



# **TEXAS HEALTHY COMMUNITIES – WACO PROJECT**

## **PHASE III**

**An Academic-Practice Partnership to Address Healthy Living  
 (76704, 76705, 76706)**

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## INTRODUCTION

The American obesity epidemic has become a national prevention priority. Underserved communities are particularly vulnerable to obesity-related risks because of barriers to engaging in healthy living habits. The Waco-McLennan County Public Health District recently detected high obesity levels in some low-income neighborhoods of Waco where environmental barriers to physical activity and healthy eating exist. Additional information is needed about related attitudes, knowledge, behaviors, resource access, and community capacity to invoke change. For this project, household surveys were used to obtain information in the target zip codes 76704, 76705, and 76706. This project was designed to answer the following questions:

- What factors contribute to obesity rates in the target zip codes?
- What self-reported active living-, eating-, and obesity-related attitudes and behaviors exist among participants?
- What resources are participants aware of (resource awareness), using (resource use), and needed (resource needs) to develop and maintain healthy personal and/or family active living and healthy eating habits?

A similar project was conducted in the spring of 2015 in the 76704 zip code and in the spring of 2016 in the 76706 zip code. Respondents stated that the cost of healthy food, the taste of healthy food, and the time it takes to think about eating healthy were significant barriers to healthy eating among residents in 76706. Barriers to physical activity included the time it takes to be physically active, access to free physical activity, and access to sidewalks and bicycle lanes. Residents of 76707 recommended enhancing local access to low-cost resources, developing culturally relevant health materials in English and Spanish available through digital media, and expanding group-oriented health programs tailored for whole-families. These findings were used by the Waco-McLennan County Public Health District to develop new and enhance existing community programs. The purpose of the CASPER 2018 Survey is to continue to understand the needs of central Texas residents.

*The Texas Healthy Communities – Waco Project: An Academic-Practice Partnership to Address Healthy Living (76704, 76705, and 76706)* was completed during the spring of 2018. The authors are grateful to all of the stakeholders and community residents who participated in this project. The purpose of this report is to summarize the methods used to collect information and the results from household surveys in the target zip codes in a way that is useful for stakeholders and residents to continue engage in health behaviors and improve quality of life. Furthermore, these methods and findings may serve as model for future work in other communities in central Texas and beyond.

## HOUSEHOLD SURVEYS

The Community Assessment for Public Health Emergency Response, or CASPER, was used to collect information from households about healthy eating and physical activity. These methods are designed to provide quick and valid information about households.

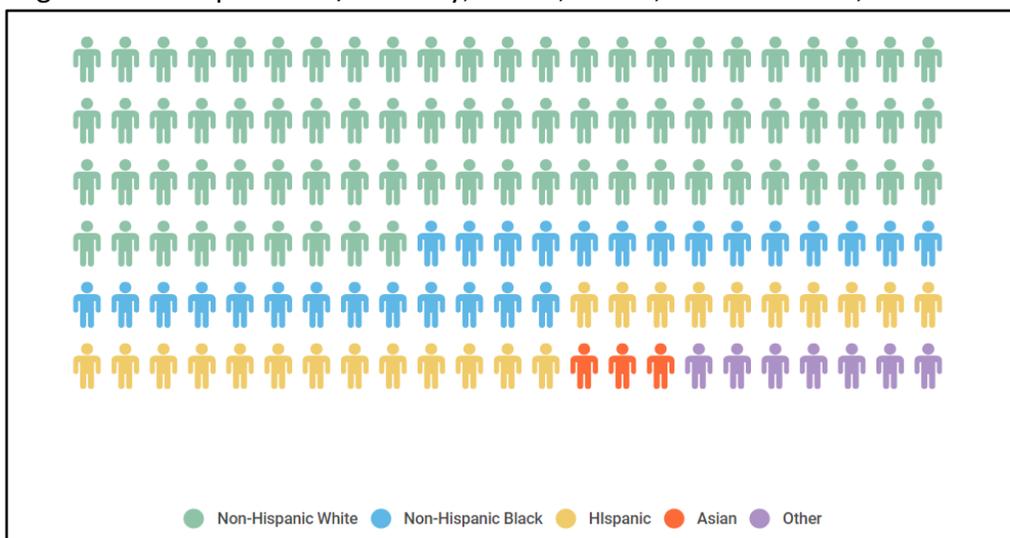
For this project, zip codes 76704, 76705, and 76706 were selected to serve as the sampling frame for the CASPER survey. A two-stage cluster sampling method occurred because not every household is selected. In the first stage, the zip codes were divided into census blocks according to the U.S. Census Bureau. Thirty census blocks were selected, with their probability of selection proportional to the number of housing units in each cluster. In the second stage, seven housing units were selected from each of the 30 census blocks for the purpose of conducting interviews with a household respondent. The goal of CASPER is to collect 7 household surveys x 30 census blocks = 210 total household surveys.

