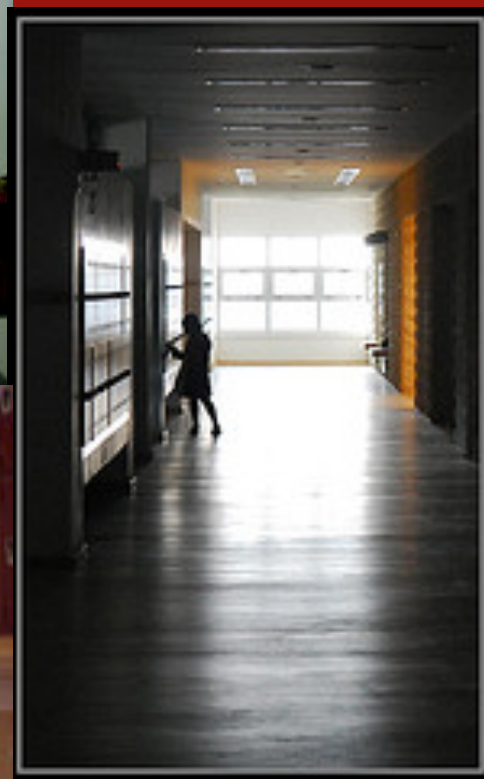


2012

# Owl Creek Study

Nutrition, Food Security, and Health  
Among 5-7th Grade Students





2012

# Owl Creek Study: Nutrition, Food Insecurity, and Health Among 5th-7th Grade Students

## **Kevin M. Fitzpatrick, Ph.D.**

Professor & Jones Chair in Community  
Director, Community and Family Institute  
Department of Sociology & Criminal Justice  
University of Arkansas

With assistance from:

Don Willis, B.A.  
Gail O'Connor, B.S.  
Department of Sociology & Criminal Justice  
University of Arkansas



COMMUNITY & FAMILY INSTITUTE

Copyright ©2012 Community and Family Institute  
Department of Sociology and Criminal Justice  
University of Arkansas  
Old Main 211 Fayetteville, AR 72701



We would be delighted if you quote this report in your publications or make copies of any part of this report for yourself or for anyone else. However, we do ask that you give proper citation to the report.

Suggested citation:

Owl Creek Study:  
Nutrition, Food Insecurity, and Health Among 5-7th Grade Students  
Kevin M. Fitzpatrick, Director  
Community and Family Institute  
Department of Sociology and Criminal Justice  
University of Arkansas

Printed in the United States of America  
Printed by: PMC Solutions  
University of Arkansas  
Fayetteville, AR

# The Community & Family Institute

## About the Institute

The Community and Family Institute is located in the University of Arkansas' Department of Sociology and Criminal Justice. The Institute was founded in 1997 based on the principle that community improvement, initiative, sustainability, and program success are closely tied to the assessment of needs, evaluation of community goals, and development of appropriate and pragmatic responses to problems. The Institute is dedicated to helping people build better communities by collecting meaningful data, facilitating information-based planning, and developing custom research strategies for exploring important social issues in the Northwest Arkansas region and beyond.

The Owl Creek Study is a prime example of the importance of carefully examining program and community needs. The goal of this project has been to stimulate dialogue about nutrition, food insecurity, and health status among Fayetteville School district students. We hope this report encourages the development of informed strategies for shaping interventions and programming designed to make a difference in the lives of young people.

## Contact Information

Kevin M. Fitzpatrick Ph.D., Director  
Community and Family Institute  
Department of Sociology and Criminal Justice  
University of Arkansas  
Old Main 231  
Fayetteville, AR 72701

Email: [kfitzpa@uark.edu](mailto:kfitzpa@uark.edu)  
Telephone: 479-575-3777  
Fax: 479-575-7981  
Web Page: <http://sociology.uark.edu/3550.php>

# Funding

This report was made possible through the financial and in-kind donations from the following organizations:

Harvey and Bernice Jones Charitable Trust  
Wal-Mart Stores  
University of Arkansas:

J. William Fulbright College of Arts & Sciences  
Department of Sociology & Criminal Justice  
Community & Family Institute  
University of Arkansas Bookstore

# Acknowledgements

This project is made possible by the continued funding and support of the Jones Trust.

We would like to thank all the project participants for their cooperation and support of this study. Thanks to thank the Community and Family Institute research staff for their contributions throughout this study. In addition, both the graduate and undergraduate interviewers were a critical part of the team and we appreciate their willingness to help with this project.

