

Think Achieve Award Spring 2014

Physical Activity Patterns Among Inner City Children

Field Research and Service Learning Project

**Department of Health and Human Performance
Physical Activity Epidemiology
HHP4490**



Children's Games, Pieter Bruegel , the Elder, 1560



Children's Games, The 21st Century

Background

- **Grow Healthy Together Chattanooga (GHTC) partnership formed in 2010**
- **Focus – reduce prevalence of childhood obesity among children of East and South Chattanooga, Tennessee**
- **Interventions - policy and environmental supports for healthy eating and active living**
- **2010 - baseline measures of physical activity among children and youth in the East and South Chattanooga was assessed**
- **2014 – opportunity for UTC to conduct a follow-up assessment of impact of 3 years of intervention in East and South Chattanooga**

Approach

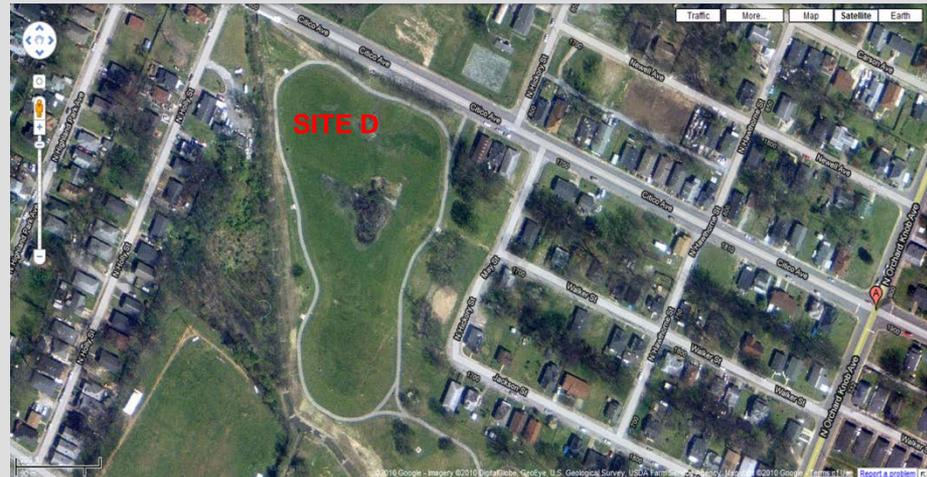
- **Complement evaluation of Growing Healthy Together Chattanooga**
- **Form three research teams from within the HHP4490 course**
 - Team # 1 trained in the use of the System for Observing Physical Activity and Recreation in Communities (SOPARC)
 - Team #2 trained in the use of the valid and reliable Active Where? survey instruments
 - Team #3 trained in the procedures in using objective pedometer-based measures of physical activity

Approach (con't)

Evaluation guidelines for the field research and service project

1. Create a research question/statement or hypothesis
2. Present sources for a literature review
3. Identify objectives
4. Identify methods
5. Present results
6. Conclusions
7. Application
8. Format of Project