On-site, the interview teams used a detailed map of the census block viewed in GoogleEarth to select seven households through sequential sampling. Eligible household respondents were residents of the selected house  $\geq 18$  years of age who provided verbal consent to participate and agreed to speak on behalf of all household members. This report includes information provided by the adult survey respondents, referred to as “participants.” Participants provided information about members of the household, healthy eating habits and barriers, and physical activity habits and barriers.

### **Section 1.** Characteristics of the households

In total, 138 households in the target zip codes participated in this project. There were 377 individuals who lived in these 138 households. Of the 138 households, 93 households had no children living at the house and 45 households had at least one child living at the house. The average household age for adults was 44.9 years, and the average household age for children was 8.7 years. For respondent race/ethnicity, 57% of participants identified as Non-Hispanic White, 20% identified as Non-Hispanic Black, 17% identified as Hispanic, 5% identified as other, and 2% identified as Asian. Participants were asked to report if any member of the household used benefits. The proportion of the household that used benefits is presented in Table 1 below.

Figure 1. Participant race/ethnicity, 76704, 76705, 76706 CASPER, 2018.



By household, 49% of participants reported all household members were Non-Hispanic White, 17% reported all members as Hispanic, 12% reported all household members as Non-Hispanic Black, 15.9% reported that there was a mix of race/ethnicities (e.g., one member was white and one member was Hispanic), 4% reported all members as other, and 2% reported all members as Asian.

SNAP	10.9%
WIC	5.8%
Free and reduced lunches	8.0%

In order to assess the health of household members, participants were asked to report if they or anyone in the household had been told by a doctor that they have a particular health condition. Household health conditions are reported in Table 2 below.

High Blood Pressure	42.0%
Diabetes	23.9%
Overweight/Obese	34.8%
High Blood Cholesterol	26.8%
Heart disease (not including high blood pressure)	13.8%

## Section 2. Healthy Eating

Participants were asked to think about the items currently in their household refrigerator, freezer, or pantry. The proportion of households that reported each food item in their home at the time of the survey is presented in Table 3 below.