Finally, we thank Fayetteville School district for their enthusiastic support of this project, along with Kristen Champion, principal at Owl Creek, and her staff. We appreciate their hard work on the project, making sure that everything ran smoothly, and supporting our efforts to better understand the health and nutritional challenges of students and their families in the 21st century.

# Table of Contents

The Community and Family Institute .....	<i>iii</i>
Funding.....	<i>iv</i>
Acknowledgements.....	<i>v</i>
Table of Contents.....	<i>vii</i>
 <b>Chapter 1: Describing Owl Creek 5th-7th Grade Students</b>	
Introduction .....	2
By the Numbers .....	3
Student Background .....	4
Students and Their School .....	5
 <b>Chapter 2: Food Insecurity and Friendships</b>	
Introduction .....	10
By the Numbers .....	11
Food Insecurity .....	12
Students and Their Friends.....	15
 <b>Chapter 3: Health and Well-Being</b>	
Introduction .....	20
By the Numbers .....	21
Physical Health and Nutrition.....	22
Social/Psychological Health.....	24
 <b>Chapter 4: Student’s Families</b>	
Introduction.....	28
By the Numbers.....	29
Family Background.....	30
Food Insecurity/Health & Nutrition.....	32
Social/Psychological Health.....	35
 <b>Chapter 5: Observations and Recommendations</b>	
Introduction.....	38
Summary Observations.....	39
Recommendations.....	40



## **Appendices**

Appendix A: Survey Methodology

Appendix B: Survey Instruments

Appendix C: IRB Permissions

# Chapter 1

## Describing Owl Creek 5th-7th Grade Students

## Introduction

The student population at Owl Creek is at-risk for food insecurity with nearly 70 percent of Owl Creek's 713 (K-7) students eligible for the free/reduced lunch program. Over half of these students also are certified to participate in the Federal food stamp program. While these statistics provide a rough estimate of risk, clearly a deeper understanding of this population's characteristics and specific needs are important for improving services to students and their families. To this end, it was proposed that a survey be administered to the 5th-7th grade **students and their parents**. In part, the justification for focusing on these students was primarily because of their mature understanding of food-related issues. As adolescents, they are in a position within their family to have some input and expressed interest in nutrition, food security, and other issues related to a healthy lifestyle.

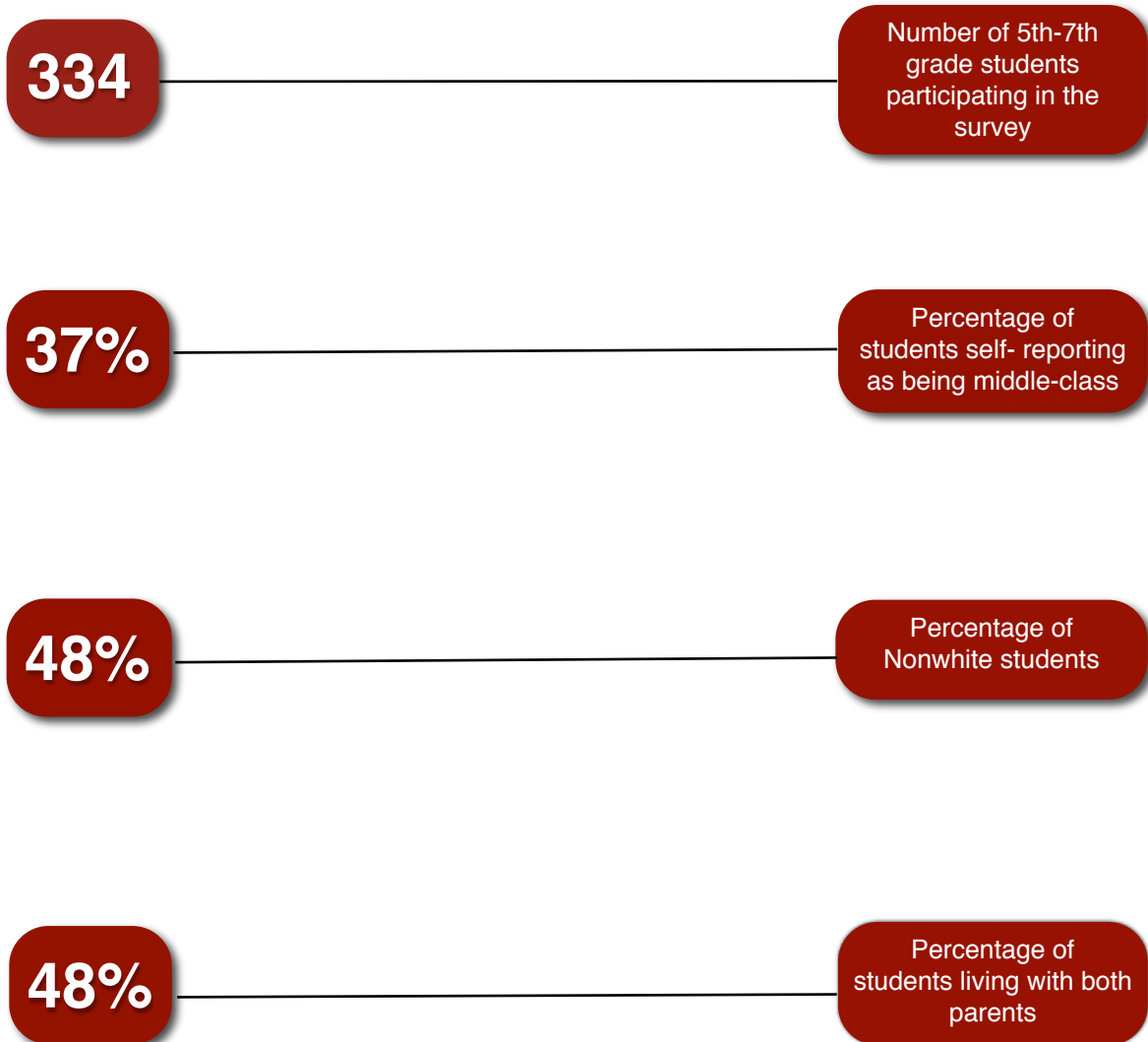
The information gathered from both of these surveys was intended to help inform and guide the implementation of wide-ranging services and program for students and their families. The student survey fulfills this purpose by assessing a wide-range of their needs and behaviors--specifically, providing Owl Creek administration with some insight into their student's eating and exercise behaviors, social activities, food security, physical health, and mental health/self-esteem. Furthermore, by assessing the current state of student health and well-being at Owl Creek School, the progress made by future program interventions can be assessed more precisely.