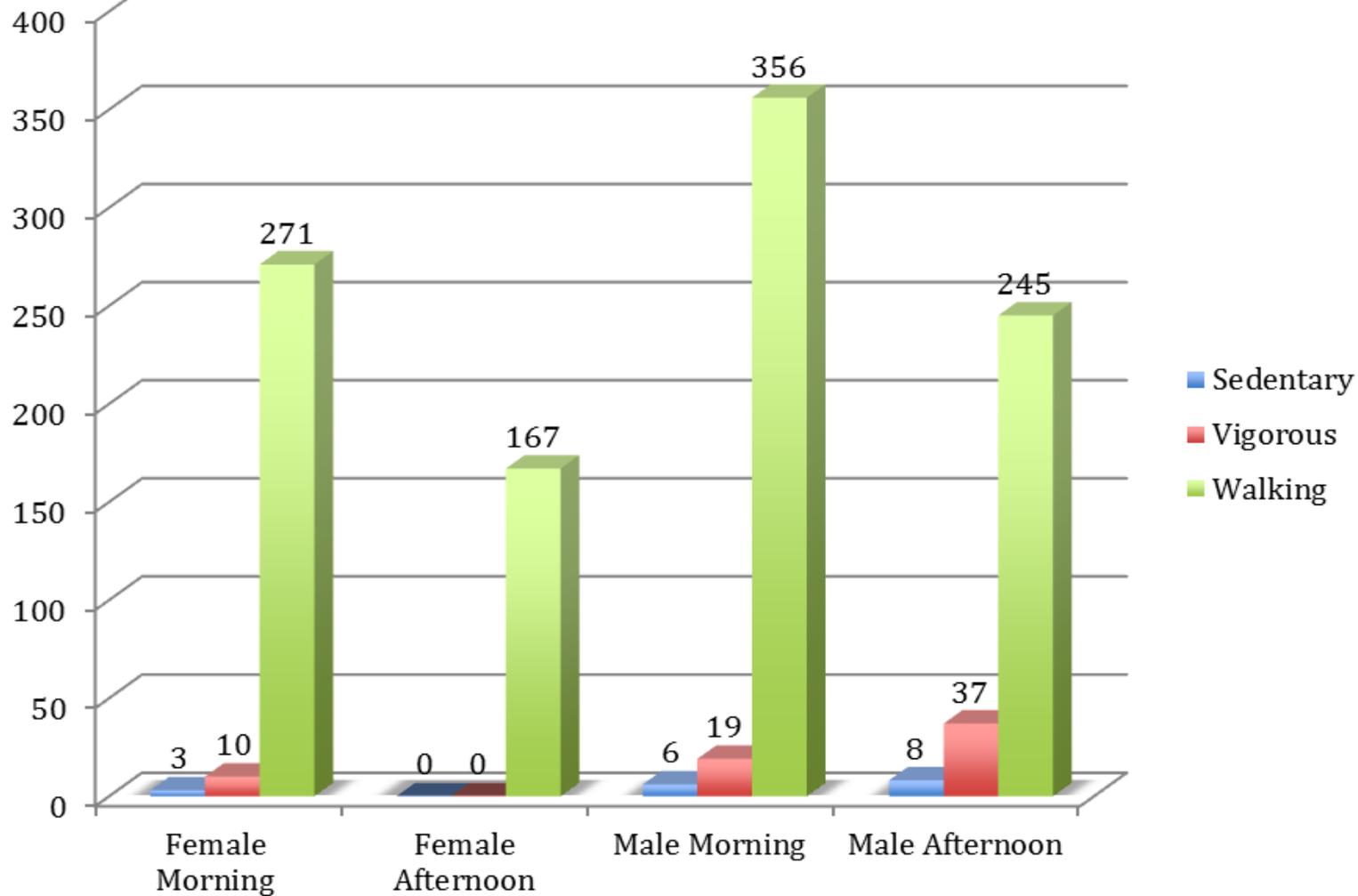
East Chattanooga Physical Activity Observation Sites



South Chattanooga Physical Activity Observation Sites



SOPARC Results – Team #1



SOPARC Results – Team #1

Age	Sedentary (Morning)	Sedentary (Afternoon)	Walking (Morning)	Walking (Afternoon)	Vigorous (Morning)	Vigorous (Afternoon)
Child	0	0	359	104	20	0
Youth	8	2	133	176	0	4
Adult	0	0	129	134	9	14

Survey Results - Team #2

Descriptive Statistics

Descriptor	N	Minimum	Maximum	Mean	Std. Deviation
Child Age	53	7.00	11.00	8.9245	1.37070
Child Weight (kg)	53	20.50	87.80	36.8243	12.42742
Child BMI	51	9.79	52.00	21.7347	8.07969
Adult Respondent's Age	48	20	60	32.8750	8.11519
Adult Weight (kg)	45	50.00	174.00	83.0362	22.73733

Survey Results - Team #2

Child Gender		
Gender	Frequency	Percent
Female	30	56.6
Male	23	43.4
Total	53	100

Parent Gender		
Gender	Frequency	Percent
Female	47	88.7
Male	3	5.7
Missing Data	3	5.7
Total	53	100

Survey Results - Team #2

Child Race		
Race	Frequency	Percent
White/Caucasian	5	9.4
Black/African American	41	77.4
Latino/Hispanic	5	9.4
Missing	2	3.8
Total	53	100