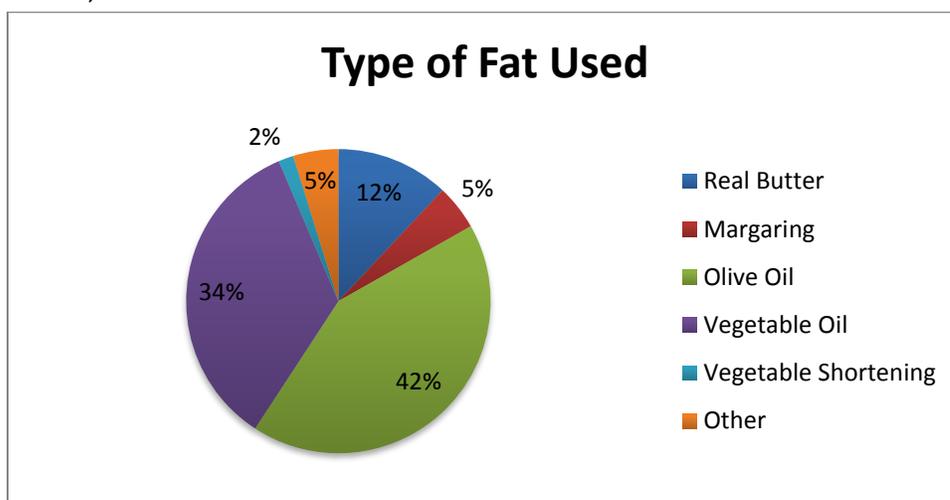
Fresh fruit	84.8%
Fresh vegetables	89.1%
Frozen fruit	49.3%
Frozen vegetables	74.6%
Canned fruit	58.0%
Canned vegetables	76.1%
Low fat milk (non-fat, 1%, skim)	39.1%
Whole grains (100% whole wheat bread or pasta)	73.2%
Lean protein (chicken, turkey, low fat ground beef)	94.2%
Beans	85.5%

Participants were asked to give information about who shops for food in the household, how often shopping occurs, and about transportation used for shopping. This information is presented in Table 4 below.

<b>Food shopper in household</b>	
Female adult	50.0%
Male adult	18.8%
Adults take turns	21.7%
Family goes together	8.0%
A child	0.0%
Someone else	0.7%
<b>How often</b>	
Multiple times per week	44.2%
1 time per week	35.5%
1 time per 2 weeks	16.7%
1 time per month	2.9%
<b>Transportation to buy food</b>	
Personal vehicle	92.8%
Family or friend's vehicle	3.6%
Public transit (bus)	0.7%
Walk	0.0%
Bicycle	2.2%

Participants were asked to report the type of fat usually used when cooking in their household. About one-third (34%) of participants reported that vegetable oil was the kind of fat usually used for frying, sautéing, and baking at home, and (42% of participants reported that olive oil was the kind of fat usually used for frying, sautéing, and baking at home. This information is presented in Figure 2 below.

Figure 2. Fat used for frying, sautéing, and baking at home cooking, 76704, 76705, 76706, 2018.



Participants were asked to report about how many cups of fruit and vegetables they ate or drank (i.e., 100% fruit juice or 100 pure vegetable juice) each day. Participants were asked to report the fruit and vegetable consumption for themselves and for the oldest child living in the household. The usual daily fruit and vegetable consumption for the adult participant is shown in Figure 3 and the usual daily fruit and vegetable consumption for the oldest child in the household is shown in Figure 4 below.

Figure 3. Fruit and vegetable consumption per day for adult respondent, 76704, 76705, 76706 CASPER, 2018.