### Specific purposes of this survey include:

- ◆To improve Owl Creek's general knowledge of their student population and families.
- ◆To assess Owl Creek student needs as it relates to a healthy lifestyle.
- ◆To inform and guide the Ground-to-Plate project in the design and implementation of educational and service programs related to food insecurity and healthy eating.
- ◆To provide a broad assessment of student health and well-being.



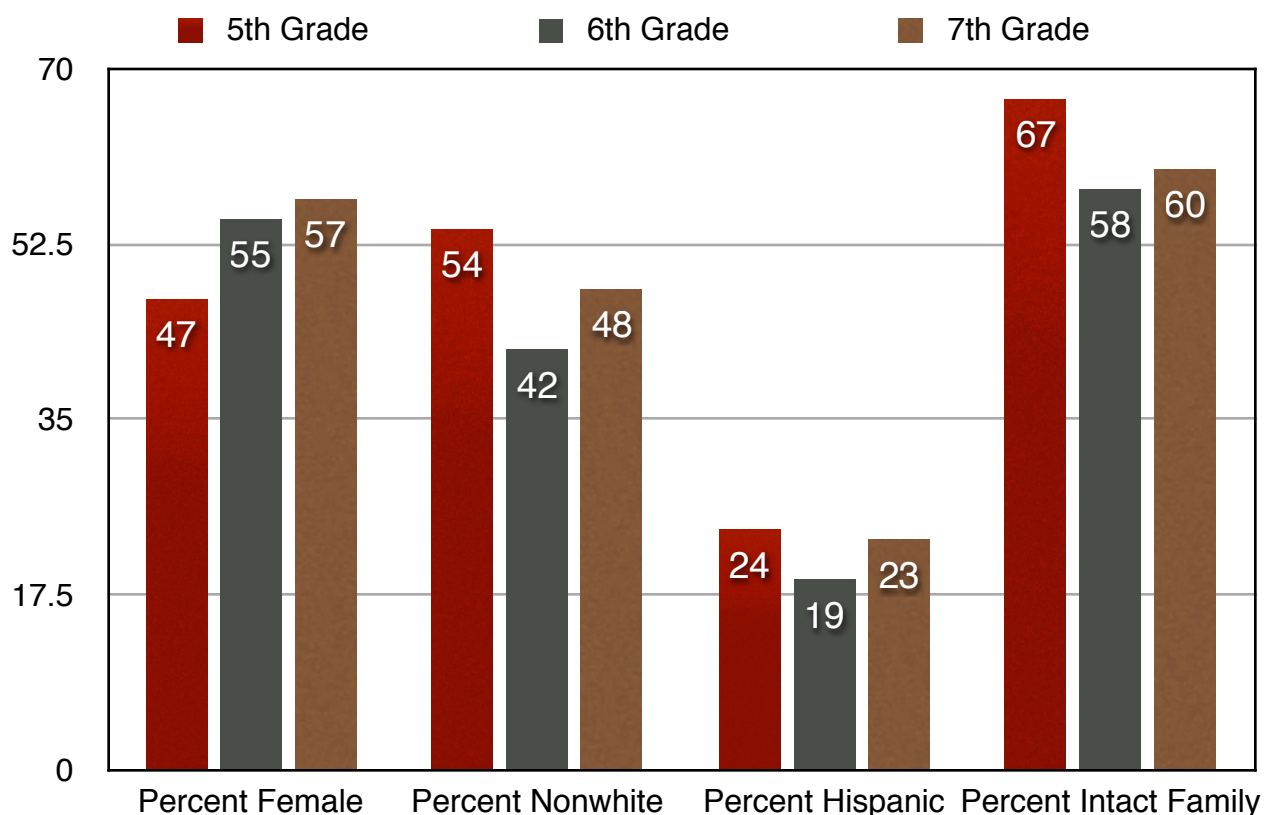
# By The Numbers



## Student Background

In order to provide some background of the student respondents, all their primary socio-demographic background information was collected. Of the 361 students that were enrolled in the 5th-7th grade at the time of the survey, 334 (92%) surveys were completed by students in 15 classrooms. There were three refusals and the remaining students had excused absences on the day of the survey. Of the total number of students, 54 percent were female; 48 percent were Nonwhite; 21 percent self-identified as