



ADHD–Eating Disorder Co-Occurrence and Disparities Among Young Adult Women of Color

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INTRODUCTION

Attention-deficit/hyperactivity disorder (ADHD) is a neurodevelopmental disorder that commonly co-occurs with eating disorders (EDs), particularly among women. Research suggests that hormonal fluctuations across the menstrual cycle influence dopamine regulation, which affects ADHD symptoms such as inattention, impulsivity, and emotional dysregulation. Roberts et al. (2018) found that women with ADHD experience worsening symptoms during the premenstrual phase, and Klump et al. (2013) reported that hormonal changes are associated with increased binge eating. However, Phimphasone et al. (2023) emphasize that women of color remain underrepresented in mental health research, limiting understanding of how these factors interact with social determinants of health. Because no single accessible dataset captures all of these constructs, this study uses two datasets: the Healthy Minds Study, to test whether an ADHD diagnosis and a disordered-eating screen co-occur among young adult women of color and vary by racial/ethnic group and racial discrimination; and a synthetic menstrual-cycle dataset, to demonstrate an analytic approach for cycle-related symptoms.

H1: ADHD diagnosis and disordered-eating screens will be positively associated and will differ across racial/ethnic groups.

METHOD

This study analyzed two independent, de-identified datasets, reported together but not merged.

Analysis 1: Healthy Minds Study.

Analysis 1: Healthy Minds Study. Data came from the 2024–2025 Healthy Minds Study (N = 84,735; ages 18+; 135 institutions). The analytic sample was women of color—respondents female at birth who endorsed any non-White racial/ethnic category (n = 9,917). ADHD was a self-reported professional diagnosis (non-endorsement coded 0). Disordered eating used the Screen for Disordered Eating (positive ≥ 3). Racial discrimination used the Trauma Symptoms of Discrimination Scale. Applying non-response weights and clustering standard errors by institution, logistic regression tested the ADHD–ED association, with race/ethnicity and discrimination as moderators, adjusting for age.

Analysis 2: Menstrual-Cycle Dataset.

Analysis 2: Menstrual-Cycle Dataset. A publicly available synthetic dataset (100 simulated users; 6–12 cycles each) illustrated the analytic approach for cycle symptoms. Because observations were nested within users, a mixed-effects logistic regression modeled the symptom (mood-related vs. other) on stress, sleep, BMI, cycle length, and diet, with a random intercept for user. As the data are synthetic, results are a methodological demonstration, not evidence about real cycle effects.

FIGURES

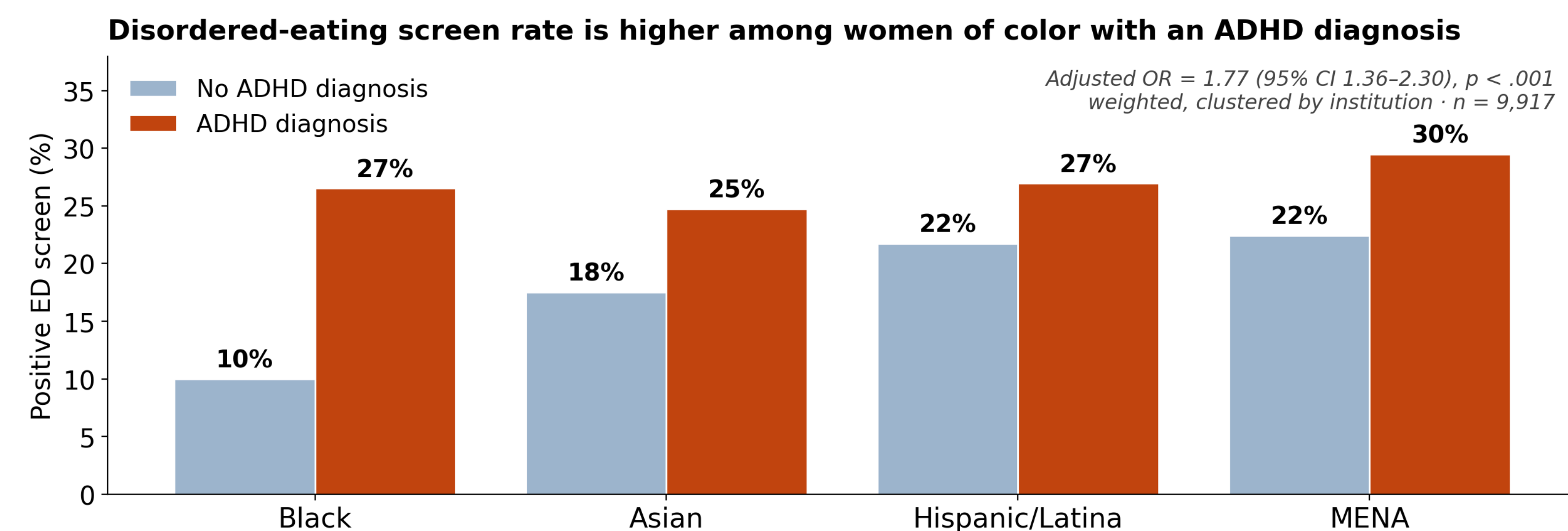


Figure 1. Positive disordered-eating screen rate by ADHD diagnosis and racial/ethnic group (HMS; weighted; n = 9,917).