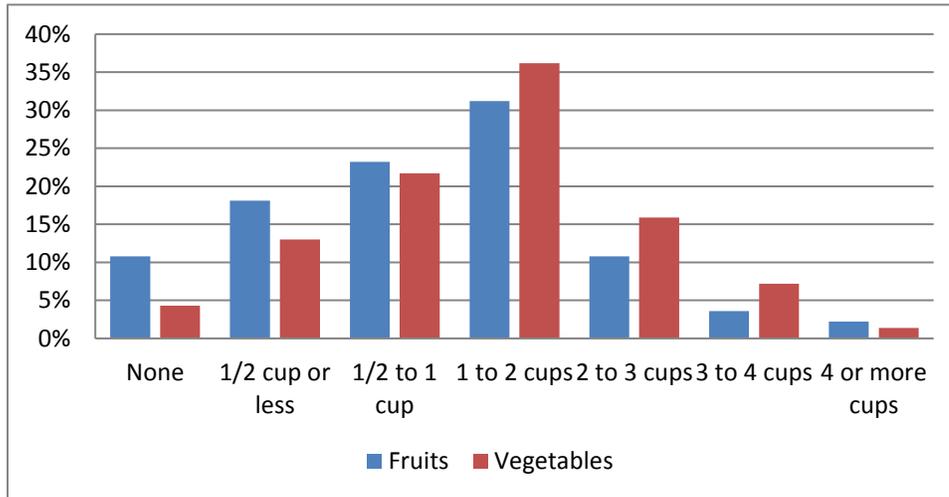
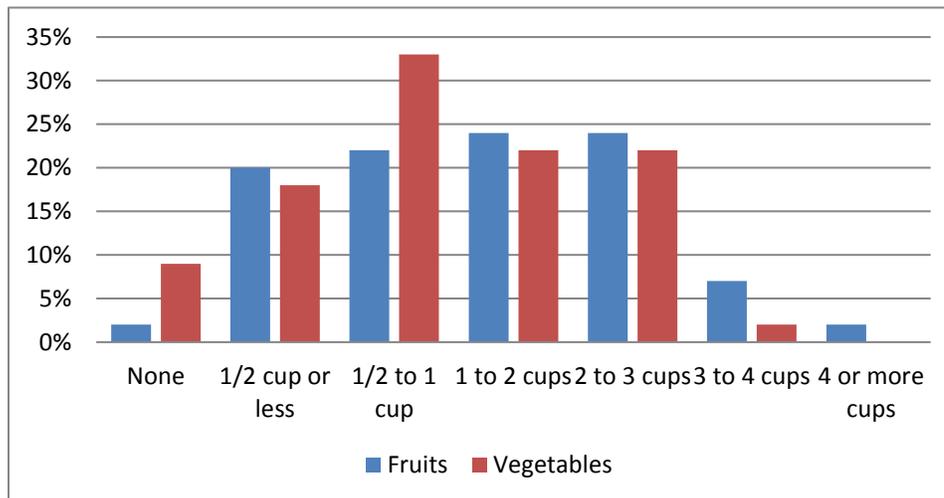


Figure 4. Fruit and vegetable consumption per day for oldest child in household (among 45 households with children), 76704, 76705, 76706 CASPER, 2018.



Participants were asked about potential obstacles or barriers to healthy eating, including cost, time, location, transportation, knowledge, preparation skills, and taste. Participants were read seven statements and were asked to agree or disagree with each statement for themselves or for anyone in their household. The proportion of agreement and disagreement with each statement is presented in Table 5 below.

Table 5. Proportion of agreement and disagreement with barrier to healthy eating statements, 76704, 76705, 76706 CASPER, 2018.		
<i>Items in <b>bold</b> = barriers</i>	AGREE	DISAGREE
It costs too much to eat healthy food (COST)	<b>42.0%</b>	58.0%
I have time to think about eating healthy food (TIME)	82.6%	<b>16.7%</b>
There is a store where I can buy healthy food near me (LOCATION)	91.3%	<b>8.7%</b>
I have transportation to buy healthy food (TRANSPORTATION)	96.4%	<b>3.6%</b>
I know the difference between healthy and unhealthy food (KNOWLEDGE)	100.0%	<b>0.0%</b>
I have the skills to prepare or cook healthy food (SKILLS)	90.6%	<b>8.7%</b>
I have the kitchen tools I need to prepare or cook healthy food (TOOLS)	97.8%	<b>2.2%</b>
Healthy foods taste good (TASTE)	90.6%	<b>9.4%</b>
Eating fruits and vegetables improves my health (BELIEFS)	100.0%	<b>0.0%</b>