Hispanic origin; 23 percent were 5th graders, 37 percent were 6th graders, and 40 percent were 7th graders. The median age of students surveyed was 11 years old.

**Table 1.1**  
Sociodemographics of Owl Creek Students: Grades 5-7



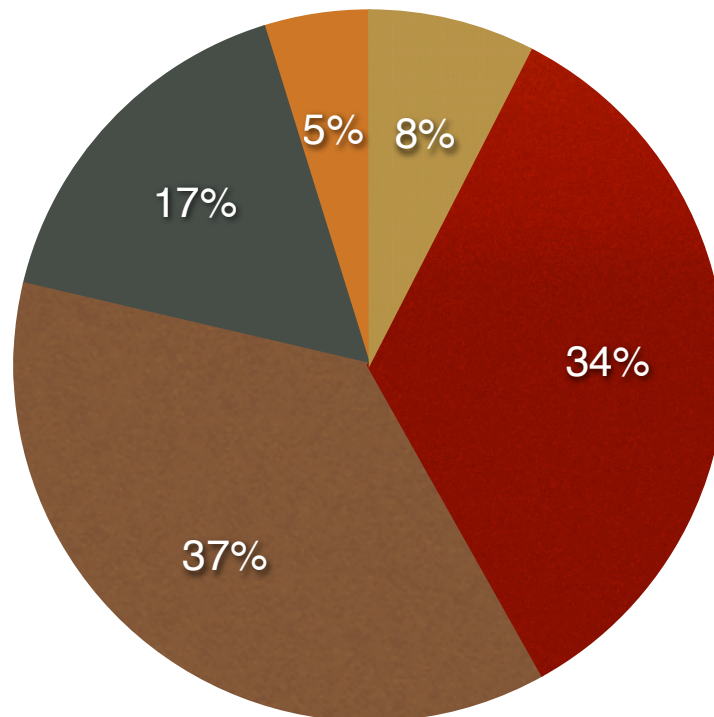
As seen in Table 1.1, there are some noticeable differences in the student backgrounds across the three grades. For all the variables in Table 1.1, the largest differences were between 5th and 7th grade students; 7th grade students were more likely to be female, white, and living in non-intact families (families where one or no parents were present) compared to 5th graders. There were no major differences across the grades with regards to the distribution of students self-reporting Hispanic or Spanish origin. While we note some sociodemographic differences across the grades, they are limited. As a result, for ease of interpretation and presentation, we present data on the entire group of 334 surveyed 5th-7th graders for the remainder of this report.

