

# **Mental wellbeing matters in obesity prevention: Exploring the role of mental wellbeing in adolescent obesity prevalence**

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## **Abstract**

Youth obesity prevalence in Europe has been rising over the last few decades. Based on group model building with adolescents in six European countries, poor mental wellbeing was identified as an important driver of youth obesity. This paper presents a system dynamics simulation model that explains the dynamics between poor mental wellbeing and obesity prevalence. It further identifies high-leverage intervention points in the system through scenario analyses. Our findings suggest that poor mental wellbeing, as a consequence of socio-cultural norms and stressors, adversely affects dietary patterns, motivation to engage in physical activity, and sleep behaviours. Successful obesity prevention strategies would thus seek to reduce psychosocial stress and body image pressures in order to improve mental wellbeing and obesity outcomes.

**Keywords:** obesity, adolescents, mental health, mental wellbeing, simulation modelling, system dynamics, obesity prevention, CO-CREATE, HBSC