Overweight, Commuting to School, Urban Design in Chinese School Neighborhoods

Lin Lin
East China Normal University

Background: China's rapid urbanization since 1978 has involved economic, social, and environmental changes that have led to the transformation of life style that increases risk for physical inactivity, overweight, and obesity among school age children. Recent studies found that Chinese school age children's duration of physical activities, such as commuting to school by bike or on foot, doing exercises, and housing works, has been decreased; meanwhile, the length of time for sedentary behaviors, such as doing homework, watching TV, and using computer has been increased. However, few empirical studies investigated the relationship among the design of the built environment, school age children's commuting to school, and their overweight and obesity in China. This study intends to fill this gap.

Methods: Thirty-two elementary schools, evenly chosen from four strata of residential building density, located in 16 districts of Shanghai, China, were studied. Observations were carried out to tally commute modes to and from school. Modified Chinese version of the Children's Leisure Activities Study Survey has been/will be conducted at each school. Currently, 200 surveys from 10 schools were completed. Multinomial logistic regression models will be developed to examine the associations between travel modes to school, urban design attributes, and school age children's BMI.

Results: Our observation showed that, on average, 36% of school age children were escorted to school via e-bike and 4% were escorted via bike, 29% walked to school alone, 22% walked to school with a guardian, and 8% were driven to school. However, travel modes to school, except for walking to school alone, were not associated with built environment attributes.

Conclusions: This is one of the first studies in China to investigate the association among the design and the built environment, school age children's commuting to school, and their overweight and obesity.