### Section 3. Physical Activity

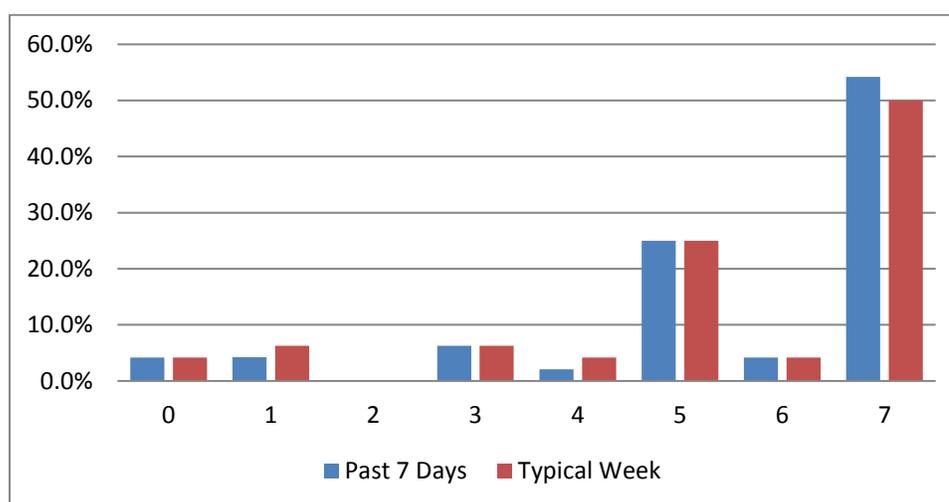
Participants were asked about their physical activity during the last 7 days. Physical activity refers to activities that take hard physical effort and make your heart beat faster and make you breathe much harder than normal. Participants were asked to report how many days in the past week and how many days in a typical week they were physically active for at least 30 minutes. [Statistical note: The average, or arithmetic mean, is the sum of all the numbers in the set divided by the amount of numbers in the set. The median is the middle point of a number set, in which half the numbers are above the median and half are below. The median is sometimes reported instead of the average if there are extremely high or extremely low numbers that are skewing the average.]

The average number of days over the last 7 days that survey participants reported engaging in physical activity was 3.4 days; 12% of participants reported participating in no physical activity for the last 7 days. For a typical week, the average number of days that survey participants reported engaging in physical activity was 3.6 days; 7% of participants reported participating in no physical activity in a typical week.

Participants were also asked about sedentary behavior, or time spent sitting while at work, at home, while doing course work, or during leisure time. This included time spent sitting at a desk, visiting friends, reading, traveling on a bus, or sitting or lying down to watch television. During the last 7 days, participants reported sitting an average of 405.7 minutes (median=300.0 minutes) on a week day. During the last 7 days, participants reported sitting an average of 352.1 minutes (median=270.0 minutes) on a weekend day.

Participants were asked to report on how many days the oldest child living in the household was physically active for a total of at least 60 minutes per day, both over the last 7 days and over a typical or usual week. Information on the oldest child in the household was reported for the 45 households with a child in Figure 3 below. Approximately half of children were active for 7 days in the past week and in a typical week. Regarding sedentary behavior, participants reported that the oldest child spent an average of 273.8 minutes (median=180.0 minutes) sitting on a weekday and 271.3 minutes (median=180.0 minutes) sitting on a weekend day.

Figure 3. Number of days the oldest child in the household was physically active for at least 60 minutes, 76704, 76705, and 76706 CASPER, 2018.



Participants were asked about potential obstacles or barriers to physical activity, including cost, time, location, transportation, sidewalks, bicycle lanes, desire, skills, safety, and fatigue.

Participants were read twelve statements and were asked to agree or disagree with each statement for themselves or for anyone in their household. The proportion of agreement and disagreement with each statement is presented in Table 7 below.

Table 7. Proportion of agreement and disagreement with barrier to physical activity statements, 76704, 76705, 76706 CASPER, 2018.

