Perinatal and lifestyle factors mediate the association between maternal education and preschool children’s weight status: the ToyBox study.

Abstract
OBJECTIVE: This study aimed to explore the associations among perinatal, sociodemographic, and behavioral factors and preschool overweight/obesity.

METHODS: Data were collected from 7541 European preschoolers in May/June 2012. Children's anthropometrics were measured, and parents self-reported all other data via questionnaires. Level of statistical significance was set at P ≤ 0.05.

RESULTS: Certain perinatal factors (i.e., maternal prepregnancy overweight/obesity, maternal excess gestational weight gain, excess birth weight, and "rapid growth velocity"), children’s energy balance-related behaviors (i.e., high sugar-sweetened beverage consumption, increased screen time, reduced active-play time), family sociodemographic characteristics (i.e., Eastern or Southern Europe, low maternal and paternal education), and parental overweight/obesity were identified as correlates of preschoolers' overweight/obesity. Furthermore, maternal prepregnancy overweight/obesity, children's "rapid growth velocity," and increased screen time mediated by 21.2%, 12.5%, and 5.7%, respectively, the association between maternal education and preschoolers' body mass index.

CONCLUSION: This study highlighted positive associations of preschooler's overweight/obesity with excess maternal prepregnancy and gestational weight gain, excess birth weight and "rapid growth velocity," Southern or Eastern European region, and parental overweight/obesity. Moreover, maternal prepregnancy overweight/obesity, children's "rapid growth velocity," and increased screen time partially mediated the association between maternal education and preschoolers' body mass index. The findings of the present study may support childhood obesity prevention initiatives, because vulnerable population groups and most specifically low-educated families should be prioritized. Among other fields, these intervention initiatives should also focus on the importance of normal prepregnancy maternal weight status, normal growth velocity during infancy, and retaining preschool children's screen time within recommendations.

KEYWORDS: Children; Lifestyle; Obesity; Perinatal; Sociodemographic