Another interesting background characteristic of these students is their self-reported ranking of social class. Students were asked, "Thinking about the money your family has and things they own, would you think of yourself as:" Upper class, between Upper and Middle class; Middle class, between Middle and Lower class, and Lower class. The results are presented

in Figure 1.1. Over 70 percent of the students self-reported that they saw themselves as either Middle or Upper-middle class. Interestingly, their parents ranked themselves much lower and of those parents self-reporting social class, only 44 percent said they were either middle or upper-middle class (see Chapter 4). Clearly students and parents have a different perspective on class and how it is defined both personally and structurally.

**Figure 1.1**  
Social Class Ranking of Owl Creek Students: Grades 5-7

● Upper Class ● Upper-Middle ● Middle ● Middle-Lower ● Lower



## Students and Their School

Ninety percent of the students said they attended school in the Fayetteville district last year. Residential mobility can be an important risk factor impacting academic and social progress; the students surveyed are residentially stable and appear not to be at-risk based on mobility. In addition to their residential stability, 90 percent of the surveyed students thought their grades were on average and mostly receiving B's or C's and better. Somewhat related to their academic self-assessment is their response to how happy they are with school right now. Importantly, 19 percent of students said they were unhappy or very unhappy. The majority of students reporting they were unhappy or very unhappy with school also tended to report poor academic progress.

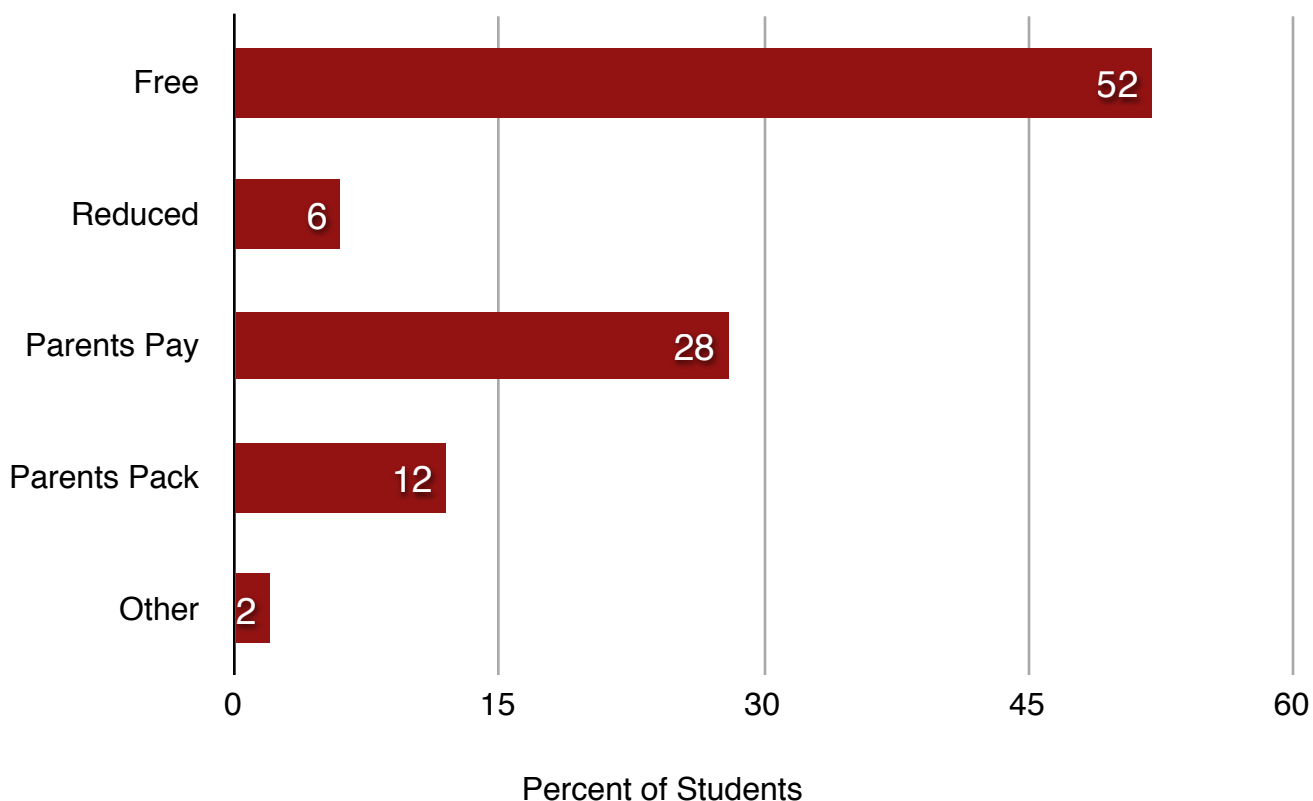
We also asked students questions about their own behaviors in school that could be construed as risky as it relates to academic progress; knowing that middle-school students are not as likely as high school students to engage in high-risk behaviors, we focused only on specific behaviors that were related to school behavior and attendance. Over 90 percent of the students reported NEVER being in the principal's office for any reprimand or trouble; six percent of the students said they had purposely skipped school or class.

