

Neighborhood stressors associated with biological stress in kids in New Orleans

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Neighborhood stressors - the density of liquor or convenience stores, reports of domestic violence and rate of violent crime - were associated with signs of biological stress in a small study of black children in neighborhoods in the greater New Orleans area.

Many children are exposed to violence and a greater understanding of the effect on children's health is critical because social environmental conditions likely contribute to health disparities. Socioeconomically disadvantaged communities have a higher exposure to violence.

Katherine P. Theall, Ph.D., of the Tulane University School of Public Health and Tropical Medicine, New Orleans, looked at the association of the three neighborhood-level stressors with biological outcomes reflected by [telomere length](#) (parts of chromosomes that can help measure stress on the body because shortening relates to cell aging) and cortisol (a stress hormone) functioning.

The study included 85 children between the ages of 5 to 16 (50 of them were girls) from 52 neighborhoods around New Orleans from 2012 through half of 2013. Saliva samples were used determine average relative telomere length and cortisol reactivity. Neighborhood stressors were measured within radiuses of the children's homes.

The authors report each neighborhood stressor was associated with biological stress as measured by shortened telomere length and cortisol functioning.

Limitations of the study include its lack of applicability to other demographic groups. The study also cannot establish causality.

"Neighborhoods are important targets for interventions to reduce the effect of exposure to violence in the lives of children. These findings provide the first evidence that objective exposures

to neighborhood-level violence influence both physiological and cellular markers of [stress](#), even in [children](#)," the study concludes.

More information: *JAMA Pediatr.* Published online November 14, 2016. [DOI: 10.1001/jamapediatrics.2016.2321](#)

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