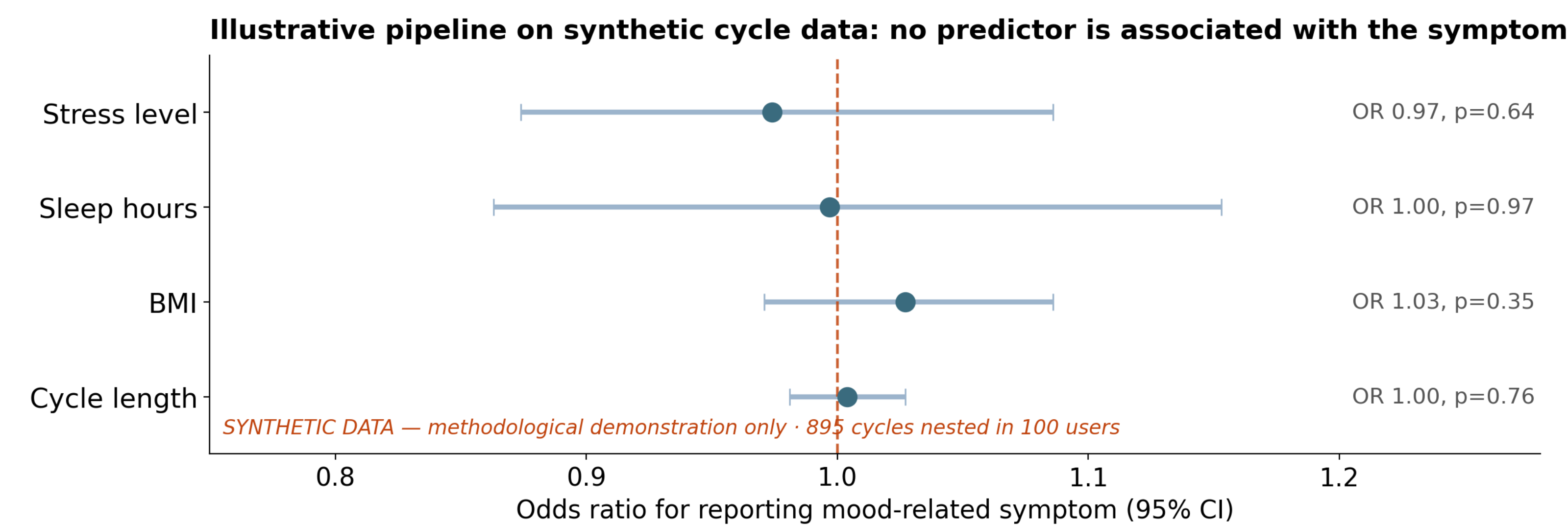


Figure 2. Odds ratios for a mood-related symptom on synthetic cycle data; all intervals cross 1.0 (demonstration only).

RESULTS

Analysis 1: Healthy Minds Study.

Analysis 1: Healthy Minds Study. The sample included 9,917 young adult women of color. Overall, 9.0% reported an ADHD diagnosis and 18.9% screened positive for disordered eating. Positive screens were more common among women with ADHD (25.7%) than without (18.2%). In a logistic regression using survey weights and clustering by institution, an ADHD diagnosis was linked to 1.77 times higher odds of a positive eating-disorder screen (95% CI 1.36–2.30, $p < .001$). This pattern held across every group (Figure 1), with the largest gap among Black women (26.5% vs. 10.0%). Racial discrimination was also tied to higher odds of a positive screen (OR = 2.05, $p < .001$). These findings support H1.

Analysis 2: Menstrual-Cycle Dataset (Synthetic).

Analysis 2: Menstrual-Cycle Dataset (synthetic). A clustered logistic regression modeled a mood-related symptom across 895 cycles from 100 simulated users. No predictor—stress, sleep, BMI, or cycle length—was associated with the symptom (all $p > .34$; Figure 2). Because the data are synthetic, these null results are expected and simply show the analysis pipeline works. H2 still awaits testing on real cycle data.

DISCUSSION

Consistent with our hypothesis, young adult women of color with an ADHD diagnosis commonly screen positive for disordered eating symptoms. This comorbidity was found to be significantly higher than peers without an ADHD diagnosis. In addition to an ADHD diagnosis, an experience of racial discrimination was also associated with a greater risk of disordered eating symptoms. These results align with previous research showing that ADHD related changes such as impulsivity, emotional regulation difficulties, and executive functioning defects may increase vulnerability in unhealthy eating behavior.

The menstrual cycle analysis did not find significant relationships between cycle-related factors and new symptoms. Although this analysis did not find significance, these results came from a synthetic data set designed to demonstrate the planned statistical approach rather than to test real-world effects. As a result, no conclusion about hormonal inflection can be drawn from the analysis. Future research should use longitudinal menstrual cycle data to better understand how hormonal changes affect ADHD and disordered eating symptoms over time.

Overall, this study highlights the importance of examining ADHD and disordered eating comorbidity, especially in women of color who continue to be underrepresented in mental health research. Improving representation in future studies and incorporating culturally responsive approaches may help clinicians identify individuals with greater risk and provide earlier, more effective support.

ACKNOWLEDGEMENTS

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