PS3-19:

Association of Racial Discrimination and Overweight Status Among Adolescents

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Background/Aims: The percent of overweight adolescents has tripled in the last 30 years, with increasing the risk for obesity and chronic diseases. Evidence suggests racial discrimination has implications for academic performance and health; however, research examining its contribution to obesity among adolescents is limited. We examined the association between discrimination and overweight status in a racially-diverse sample of healthy adolescents. **Methods:** Adolescents age 14-17 years completed a single research visit between November 2009 and June 2011. Height and weight were measured by trained staff. Discrimination was measured using 8 items from the school discrimination scale (SDS) which assesses the frequency with which adolescents perceive personal racial discrimination at school by their teachers and peers. Overweight was defined as a body mass index ≥85th percentile for sex and age. Logistic regression was used to estimate the association of discrimination with overweight status. **Results:** The sample consisted of 333 adolescents (mean age 16.4±1.0 years; 152 (44.6%) male; 174 (55.2%) African-American (AA); 127 (38.1%) overweight). Males had higher scores on the peer and teacher SDS than females, 1.26±0.47, 1.27±0.59 vs. 1.14±0.33, 1.18±0.48, P <.01 and P = 0.01 respectively. In crude analyses, adolescents with higher peer and teacher SDS scores were more likely to be overweight, OR = 1.3 P = 0.09 and OR = 1.3 P = 0.02, respectively. In race- and gender-specific models, white males with a higher teacher SDS score had a 5.1 higher odds of being overweight, P = .04. The association persisted with adjusting for age. There was no association among white females, AA males or AA females for teacher SDS score and overweight status, P = 0.68, P = 0.27, and P = 0.58 respectively. Additionally, we found no association by race or gender for peer SDS and overweight status. **Conclusions:** Our results suggest that adolescents, particularly males that report being discriminated against by their teachers, are more likely to be overweight. We likely did not observe an association between peer SDS and overweight status, because our population was recruited from a highly segregated area, where students attend schools with peers of the same race. Given adolescent health is predictive of adult health, additional research examining the role of discrimination in producing poor health outcomes among adolescents is warranted.

Keywords: Overweight; Discrimination; Racial Discrimination

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PS3-20:

Prevalence of Obesity and Extreme Obesity in Children Aged Three to Five Years

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Background/Aims: Early childhood adiposity may have significant later health effects, highlighting the importance of early recognition in young children. This study examines the prevalence and recognition of obesity and severe obesity in preschool-aged children. **Methods:** The electronic medical record was used to examine body mass index (BMI), height, sex, and race/ethnicity in 42,559 children aged 3-5 years 2007-2010 within Kaiser Permanente Northern California. Normal BMI (BMI <85th percentile); overweight (BMI 85th-94th percentile); obesity (BMI ≥95th percentile); and extreme obesity (BMI ≥99th percentile or BMI ≥1.2x95th BMI percentile) were classified using the 2000 Center for Disease Control and Prevention growth charts. Provider recognition of elevated BMI was examined for obese children aged 5 years. **Results:** Among 42,559 children, 12.4% (2,698 of 21,720) of boys and 10.0% (2,077 of 20,839) of girls had BMI ≥95th percentile. The prevalence was highest among Hispanics (18.2%, 982 of 5,397 boys and 15.2%, 760 of 4,988 girls), followed by blacks (12.4%, 161 of 1,138 boys and 12.7%, 154 of 1,216 girls). A positive trend existed between BMI category and median height percentile, with obesity rates highest in the highest height quintile. The proportion with BMI ≥99th percentile was 3.9% (1,670 of 42,559), nearly two-fold higher for boys (66.8%, 1,116 of 1,670) versus girls (33.2%, 554 of 1,670), and identified a larger proportion of children compared to BMI ≥1.2x 95th BMI percentile (1.6%, P <0.001). Among those aged 5 years, 77.9% of obese children (1082 of 1389) had provider diagnosis of obesity or elevated BMI, increasing to 84.5% (424 of 502) among the subset with severe obesity. **Conclusions:** Obesity and severe obesity are evident as early as age 3-5 years, with race/ethnic trends similar to older children. This study underscores the need for continued recognition and contextualization of early childhood obesity in order to develop effective strategies for early weight management.

Keywords: Obesity; Pediatrics; Body Mass Index

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PS3-29:

Impact of BMI and Change in BMI on Progression from Normotension to Prehypertension or Hypertension in Patients Ages 3-17

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Background/Aims: Overweight and obesity among US children and adolescents is an important public health problem. Conditions associated with obesity, such as type 2 diabetes, hypertension, and hypercholesterolemia, are becoming more common in children. This study examined the relationship between changes in BMI percentile and incident prehypertension and hypertension in a cohort of children and adolescents. **Methods:** Study subjects were 23,578 patients, ages 3-17, with three or more outpatient primary care visits between 2007 and 2010 at HealthPartners Medical Group, Kaiser Permanente Colorado, or Kaiser Permanente Northern California. Data were extracted from electronic health records (EHR). Change in BMI was defined as: increase, decrease, stayed obese, stayed overweight, and stayed healthy weight using established BMI percentile cut-points. Incident prehypertension and hypertension were defined using blood pressures and diagnosis codes from the EHR. We used time-dependent Cox proportional hazards models to estimate the hazard of change in BMI percentile with incident prehypertension and hypertension. **Results:** Over a median 2.6 years follow-up, there were 7,232 cases of incident prehypertension, 148 diagnoses of incident hypertension, and 107 additional cases of incident hypertension based on blood pressure data from the EHR. Seventy-one prehypertensives went on to develop hypertension. Those who stayed obese, stayed overweight, and increased BMI had increased hazard of incident prehypertension (1.96, 1.39, and 1.49, respectively) and increased hazard of incident hypertension (3.61, 1.21, and 1.83, respectively) compared with those who stayed healthy weight. **Conclusions:** Persistently high BMI or increasing BMI over time was associated with pronounced increase in risk of both incident prehypertension and hypertension. Future research should examine factors associated with the development and recognition of hypertension.

Keywords: Obesity; Hypertension; Pediatrics

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PS3-30:

Recidivism to Uncontrolled BP Levels in Previously Controlled Hypertension Patients

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Background/Aims: We posit that as rates of hypertension (HT) control improve nationally, recidivism from controlled to uncontrolled HT will emerge as a major obstacle to ongoing improvement in overall population rates of HT control. To probe this hypothesis, we examined rates and predictors of HT recidivism in adults with baseline adequate HT control who are receiving care at medical groups that have overall high rates of HT