



A healthy urban tree canopy provides myriad environmental and health benefits. Unfortunately, low-income neighborhoods often have inadequate canopy, and their residents suffer from higher rates of chronic diseases. Expanding the tree canopy cover in low-income urban neighborhoods could help address health disparities while achieving environmental goals. Furthermore, when community members plant trees, the process itself could have an immediate effect on building social connections and cohesion that support mental and physical health. In California, tree planting as a means for achieving health improvements is being tested through Koa Family.

Koa Family is a project with University of California Davis Institute for Population Health Improvement (IPHI). The objective is to reduce risk and prevalence of obesity among low-income mothers. 100 overweight low-income mothers residing in two low-income communities are enrolled in the project. The intervention being explored is community tree planting to improve long term health. The 100 participants are in the process of planting 300 five-gallon trees in their neighborhoods. They work with an ISA Certified Arborist (Davey Resource Group) to identify planting sites, secure permissions, and arrange for maintenance. Participants receive education on tree benefits and tree planting and care. The

arborist coordinates and supervises tree planting activities.

The association between urban tree canopy and health is well documented. Koa Family offers a unique opportunity to test health effects of changing tree canopy cover via community members. IPHI administers surveys and interviews to study participants at intervals. Participants also take part in a focus group after tree planting. Data is being used to test the following hypotheses:

1. Participation in neighborhood tree planting will result in increased awareness and appreciation of neighborhood trees, as well as increased self-efficacy to make positive changes within one's community.
2. Participation in neighborhood tree planting will result in increased self-reported health and quality of life.

The tests use mixed methods. Quantitative analyses compare changes in survey responses before and after tree planting. Qualitative analyses identify the role of tree planting in catalyzing changes in health-related behaviors and well-being. i-Tree, or similar software, is used to document the trees planted and quantify their benefits.

This is a unique project to study longitudinal effects of participation in neighborhood tree planting campaigns in low-income communities. Results will contribute to better understanding of the impacts of working with community members to increase urban tree canopy where needed most.

#### Reference Materials:

UC Davis KOA Family Study

- [https://health.ucdavis.edu/iphi/Programs/KOA/Resources/Results\\_of\\_Formative\\_Research.pdf](https://health.ucdavis.edu/iphi/Programs/KOA/Resources/Results_of_Formative_Research.pdf)
- [https://health.ucdavis.edu/chpr/community\\_engagement/KOA%20Family/index.html](https://health.ucdavis.edu/chpr/community_engagement/KOA%20Family/index.html)
- <https://health.ucdavis.edu/iphi/Programs/KOA/index.html>



**1. & 2.** Planting fruit trees in a community garden as part of the KOA family project. Photo Credit: UC Davis IPHI.

