****

**EPI21 News Release**

**Presentation #5**

**Embargoed until 10 a.m. CT/ 11 a.m. ET, Thursday, May 20, 2021**

**Contact Information:** Chelsea Singleton, Ph.D., may be reached at [csingle1@illinois.edu](mailto:csingle1@illinois.edu) or 217-300-2189 (*please do not publish contact information*).

**Session Assignment**

02A - Health Equity and Social Justice Presentation #5; Speaking Time: 5/20/2021 11:47:00 AM - 5/20/2021 11:55:00 AM)

**Title**

**Violent Crime, Physical Inactivity, And Obesity: Examining Differences In Spatial Relationships By Racial/ethnic Composition Of Community Residents**

**Abstract Content**

**Introduction:** Violent crime (e.g., homicide, aggravated assault) is a major public health issue that disproportionately affects communities of color in large urban centers. Studies have reported that residents in high crime communities are less likely to engage in physical activity. There is limited understanding of how violent crime influences physical inactivity and obesity at the community level. We aimed to address this gap by examining differences in spatial relationships between violent crime rate, physical inactivity, and obesity by racial/ethnic composition of community residents in Chicago, IL. **Hypothesis:** We assessed the hypothesis that violent crime rate is associated with the prevalence of physical inactivity and obesity at the census tract level in Chicago, IL. **Methods:** We conducted an ecological assessment of 2018 census tract data obtained from various sources. We used data from the City of Chicago to calculate per capita violent crime rate (number of incidents per 1,000 residents) for all census tracts (N = 801). Data on physical inactivity and obesity prevalence (%) were acquired from the CDC. Socio-demographic data (i.e., % Non-Hispanic (NH) White, % NH Black, % Hispanic, median household income) were obtained from the census bureau. We examined spatial lag and error models to determine if violent crime rate is associated with % physical inactivity and % obesity after controlling for socio-demographic characteristics and amenity availability (i.e., per capita outdoor parks and grocery stores). Stratified models were examined to identify differences in associations among majority NH White, NH Black, and Hispanic census tracts (defined as ≥ 50% representation). **Results:** NH Black census tracts (n = 278) had significantly higher rates of violent crime, physical inactivity, and obesity than Hispanic (n = 169) and NH White tracts (n = 240). Overall, violent crime rate was positivity associated with % physical inactivity (p<0.001) but not % obesity (p=0.77) in Chicago after controlling for covariates. Stratified models revealed that violent crime rate was positively associated with % physical inactivity (p<0.001) and % obesity (p=0.01) among NH Black tracts. Violent crime rate was not associated with % physical inactivity or % obesity among Hispanic and NH White census tracts. **Conclusions:** Racial/ethnic composition of residents appears to influence census-tract level associations between violent crime rate, physical inactivity, and obesity. Violent crime appears to be more relevant to physical inactivity and obesity in Chicago’s NH Black communities compared to Hispanic and NH White communities.

**Author Block**

**Chelsea R Singleton**, Fikriyah Winata, Oluwafikayo S Adeyemi, Kaustubh V Parab, Susan Aguiñaga, Univ of Illinois at Urbana-Champaign, Champaign, IL