<i>Items in <b>bold</b> = identified health barriers</i>	AGREE	DISAGREE
It costs too much to be physically active (COST)	<b>13.8%</b>	86.2%
Physical activity takes too much time (TIME)	<b>15.2%</b>	84.8%
Places for me to be active are too far away (LOCATION)	<b>8.0%</b>	92.0%
I have transportation to places to do physical activity (TRANSPORTATION)	95.7%	<b>4.3%</b>
The sidewalks are nice to use around my home (SIDEWALK)	52.1%	<b>44.9%</b>
There are bicycle lanes to use around my home (BICYCLE LANES)	23.9%	<b>75.4%</b>
The adults in the house want to be physically active (DESIRE)	89.9%	<b>10.1%</b>
I have the skills to be physically active (SKILLS)	93.5%	<b>6.5%</b>
There are not enough free places for me to be physically active (FREE)	<b>21.0%</b>	79.0%
The children in the house want to be physically active (CHILDREN) <sup>1</sup>	86.7%	<b>13.3%</b>
My neighborhood is safe for physical activity (SAFETY)	86.2%	<b>13.8%</b>
I am fatigued by physical activity (FATIGUE)	<b>55.1%</b>	44.9%

<sup>1</sup> Among the 45 households where participants reported children living in the home.

## CONCLUSION

Overall, findings from the CASPER household survey conducted in zip codes 76704, 76705, and 76706 may inform programs and policies that can support positive health behaviors such as healthy eating or active living. The most common barriers to healthy eating reported by participants were cost of healthy food, the time it takes to think about eating healthy, and the taste of healthy food. The most common barriers to participating in physical activity were access to bike lanes, sidewalks, and free opportunities for physical activity.

Findings from previous CASPER assessments in 2015 and 2016 were used to inform programs and initiatives implemented in Waco and McLennan County, including the Waco Downtown Farmer's Market Double Up Program, Healthy Soul Food Cooking Demonstrations, and the QR Fitness Trail System. These programs aim to eliminate the most common health barriers identified by the previous CASPER surveys and facilitate healthy opportunities for residents of Waco-McLennan County.

For example, the Waco Downtown Farmer's Market (WDFM) Double Up Program began in the spring of 2018 and aims to increase Waco residents' access to healthy food by decreasing the cost of fruits and vegetables purchased at the WDFM. For every dollar spent at the market on SNAP-approved items, the WDFM matches the dollar amount in free fruits and vegetables from the market, up to \$20.00. This program allows Waco residents to use a local, low-cost resource to purchase more fruits and vegetables. WDFM addresses the identified health barrier of cost of healthy food, aims to increase residents' access to healthy food, and makes it possible for more community members to adopt healthy behaviors.

In zip codes 76704 and 76707, Healthy Soul Food Cooking Demonstrations have been presented in recent years, with the assistance of Live Well Waco. During these cooking demonstrations, community members have the opportunity to learn how to make different soul foods (traditional foods in the African American community) in a healthy way. The goal of this program is to equip community members with knowledge and skills to make healthy substitutions in traditional meals and address barriers to healthy eating such as knowledge, skills, and taste.

The QR Fitness Trail System is a program currently installed in 11 Waco area public parks that offers an opportunity for community members to access free physical activity instruction. Community members need access to a smart phone and a Quick Response Code Reader app. Signage throughout the parks can be scanned to receive access to free instructional workout videos focusing on upper body, lower body, core body, and flexibility exercises. The QR Fitness

System was informed by data from previous CASPER assessments about cost and location of physical activity opportunities as a need for central Texas residents.

Future programs should focus on connecting community members to existing resources to eliminate cost barriers to healthy eating, advocating at the city and county level for bicycle lanes and sidewalks to be incorporated into new developments, and promoting and expanding access to free physical activity opportunities for central Texas residents. Periodic community health needs assessments, such as using CASPER methodology as presented in this document, may be useful for informing new efforts and evaluating existing efforts to improve population health.

For more information about the Texas Healthy Communities program in central Texas, please contact the Waco-McLennan County Public Health District at (254) 750-4550.

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For more information about the CASPER assessment and methodology, please contact the Baylor University Public Health Program at [kelly\\_ylitalo@baylor.edu](mailto:kelly_ylitalo@baylor.edu).

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