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Spillover effects of childhood obesity prevention interventions: a systematic review

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Introduction: Interventions designed to prevent childhood obesity are complex, aiming to improve children's obesity-related behaviours and provide health promoting environments. These efforts often impact not only the individuals, communities and outcomes directly addressed by the intervention, but also those beyond the primary targets. To comprehensively evaluate effectiveness and cost-effectiveness, it is important to understand the broader impacts (or spillover effects) of childhood obesity prevention initiatives. This systematic review aims to assess the spillover effects of childhood obesity prevention interventions.
Methods: Two reviewers searched six academic databases and two trial registries (2007 -2023) to identify studies that reported measuring quantifiable obesity-related and other outcomes in individuals or communities not primarily targeted by an obesity prevention intervention. Critical appraisal was performed for studies reporting statistically significant findings, and a narrative synthesis of the data was carried out.
Results: Twenty academic studies and 41 trial records were included. Studies were primarily conducted in the United States of America (35 academic studies or trial records), followed by Europe (12 academic studies or trial records) and Oceania (8 academic studies or trial records). Studies primarily reported on interventions that targeted children aged under five years (33 academic studies or trial records), followed by school-aged children and adolescents (25 academic studies or trial records). The most frequently reported spillovers were diet or nutrition (nine academic studies and 16 trial records) or physical activity/sedentary behaviour-related (eight academic studies and 17 trial records), followed by body mass index (eight academic studies and 14 trial records). Spillovers were most frequently reported in parents/caregivers, followed by other family members. Among the 20 academic studies, nine reported statistically significant spillover effects.
Conclusion: Limited evidence suggests that childhood obesity prevention interventions may have positive spillover effects in parents/caregivers and families of targeted participants. More evidence of the nature and magnitude of spillover effects from childhood obesity prevention interventions would build a stronger case for obesity prevention in the future.

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Correlation between weight and time of menarche

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The time of first menarche is an important milestone in female sexual maturation. Dates of some studies have shown that early menarche may be associated with obesity. The present study examines the menarche age among adolescent girls in Yerevan city.
Materials-Methods: Dates regarding gestational age, birth weight and height, chronological age of onset of menarche, anthropometric dates at menarche time were collected from medical records of 450 girls.
Results: We found than high percentage of girls including to this study had menarche at age between 9.6-13.0 (n=352(78.2%)), and lower percentage 98 (21.8%) had menarche at age between (14-15). We found that the mean for age of menarche decrease steadily from (14.3; 13.7 to 11.3) years as the BMI increase from (15-19, 20-25, to >25) respectively. We found that there was no relationship of birth weight or small size for gestational age to age at menarche (p>0.05).
Discussion: The study shown that weight, BMI are negatively correlated with menarche age.

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Changes in lifestyle and nutritional status in children at risk of obesity after one-year intervention: MELIPOP Study

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Introduction: Childhood obesity is a public health concern that requires adequate prevention and intervention. Healthy dietary patterns, such as the Mediterranean diet, stands out for their nutritional value and well-known beneficial effects in the prevention of chronic diseases. Physical activity since childhood improves cardiometabolic markers, mental health, social and cognitive development. For these reasons, the present intervention project has focused on modifying both the dietary and physical activity patterns and reducing sedentary behaviours through an integrated approach that should contribute to prevent obesity. The aim was to evaluate the association between changes in the adherence to the Mediterranean diet (MDA) and active lifestyle adherence (ALA) and the nutritional status during first-year follow-up in the control and intervention groups.
Methods: MELIPOP study is a randomised clinical trial conducted in three Spanish cities (NCT04597281). Children aged 3-6 years at baseline, whose parents living with overweight or obesity, were contacted (n=293). After run-in period, baseline measurements were performed in 147 children, who were subsequently randomised. In this study, we only include the first 117 children. Anthropometric and body composition measurements were obtained in 51 children who had been followed up for 12 months in clinical care and 66 in the Mediterranean lifestyle intervention. Weight and height were measured according to the ISAK-protocol and used for body mass index (BMI) derivation. Fat Mass Index (FMI) was calculated from fat mass (kg) by bioelectrical impedance. MDA was assessed using an 18-item questionnaire adapted from the PREDIMED