

Salud America!

Pilot Investigator Project Results

Dina C. Castro, MPH, Ph.D.
FPG Child Development Institute
University of North Carolina at
Chapel Hill



Robert Wood Johnson Foundation



Project Team

- Margaret Samuels, Co-Principal Investigator
 - Orange County Partnership for Young Children

- Ann Harman, Evaluator
 - Harman & Associates

- Maria Hitt, Project Coordinator
 - Orange County Partnership for Young Children



Project Summary

- ❑ **Project Title:** *Growing Healthy Kids*
- ❑ **Purpose:** A community gardening program intended to reverse the trend of childhood obesity by encouraging children and their families to eat smart and move more
- ❑ **Location:** Orange County, North Carolina
- ❑ **Intended End-users:** Low-income families — especially Latino families — raising young children in the Orange County



Project Summary

- The project provided participating families an opportunity to work with their children to grow fresh vegetables for their families.
- The project used community gardens as a vehicle for providing low-income families raising young children access to information about proper nutrition and healthy eating.



Project Summary

- Between spring 2008 and spring 2009 three community gardens were established.
- All three gardens were located in Carrboro, North Carolina, and served families from surrounding communities within Orange County.

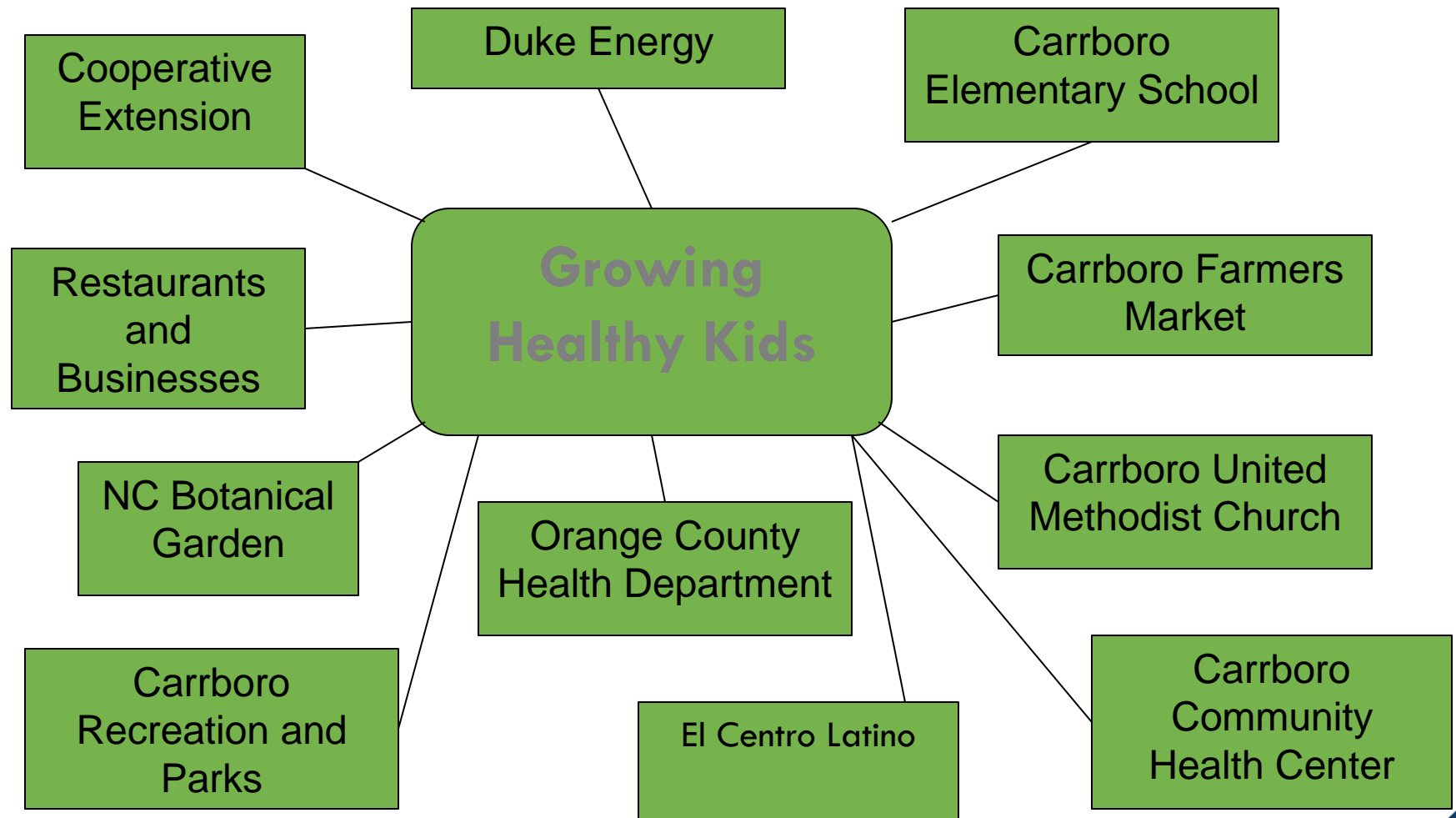


Project Summary

- Garden sites were selected for their close proximity to neighborhoods or public schools
- Locations were intended to promote a sense of community and ensure that residents can walk to the garden site or access local transportation



