting individual behavioural change (7). Few if any interventions were directed towards the wider community, for example creating more green spaces, improving cycle networks, using nutrient labelling/profiles, or reducing the affordability of unhealthy food and drinks. This is surprising, since it is generally agreed that policy approaches to obesity prevention are required, due to its potential to reach the whole population, reduce inequities, and enable systemic changes, with potential benefits in terms of duration of effects (1).

The review revealed that there is limited evidence of differential effects of interventions on adolescents from different socio-economic groups. This despite the fact that groups with lower SES have the highest and fastest increasing obesity prevalence in Europe.

The review concludes that the evidence-base for the effectiveness of interventions to prevent overweight and obesity in adolescents is weak. In addition, the body of evidence is incomplete, since the vast majority of included interventions targeted the individual and were set in schools, while structural and environmental interventions applied in the wider society were lacking. Community and population level interventions might stand a better chance of having a significant impact on the dietary and physical activity behaviour and health of the adolescent population (7).

Action needs

There is a need for:

- Effective and coordinated policy responses targeting inequalities both in overweight and obesity as well as in the social determinants of health.
- A new understanding of the associations between national overweight and obesity prevalence among adolescents and national policies
- High quality evaluations of the effectiveness of structural and environmental interventions targeting overweight and obesity among adolescents
- Studies on differential effects of interventions targeting overweight and obesity among adolescents on different socio-economic groups

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ABOUT: CO-CREATE is led by the Norwegian Institute of Public Health and brings together 14 international research and advocacy organisations to work with young people to create, inform and promote policies for obesity prevention.

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