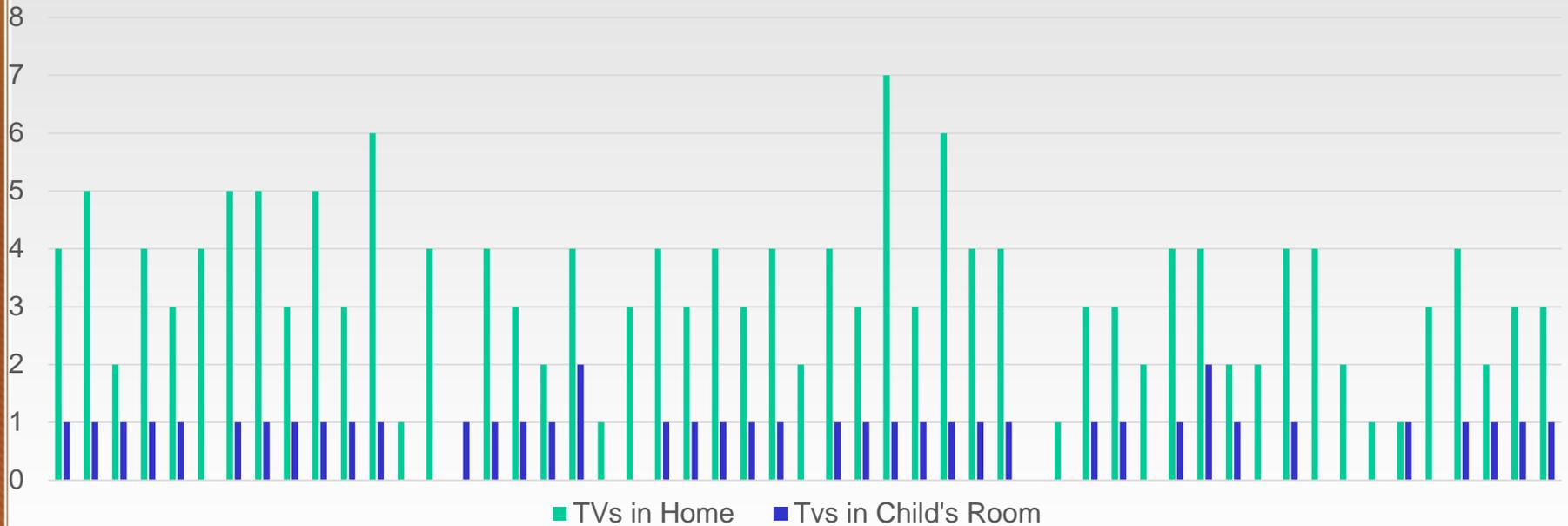
Adult Responder Race		
Race	Frequency	Percent
White	4	7.5
Black	40	75.5
Other	2	3.8
Prefer not to answer	1	1.9
Missing	6	11.3
Total	53	100

Survey Results - Team #2

Type of Residence		
Type of Housing	Frequency	Percent
Single Family House	28	52.8
Multi-family House	3	5.7
Apartment	13	24.5
Condo/Townhouse	3	5.7
Total	47	88.7
Missing	6	11.3
Total	53	100