Nearly 35 percent reported missing school or class because they were sick. The majority of students missing multiple days did so because of illness. Finally, we asked students if they had been in trouble and gotten detention or suspension. Approximately 20 percent of the students surveyed in 5th-7th grade said they had been in detention or suspended at least once in the past year. While the majority of those students report being in detention or suspended once, that percentage appears to be somewhat high for students generally, though based on previous research we do know that risk behaviors and general attitudes toward school and authority begin to be challenged during the middle-school years.

### School Lunch

In order to know something about students and their lunch, we first asked them how they paid for lunch, and then if they had no money for lunch, who would they ask for help. As seen in Table 1.2, fifty-eight percent reported that they received a free or reduced price lunch each day. That number is close to the total percent of students at Owl Creek that are eligible for free/reduced lunch as reported by the school district (65%).

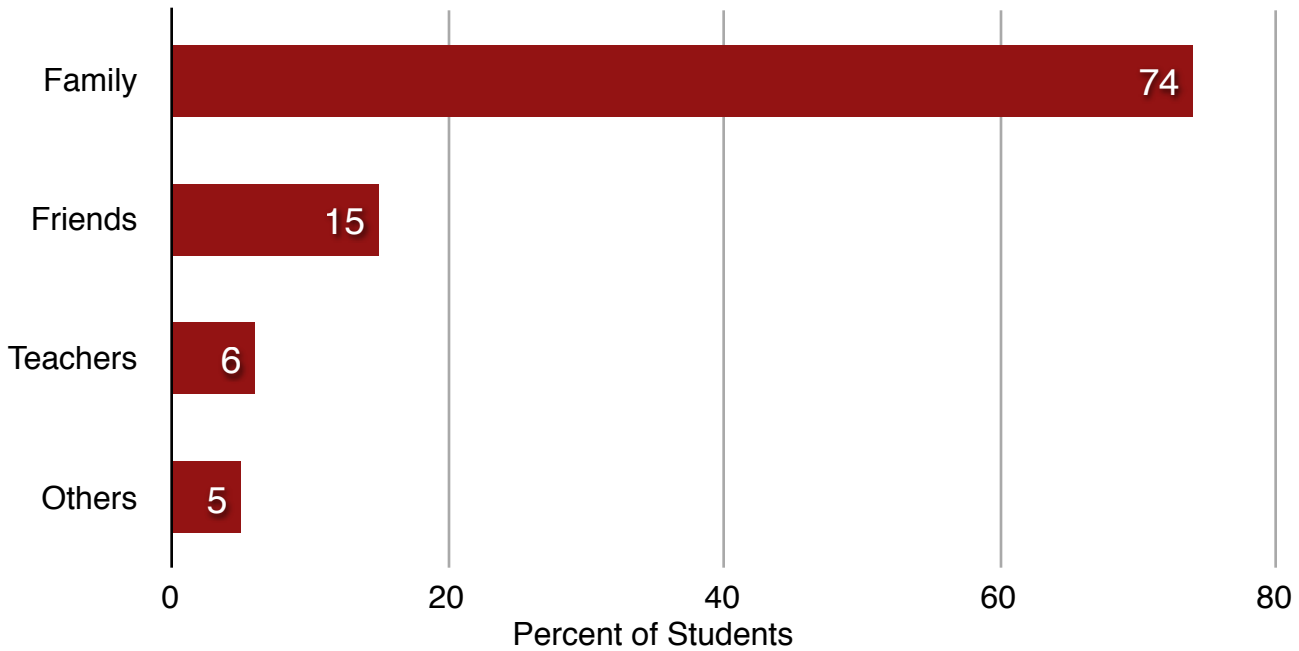
**Table 1.2**  
Paying for Lunch Among Owl Creek Students: Grades 5-7



Following up the question of how do you pay for lunch, we asked how they would buy a lunch if they had forgotten theirs, had no money, etc. Those results are reported in Table 1.3. While family represented the overwhelming majority of who students would ask for help if they didn't have lunch money, friends represented the second largest group of support, followed by teachers. Of course the majority of students look to their family for monetary

assistance, particularly at this age, but it is interesting to note their reliance on friends and how important that is even under the circumstance of having no money for lunch.