Project Summary: Community Partners



Participants

- A total of 60 families with a combined 120 children have participated in the Growing Healthy Kids (GHK) project between spring 2008 and 2011.
 - **Boys:** 59 (49%)
 - **Girls:** 61 (51%)
 - **Latinos:** 71 (59%)
 - **Average age at program entry:** 6.0 years (s.d. = 3.4 years)



Methods

□ Component #1:

Weekly Gardening Work Sessions:

- From April through November of each program year each community garden held established hours every week when the gardens were open and staff were present to assist families with preparing, planting, tending and harvesting their gardens.



Gardening as a Family Activity



Methods

□ Component #2:

7-Week Cooking & Nutrition Workshops:

- ▣ North Carolina Cooperative Extension staff conducted a 7-week cooking and nutrition workshop series for all families – parents and children – participating in the GHK project.



Cooking & Nutrition Classes



- ▣ Provided by Cooperative Extension
- ▣ EFNEP = Expanded Foods and Nutrition Education Program

Methods

□ Component #3:

Social Activities and Events:

Over the course of each program year, additional activities and events were planned for participating families.



Modeling Healthy Choices

Healthy Snacks



Physical Activity



Study Design/Data Collection

□ The project three primary goals related to childhood obesity were:

1. Help children achieve or maintain a healthy body weight for their age and height.

Measure: Children's BMI measured at beginning and end of program participation.



Study Design/Data Collection

2. Increase the number of fruits and vegetables that children had access to, particularly in their homes.

Measure: Parent survey administered when family joined program and at the end of each year of program participation.



Study Design/Data Collection

3. Increase the number of servings of fruits and vegetables the children ate each day.

Measure: Parent survey administered when family joined program and at the end of each year of program participation.



Results

- *Changes in Children's BMI Classifications*
- Pre- and post-program height and weight data were collected for 95 children between the ages of 2 and 15.



Results (Continued)

- 6 of the 36 children (17%) who had a BMI classification of either Overweight or At Risk of Overweight at the time their family joined the GHK project achieved an improved BMI classification by their last height and weight measures.



Results (Continued)

- 53 of the 53 children (100%) who had a BMI classification of Normal at the beginning of the program maintained it by their last height and weight measures.



Results (Continued)

- 1 out of 6 children (17%) who had a BMI classification of Underweight at the beginning of the program had achieved a BMI classification of Normal by their last height and weight measures.



Results (Continued)

- *Changes in Fruit & Vegetable Availability*
- When asked, “How many **vegetables** do you have at your home today?” 48 families reported at both pre- and post program.



Results (Continued)

- **Average # named on pre-survey: 3.5**
- **Average # named on post-survey: 7.8**
- **Average Change: +4.3**
- **Percent Change: +123%**



Results (Continued)



- ❑ When asked, “How many **fruits** do you have at your home today?” 48 families reported at both pre- and post program.



Results (Continued)

- **Average # named on pre-survey: 1.75**
- **Average # named on post-survey: 4.30**
- **Average Change: +2.55**
- **Percent Change: +146%**



Results (Continued)

- *Changes in Fruit & Vegetable Consumption*
- When asked, “On a typical **weekday**, how many servings of **vegetables** does your child eat?” 46 families reported at both pre- and post program.



Results (Continued)

- **Pre-program average:** 2.1 servings
- **Post-program average:** 2.8 servings
- **Change:** 33% increase per day or 4.9 additional servings per week



Results (Continued)

- When asked, “On a typical **weekday**, how many servings of fruit does your child eat?” 48 families reported at both pre- and post program.



Results (Continued)

- **Pre-program average:** 3.2 servings
- **Post-program average:** 4.1 servings
- **Change:** 28% increase per day or 2.0 additional servings per week



Additional Results

□ *Parents will report that:*

*(a) they **worked in the garden regularly** (2 to 3 times a month or more),*

*(b) when they came they **stayed 30 minutes or more**, and*

*(c) their **children came** with them either **“Often”** or **“Always.”***



Additional Results (Continued)

- Of the 48 families completing a post-program survey:
 - 45 (93.8%) report that they worked in their garden “2 to 3 times a month” or “weekly”;
 - 43 (89.6%) report that when they came to their garden they stayed “30 minutes to an hour” or “more than an hour”; and
 - 34 (70.8%) report that their children came with them either “Often” or “Always.”



