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Longitudinal bidirectional relations between body dissatisfaction and depressive symptoms among Black adolescents: A cross-lagged panel analysis

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ABSTRACT

This protocol is

1) [To compare body dissatisfaction and depressive symptoms by weight status \(overweight/obesity vs. healthy weight\) among Black adolescents 12-13 years old.](#)

2) To investigate the relationship between body dissatisfaction and depressive symptoms among Black adolescents 12-13 years old, who were overweight or obese.

3) To investigate the relationship between body dissatisfaction and depressive symptoms among Black adolescents 12-13 years old, who were of healthy weight.

1 Purpose

1) [To compare body dissatisfaction and depressive symptoms by weight status \(overweight/obesity vs. healthy weight\) among Black adolescents 12-13 years old.](#)

2) To investigate the relationship between body dissatisfaction and depressive symptoms among Black adolescents 12-13 years old, who were overweight or obese.

3) To investigate the relationship between body dissatisfaction and depressive symptoms among Black adolescents 12-13 years old, who were of healthy weight.

Target variables:

Body dissatisfaction: discrepancy between perceived and ideal body weight and shape

Depressive symptoms

2 Inclusion Criteria

A sample of adolescents in middle schools, who were recruited to participate in a random controlled trial on overweight/obesity prevention, promoting healthy diet and physical activity.

The adolescents who were Black.

The adolescents who were 12-13 years old at the first assessment (baseline)

The adolescents who were healthy weight (5-85th BMI percentile) or overweight/obese ($\geq 85^{\text{th}}$ BMI percentile).

Both sexes.

3 Exclusion Criteria

1) The adolescents who were not Black

2) The adolescents who were younger than 12 years or older than 13 years at baseline

3) The adolescents who were underweight ($\leq 5^{\text{th}}$ BMI percentile)

4 Study Design

Longitudinal with three assessments: baseline (T1, 7/1/2002-4/16/2004), ~10 months (T2, 12/2/2002-11/4/2005) and ~24 months after baseline (T3, 2/3/2004-11/7/2006)

5 Study Participation and Patient Registration / Allocation Procedures

- (1) The obesity prevention intervention trial has been registered with the Clinical Trials Registry. (ClinicalTrials.gov Identifier: NCT00746083).
- (2) The University of Maryland Baltimore Institutional Review Board approved this research;
- (3) All parents signed informed consent, and all adolescents signed informed assent.

6 Surveys / Questionnaires

Data on socio-demographic characteristics, body dissatisfaction and depressive symptoms were collected through computerized audio computer-assisted self-interview (ACASI).

7 Measures

Adolescent characteristics

Sex, age, race/ethnicity, height, body weight, birthdate, poverty, maternal education, maternal overweight/obesity and intervention status.

Depressive symptoms

Depressive symptoms were measured with the Beck Depression Inventory (BDI)

Consisting of 21 items relating to depressive symptoms in the past week, e.g., sadness, feeling guilty, and fatigue, using a 4-point response scale of severity.

A summary score was calculated with higher scores indicating more depressive symptoms.

Body dissatisfaction

Body dissatisfaction was measured by comparing perceived body image with ideal image, using a culturally adapted, age- and sex-specific, 9-point silhouette scale, modified from Stunkard, Sørensen, & Schulsinger, (1983) to more closely resemble Black youth.

The silhouettes were ordered from thinnest (rating=1) to heaviest (rating=9). The adolescents identified the silhouette closest to their current body size and then on a separate, but identical scale, the silhouette they desired.

The discrepancy score was defined as perceived body size minus desired body size, with a positive discrepancy score indicating desire for a thinner body and a negative score indicating desire to be heavier.

8

Analysis

T-test for continuous variable and Chi-square tests (or Fisher's exact test) for categorical variable by weight status

Pearson correlation coefficients among body dissatisfaction and depressive symptoms over time and the covariates.

Trend test for change of body dissatisfaction and depressive symptoms over time

Cross-lagged panel model (CLPM) to examine the reciprocal relations between body dissatisfaction and depressive symptoms, accounting for the stability of depressive symptoms or body dissatisfaction across time.



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