

# Enriching the Lives of Low Income Youth with Physical Activity and Nutrition Education through Raised Bed Gardening

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## Introduction

Growing up in poverty can significantly affect the health, wellbeing, and development of children and adolescents. Youth living in impoverished neighborhoods are more likely than their peers living in more affluent communities to experience physical and mental health problems, a poor-quality diet, and an unhealthy body weight (Allen, Alaimo, Elam, & Perry, 2008).

Due to rising rates of obesity, especially among youth, much attention is currently being focused to address this epidemic. Programs which incorporate gardening provide opportunities for hands-on food, nutrition and physical activity education for children. In-school gardens improve children's eating habits. One study reported fourth grade children's preference for some vegetables improved when gardening programs was combined with nutrition education (Hermann, et al., 2006).

Another study's results suggest that gardening programs provided opportunities for constructive activities, contributions to the community, relationship and interpersonal skill development, informal social control, exploring cognitive and behavioral competence, and improved nutrition (Allen, Alaimo, Elam, & Perry, 2008).

At the local Boys and Girls Club of Washington County, located in Marietta, Ohio, 62.2% of youth is eligible for free or reduced lunch.

## Purpose

The Boys and Girls Club purpose is to provide programs and services which promote and enhance the development of boys and girls by instilling a sense of competence, usefulness, belonging and influence (Boys and Girls Club of America). To help fulfill this purpose The Boys and Girls Club of Washington County partnered with OSU Extension. As a result, the "Learning Gardens" was implemented to teach students the value and importance of horticulture and nutrition. For students, school or club gardens serve as living classrooms that teach lessons as simple as "where our food comes from" to complex lessons on ecology, resource management, nutrition and healthy lifestyles (School Gardens).



## Methods

Behind the Boys and Girls Club are multiple seven raised garden beds, called the "Learning Gardens", which are used to teach students about gardening and horticulture, healthy living, and healthy foods and nutrition.

- The Learning Gardens program consisted of two semesters: Spring and Summer.
- During the spring semester, the students had one hour session per week for seven weeks in total.
- During the summer semester, the students had two three hours sessions per week on Tuesdays and Fridays. Tuesday sessions were about horticulture and gardening while Fridays' sessions focused on nutrition and healthy living. The summer session lasted 11 weeks
- Students from the club were broken into three age groups: 5-7 years old, 8-9 years old, and 10 years old and up.
- The 5-7 years olds were assigned three beds: the two small white vinyl beds and the tire flower pollinator bed.



- The 8-9 years old were assigned the two beds: the large brown bed and the medium brown bed.



- The 10 years old and up were assigned the two large blue beds.

- All produce harvested was either consumed on site, packaged and sent home with students, or taken back to the OSU office and prepared to be consumed later.



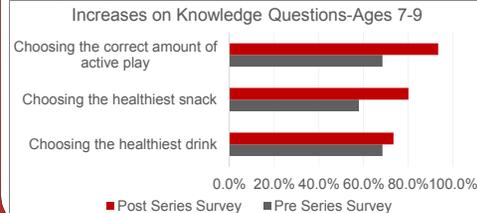
## Results

**Part 1: Horticulture** – examining students' attitudes and aspirations upon completion of the gardening program.

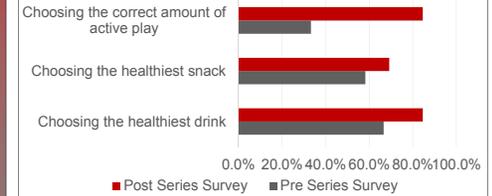
Table 1  
Gardening Aspirations and Attitudes

Question	Agree		Disagree	
	n	%	n	%
Growing plants is fun.	23	85.1	4	14.8
I plan to raise my own garden someday.	19	70.3	8	29.6
I like to know where my food comes from.	23	85.1	4	14.8
Gardening is a healthy activity.	27	100.0	0	0.0
I enjoyed the Learning Gardens	23	85.1	4	14.8
I learned a lot from the gardens.	25	92.5	2	7.4
I learned a lot from the classroom lessons.	24	88.8	3	11.1
I would like to do this again next summer.	23	85.1	4	14.8

**Part 2: Nutrition** – The students were given surveys before starting and upon completion of the nutrition series.



Increases on Knowledge Questions-Ages 10+



## Conclusions

The "Learning Gardens" enriches the lives of youth with physical activity and nutrition education. With proper guidance, and education, the students stepped outside their comfort zone and tried many new things for the first time.

The garden provided many physical activities performed by the students which included: preparing the soil, planting seeds, transplanting plants, pulling weeds, thinning crops, watering, scouting for insects and diseases, and harvesting the fruits and vegetables. With the harvesting of fruits and vegetables, the garden provided healthy nutritious foods for students to consume and an opportunity to learn about healthy eating, healthy choices, and a healthy lifestyle.

*"Boys and Girls Club Director testimonial:* "The kids absolutely loved the gardens. They enjoyed it because it was different; different in a good way. Many of the children have never been exposed to something like this and this new experience was intriguing for them."

## Bibliography

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