Additional Results (Continued)

- *Parents will report that they attended the nutrition and cooking classes, and they found them to be useful.*
- Nine families participated in the most recent class of Expanded Food and Nutrition Education Program (EFNEP) conducted by the North Carolina Cooperative Extension.



Additional Results (Continued)

- Six (6) cooking classes were conducted between May and June on consecutive Saturdays.
- NC Cooperative Extension staff taught all classes in Spanish.
- Seven (7) mothers (77.8%) participated in all 6 classes; 1 mother participated in 5 classes and 1 mother participated in 4 classes.



Additional Results (Continued)

- *Parents will report that they and their children learned new gardening skills as a result of participating in the GHK program.*
- Of the 48 families completing a post-program survey, 47 (97.9%) reported that they and their children learned new gardening skills as a result of participating in the GHK program.



Additional Results (Continued)

- *Parents will report that they attended the social activities and events.*
- Of the 48 families completing a post-program survey, 23 (47.9%) reported that they attended at least 1 of the social events offered; of the 23 participating families all reported that they were satisfied with the activities.



Additional Results (Continued)

- *Parents will rate the overall quality of various aspects of the GHK program as “Good” or “Excellent.”*
- Of the 48 families completing a post-program survey, 45 (93.8%) rated the overall quality of various aspects of the GHK program as “Good” or “Excellent.”



Policy Implications to Date

- Local policy frameworks solidly in place to support community gardens
 - Town of Carrboro master plan for parks and recreation includes designated parks and future parks capable of including community garden sites
 - Local policy supports "micro farming" within the Town limits and requires recreational facilities/space in all private developments



Policy Implications to Date

- Local policy frameworks solidly in place to support community gardens:
 - Chapel Hill-Carrboro City Schools very supportive of physical activity and healthy eating for students; has established policies related to nutrition and physical environment.
 - Chapel Hill Carrboro City Schools recently bid the food services contract out and made fresh fruits, vegetables and healthy foods a priority



Policy Implications to Date

- Margaret Samuels, Co-PI presented to the NC State Legislative Task Force on Childhood Obesity
 - The Task Force recently submitted legislation to the General Assembly related healthier guidelines for childcare centers and schools.



Policy Implications to Date

- Town of Carrboro will use the *Growing Healthy Kids* (GHK) project to increase its understanding of how to make local policy and funding decisions based on programming that shows promise
 - GHK co-directors will serve as liaisons to the Town of Carrboro Mayor and Alderman
 - Project's design team will periodically review Town and County policies to determine whether existing plans or ordinances need modification to support the ongoing sustainability of the community garden sites



Policy Implications to Date

- ▣ Schools and child care programs will be encouraged to adopt local policy that incorporates on-site gardens as a tool for promoting healthy eating and physical activity!



Presentations

- NC General Assembly, Joint Legislative Task Force on Childhood Obesity (February, 2010)
- North Carolina Partnership for Children Childhood Obesity Committee (Fall, 2009)
- National Smart Start Conference: May, 2011



Presentations

- 31st Annual American Community Gardening Association National Conference, Atlanta GA, (August, 2010)
- Town of Carrboro Board of Aldermen (October, 2010)
- Presentation and video to More At Four Demonstration Sites (April, 2010)



Products

- Instruments and Forms:
 - Project pre- and post-test measures (e.g., parent survey), and other data collection tools (e.g., focus group protocol)
 - Garden Worksheets-Work days



Publications

- Article in local newspaper “Carrboro Citizen”
- Newsletters-Each Work day
- Growing Healthy Kids Update Report, Fall, 2010 (For Board; Community and donors).
- Salud America! Research Brief
- Manuscript in preparation to be submitted to at peer-reviewed journal



Grants Submitted/Awarded

□ Grants Received:

- **Growing Healthy Kids Refugee Community Gardens, U.S.**
Department of Health & Human Services, Project began October 1, 2010, \$280,000
- **SHAPE, NC**, Blue Cross Blue Shield Foundation, January, 2011, \$13,000



Career Development

- Seek collaboration with an interdisciplinary team of researchers for a grant proposal to develop comprehensive early childhood interventions to promote positive health and education outcomes for Latino immigrant children, through home-school-community partnerships.
- Develop and evaluate a preschool curriculum component for early childhood programs to promote healthy eating and physical activity among young children.
- Maintain in contact with the network of researchers working on prevention of childhood obesity among Latino children



Future Plans

- Disseminate research findings from the project via presentations at professional meetings at the state and national levels
- Prepare manuscripts for peer-reviewed publications, and policy papers
- Apply for funding (NIH, RWJF, others) to refine and assess the feasibility of replication of this intervention
- Continue to work on informing local, state and national policy related to preventing childhood obesity, in particular among Latino children



Thanks *Salud America!*



Robert Wood Johnson Foundation