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Garden-enhanced intervention improved BMI and nutrition knowledge of California students

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The factors that affect rates of childhood obesity are complex. For example, parent feeding practices have been shown to be influential, but that influence has also been shown to change with age. Factors such as access to fruits and vegetables and the availability of safe space for physical exercise have also been associated with a risk for obesity. Because schools can act as a focal point for engaging students, families, educators, administrators, and community members, researchers implemented and evaluated a multicomponent, school-based nutrition intervention in an attempt to improve children's dietary behaviors and prevent childhood obesity. Their results are published in the *Journal of Nutrition Education and Behavior*.

The Shaping Healthy Choices Program (SHCP) was implemented in four schools in two California districts, with 179 fourth grade students (aged 9-10 years) serving as controls and 230 as part of the intervention group. During the program, which extended over one academic year, students engaged in classroom nutrition education enhanced by gardens established at the schools, harvested vegetables for cooking demonstrations, and shared the harvest with their families. In addition, newsletters corresponding to lessons were sent home, health fairs were held at school, salad bars were installed in schools, and school wellness committees were established.

As a result of SCHP implementation, students participating in the

intervention demonstrated significant improvements in nutrition knowledge and vegetable identification compared to control students. However, vegetable preference and fruit and vegetable intake did not improve, nor did general or dietary parenting practices significantly change. However, significant positive changes were observed in body measurements.

"The BMI and waist-to-height ratio were greatly improved in intervention groups, with the overweight or obese population declining from 55.6 to 37.8% at the Northern California intervention school," lead author Rachel Scherr, PhD, said. "The dramatic decrease in BMI, although unexpected in this short time frame, demonstrated that the SHCP was effective due to positive health messages and reinforcing nutrition concepts throughout the school and home environments."

By focusing on message reinforcement and connections to community, the researchers were able to achieve significant improvements in health-related outcomes. These encouraging results suggest that large-scale adoption through partnerships with Cooperative Extensions may positively impact childhood obesity rates. However, future studies should continue to use the SHCP in order to obtain data and further refine the intervention.

More information: Rachel E. Scherr et al, A Multicomponent, School-Based Intervention, theShaping Healthy Choices Program , Improves Nutrition-Related Outcomes, *Journal of Nutrition Education and Behavior* (2017). DOI: 10.1016/j.jneb.2016.12.007