Cloudy water, even if it's safe, affects rural immigrants' health

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Poor-quality tap water, or even a perception that the water is bad, can lead to an extra economic burden on low-income families in California's Central Valley. (Thinkstock photo)

Cloudy tap water may have a greater effect for California's rural immigrants than merely leaving behind a bad taste, according to a new

policy brief released by the Center for Poverty Research at the University of California, Davis.

Researchers looked at the connection between water quality and child obesity in two poor immigrant communities in California's Central Valley—San Joaquin and Firebaugh. Poor-quality tap water, or even a perception that the water is bad, combined with environmental factors such as lack of access to healthy foods and nutrition education, likely contribute to health disparities in these communities, the study finds.

"If the tap water that comes out looks dirty or has a poor taste, they're not going to have a lot more confidence in the drinking system here," said Lucia Kaiser, a nutrition specialist with UC Davis Cooperative Extension and the study's co-principal investigator. "The immigrant populations in these communities come from Mexico, where they may have experienced unsafe drinking water in rural areas," she said.

Kaiser interviewed 27 mothers from these communities after giving a class on the health effects of sugar-sweetened beverages. Most of the women reported relying on purchased and, to a lesser extent, home-filtered water for drinking and cooking. Kaiser said that the additional cost represents an extra burden on these low-income families.

Can't afford bottled water

"In these communities, more than a third can't afford to put enough food on their table, and now they have to buy drinking water, too. Every expense really matters," said Kaiser.

The study sought to find a link between poor-quality tap water and child obesity, which may in part be caused by increased consumption of sugary drinks, such as soda. The prevalence of obesity and Type 2 diabetes in California is higher among low-income minority populations

than white affluent populations. Almost half of the children in this study were overweight or obese when the study began.

Kaiser said that other published studies have found a link between water quality and increased consumption of sugary drinks, but this paper does not have enough data to establish that connection.

"This is an issue with many layers," said Caitlin French, a doctoral student in nutritional biology at UC Davis and one of the brief's co-authors. "It's not just about whether there's safe or unsafe drinking water."

French looked at Environmental Protection Agency data for the water systems serving these communities, including raw water-quality data from the California Water Quality Monitoring Database. She identified 13 systems, with the majority in these communities served by two state-regulated systems. The others rely on at least 11 different small, public or private water systems, which may be regulated by the state, locally by county regulators or may lack any regulation at all. Most of the current water quality problems French identified affected these 11 smaller systems.

All of these systems have been identified as having violations for contamination in the last 12 years for high levels of coliform bacteria, arsenic or disinfection byproducts. These violations affected more than 10,000 residents. Two systems had reporting violations, meaning that they either did not test for contaminants or did not report findings to those they serve.

"Part of it is just that low-income communities don't have the resources to remove contaminants from their water," said French. "Wealthier communities can treat and remove it before it gets to the tap."

The study is part of the health intervention Niños Sanos, Familia Sana (Healthy Children, Healthy Families) project, which takes place in the cities of San Joaquin and Firebaugh. The program, a partnership between UC Davis and these towns, targets Mexican-origin children ages 3-8 years and their families to integrate nutrition, physical activity, economic and art interventions to create healthier communities. The project is led by UC Davis professor of Chicana/o studies and vice chancellor of student affairs Adela de la Torre.

More information: The full policy brief is available online: poverty.ucdavis.edu/policy-bri … mmigrant-communities

Provided by UC Davis

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