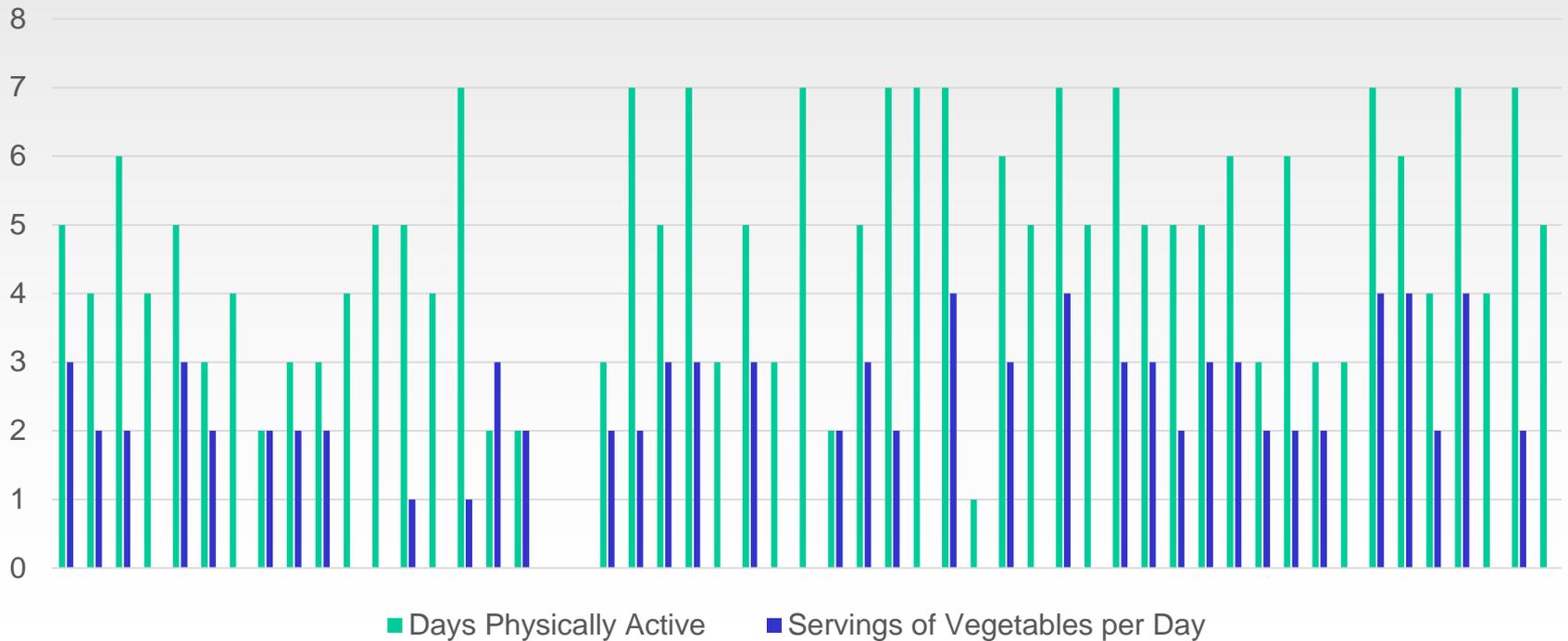
Survey Results - Team #2

TVs in Home VS TVs in Child's Room



Survey Results - Team #2

Days in a Typical Week Child is Physically Active for at Least 60 Minutes
VS Servings of Vegetables per Day



Pedometry Results - Team #3

- **Sample Size; 28 females and 23 males**
- **Steps per Day**
 - **Mean = 6,991 steps (Min = 2,075 and Max 13,737)**
 - **Std. Dev. = 2,414 steps**
 - **Males average 7,481 steps; Females average 6,588**
 - **Grade levels vs. Steps per day**
 - **2nd Grade – 7,007**
 - **3rd Grade – 6,746**
 - **4th Grade – 7,428**
 - **5th Grade – 6,815**

Pedometry Results - Team #3

- Miles per Day
 - Mean = 2.3 Miles (Min = 0.7 and Max 4.3)
 - Std. Dev. = 0.8 Miles
 - Males average 2.4 Miles; Females average 2.1 Miles
 - Grade levels vs. Miles per day
 - 2nd Grade – 2.4
 - 3rd Grade – 2.1
 - 4th Grade – 2.5
 - 5th Grade – 2.1

Pedometry Results - Team #3

- **The elements have been added to these lower socioeconomic communities.**
 - 90.2% of children are still not getting the recommended number of steps per day .
- **Safety vs. walking to school or playing outside**
 - These children live in a “top 20 crime region of American” (Harris, 2012)
 - Raising multiple children as a single parent
 - ✦ Families in lower socioeconomic areas typically “have more children on average . . . are raising their children as a single parent” (Newburger, 2011)
 - ✦ Easier to keep their children indoors rather than allowing them outside to disperse

Think Achieve Outcomes

- **Team formation and collaboration with community organizations**
- **Research question and hypothesis generation**
- **Systematic data collection and data entry**
- **Collaborative data analysis**
- **Team presentation of findings during final exam period**
- **Team preparation and submission of research manuscript in accordance with journal author guidelines (MSSE)**