Leisure-time sedentary behavior and suicide attempt among 126,392 adolescents in 43 countries

Highlights

- Sedentary behavior and suicide attempts are both highly prevalent among school children globally.
- Those who were sedentary for 8 or more hours have a double increased risk for suicide attempts compared to those who are sedentary for <1 h/day.
- Longitudinal studies are needed to provide more insight into causality and the potential mediators (e.g., depression) that are involved.

Abstract

Background

Adolescent suicide is a major global mental health problem. Exploring variables associated with suicide attempts is important for the development of targeted interventions. The aim of the current study was to explore associations between leisure-time sedentary behavior and suicide attempts.

Methods

Data from the Global School-based Student Health Survey were analyzed. Data on past 12-month suicide attempts and self-reported leisure-time sedentary time were collected. Multivariable logistic regression and meta-analysis were conducted to assess the associations.

Results
Among 126,392 students from 43 countries (mean age 13.8 ± 0.96 years; 48.9% female), 10.6% had attempted suicide. The prevalence of suicide attempts increased with increasing sedentary leisure-time per day (from 9% at <1 h/day to 16.8% at >8 h/day). Compared to those engaging in <1 h/day sedentary during leisure-time, there was a dose-dependent increase in odds ratios (ORs) for suicide attempts, with the OR for >8 h/day being 1.45 (95% confidence interval=1.19–1.77).

**Limitations**

The study is cross-sectional, therefore the directionality of the relationships cannot be deduced.

**Conclusions**

Our data suggest that leisure-time sedentary behavior is associated with increased odds for suicide attempt in adolescence. Future longitudinal data are required to confirm/refute the findings to inform public prevention campaigns.

**Keywords**

Suicide  
Sitting  
Sedentary  
Physical activity  
Mental health  
Adolescents