

Weight gain worry for stressed black girls

September 19 2012

Could the impact of chronic stress explain why American black girls are more likely to be overweight than white girls? According to Dr. Tomiyama of the University of California, Los Angeles in the U.S., and her colleagues, higher levels of stress over 10 years predict greater increases in body weight over time in both black and white girls. However, the experience of chronic stress appears to have a greater negative effect on black girls' weight, which may explain racial disparities in obesity levels. The work is published online in Springer's journal, *Annals of Behavioral Medicine*.

In the United States, the prevalence of obesity in black populations is 50 percent higher than in whites. This difference is apparent even in childhood, and particularly in [female adolescents](#). In addition, ethnic minorities tend to experience greater psychological stress than whites due, in part, to perceived racial discrimination.

Tomiyama and team looked at whether the experience of chronic stress in young girls over a 10-year period might have an effect on [Body Mass Index](#) (BMI), a measure of obesity. They were also interested in whether this effect might be different in white and black teenage girls.

Using data from the National Heart, Lung and Blood Institute's (NHLBI) Growth and Health Study, the researchers assessed the prevalence of obesity in 2,379 black and white girls beginning at age 10 and followed up for 10 years. They also looked at their experience of psychological stress over that time.

Over 10 years, more black girls were overweight or obese than white girls, who reported more stress than black girls. In addition, levels of chronic stress predicted greater weight in both groups. Even though black girls reported less stress overall, the effect of [chronic stress](#) on weight was stronger for these girls with one unit increase in stress leading to 0.8 BMI unit increase every two years. Comparatively, one unit of stress led to 0.55 BMI unit increase in white girls.

The authors conclude: "Our study documents a relationship between chronic perceived stress and BMI over a decade of growth in black and white girls. However, the relationship between perceived stress and BMI is stronger in black girls. [Psychological stress](#) may lead to weight gain through behavioral pathways, such as increased food consumption and sedentary lifestyles, but also directly through prolonged exposure to biological stress mediators such as cortisol."

Given how ubiquitous stress is, these findings raise the flag that stress may be playing a major role in the obesity epidemic as well as contributing to [racial disparities](#).

More information: Tomiyama AJ et al (2012). Chronic psychological stress and racial disparities in Body Mass Index change between Black and White girls aged 10-19. *Annals of Behavioral Medicine*; [DOI 10.1007/s12160-012-9398-x](#)

Provided by Springer

Citation: Weight gain worry for stressed black girls (2012, September 19) retrieved 9 April 2024 from <https://medicalxpress.com/news/2012-09-weight-gain-stressed-black-girls.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private

study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.