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Georgia Southern Assesses Child Body Mass Index Perceptions

May 30, 2017

In the USA, African American children residing in rural areas are disproportionately affected by childhood obesity. One strategy for preventing childhood obesity is helping caregivers to recognize their child is overweight or obese. The purpose of this study is to assess African American caregivers’ perceived level of their child’s obesity status and concordance between caregiver’s reported height and weight of their children compared to the objective measure of their child’s height and weight.

Caregivers completed a paper-based survey about perceptions of their child's weight status including body silhouettes (n = 119) and self-reported their child’s body mass index status (n = 68). Children’s (n = 71) height and weight were objectively measured. Spearman rho and independent sample t tests were calculated to assess the relationship between caregiver’s self-reported and objective BMI status. Caregiver’s visually perceived their child’s weight status to be underweight; yet, self-reported that their child’s body mass index status was obese. The Spearman’s rho correlation indicated a significant relationship between caregiver’s self-reported and objective body mass index (r = .39, p < .001). The independent sample t test reflected that the mean self-reported body mass index and objective body mass index were statistically significant with calculated body mass index perception. The investigation of three different methods for assessing body mass index perceptions may contribute to the development of tailored programs and interventions that include counseling strategies that increase parental education about their child’s body mass index.


Dr. Dayna Alexander, alumni of the Doctorate of Public Health at the Jiann-Ping Hsu College of Public Health at Georgia Southern University (JPHCOPH) was the lead author. Drs. Moya L. Alfonso and Andrew Hansen, JPHCOPH faculty in the department of Community Health were co-authors.
Georgia Southern Collaborates on Mosquito Surveillance in Response to Zika Virus

May 30, 2017

Zika virus (ZIKV) was declared an international public health emergency by the World Health Organization on February 1, 2016. Due to the known and estimated range of the ZIKV mosquito vectors, southern and central US states faced increased risk of ZIKV transmission. With the state of Georgia hosting the world’s busiest international airport, a climate that supports the ZIKV vectors, and limited surveillance (13 counties) and response capacity, the Department of Public Health (DPH) was challenged to respond and prevent ZIKV transmission. This case study describes and evaluates the state’s surveillance capacity before and after the declaration of ZIKV as a public health emergency.

We analyzed surveillance data from the DPH to compare the geographical distribution of counties conducting surveillance, total number, and overall percentage of mosquito species trapped in 2015 to 2016. Counties conducting surveillance before and after the identification of the ZIKV risk were mapped using ArcMap 10.4.1. Using SAS (version 9.2) (SAS Institute, Inc, Cary, NC). We performed the independent 2 sample t test to test for differences in prevalence in both years, and a chi-square (χ²) analysis to test for differences between numbers of species across the 13 counties. In addition, weighted frequency counts of mosquitoes were used to test (χ²) an association between major mosquito vector species and 7 urban counties. Lastly, using data from 2012-2016, a time-trend analysis was conducted to evaluate temporal trends in species prevalence.

From 2015 to 2016, surveillance increased from 13 to 57 (338% increase) counties geographically dispersed across Georgia. A total of 76,052 mosquitoes were trapped and identified in 2015 compared to 144,731 (90.3% increase) in 2016. Significant differences between species (P<.001) and significant associations (P<.0001) between 7 urban counties and major mosquito vectors were found. Significant differences in prevalence were found between several species and year highlighting species-year temporal trends.

The DPH collaborative response to ZIKV allowed a rapid increase in its surveillance footprint. Existing and new partnerships were developed with the military and local health departments to expand and share data. This additional surveillance data allowed DPH to make sound public health decisions regarding mosquito-borne disease risks and close gaps in data related to vector distribution.

“Georgia’s Collaborative Approach to Expanding Mosquito Surveillance in Response to Zika Virus: A Case Study,” was recently published in The United States Army Medical Department Journal.

Dr. Chris Rustin, assistant professor of environmental health sciences was the lead author, and Dr. Haresh Rochani, assistant professor of biostatistics along with JPHCOH students, Mr. Deonte Martin, Mr. Varadan Sevilimedu, Mr. Sarbesh Pandeya, and Dr. Rosemarie Kelley, DPH, were co-authors.