**Table 1.3**  
Help With Lunch Among Owl Creek Students: Grades 5-7







## Chapter 2

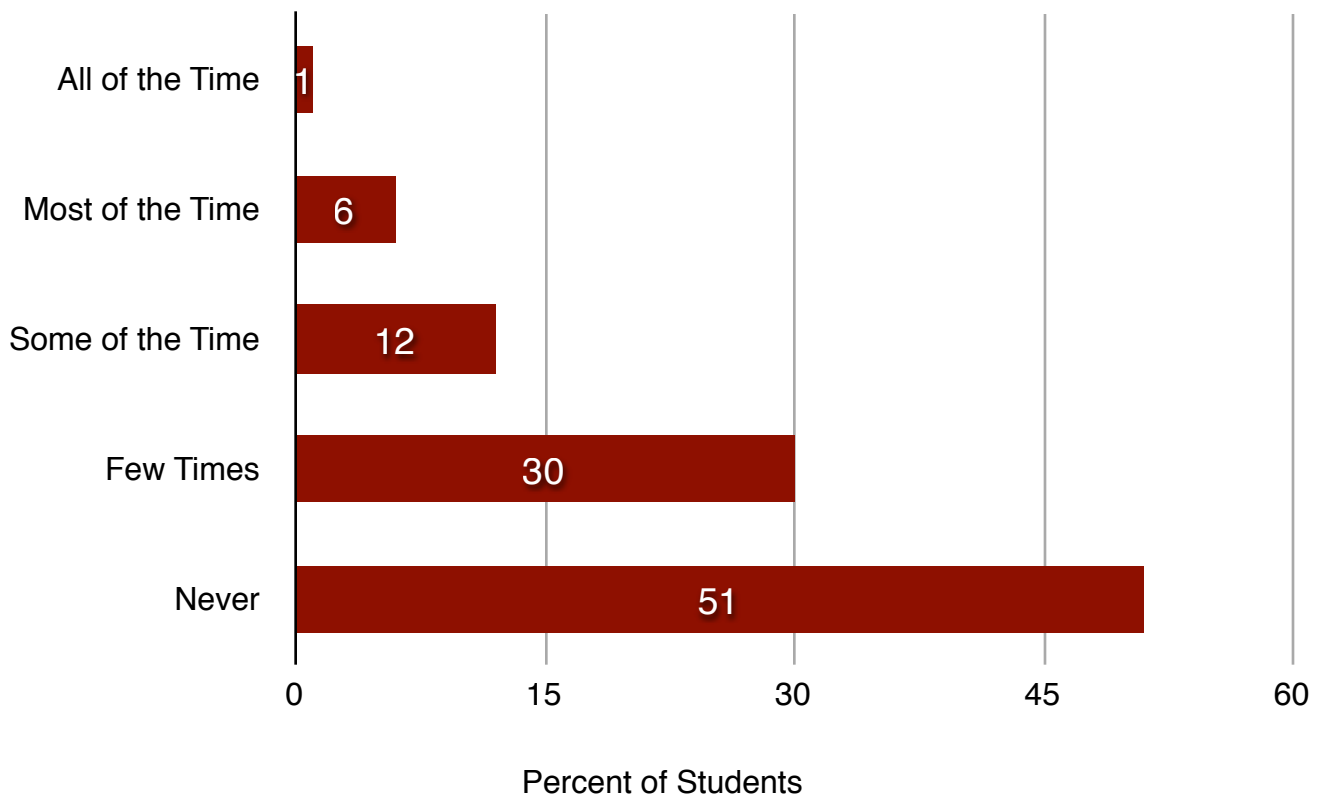
### Food Insecurity and Friendships

## Introduction

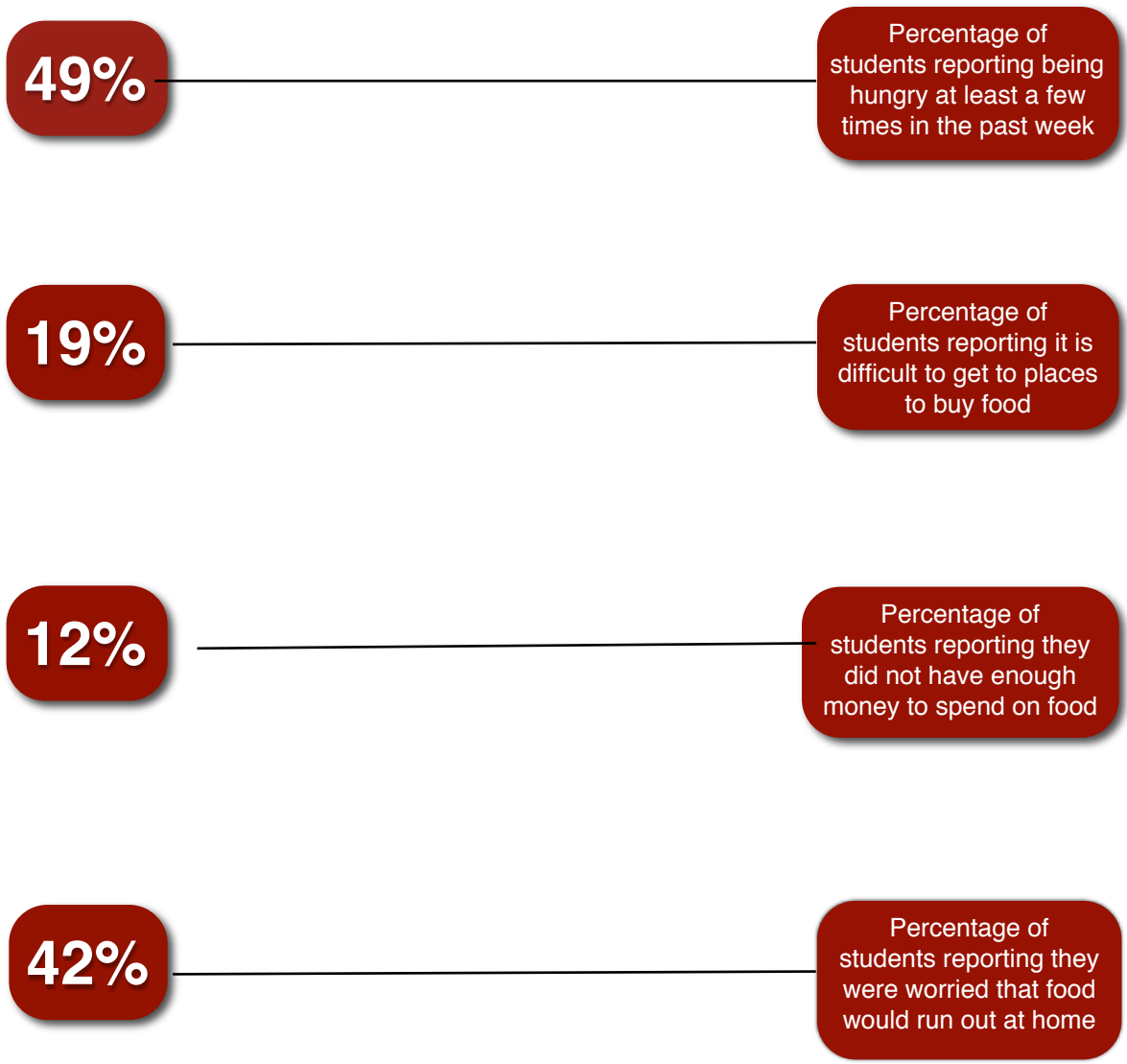
The relationship between health/nutrition and academic performance is well documented in the scientific literature. Decades of research show that poor diet can have a profound impact on weight status among students and that weight status (malnourishment or obesity) can in turn have an impact on school performance. Equally important to determining student health and well-being outcomes is food insecurity. Food insecurity is defined as a reduced availability of nutritionally adequate foods or a limited ability to acquire these appropriate foods. Often times food insecurity is discussed in the context of poverty, lack of financial resources, or inadequate service support. Recent data shows that there are nearly 50 million households in the United States that are food insecure--including nearly 17 million children. In Arkansas, estimates suggest that nearly 20 percent of children under the age of 18 are living in food insecure households; Arkansas is the 6th highest state in the country with counties that report high food insecurity rates.

While the statistics are overwhelming, the question is how much food insecurity students at Owl Creek report and are there any patterns to that food insecurity as it relates to their family background or friendships? As reported in the *By The Numbers* graphic, nearly half of the students we surveyed said they experienced hunger at least a few times during the past several weeks. As Table 2.1 shows, fewer than 10 percent of the students reported hunger most or all of the time. While this is certainly important, students and their families can still experience food insecurity and not report being hungry.

**Table 2.1**  
Reporting Hunger Among Owl Creek Students: Grades 5-7



# By The Numbers

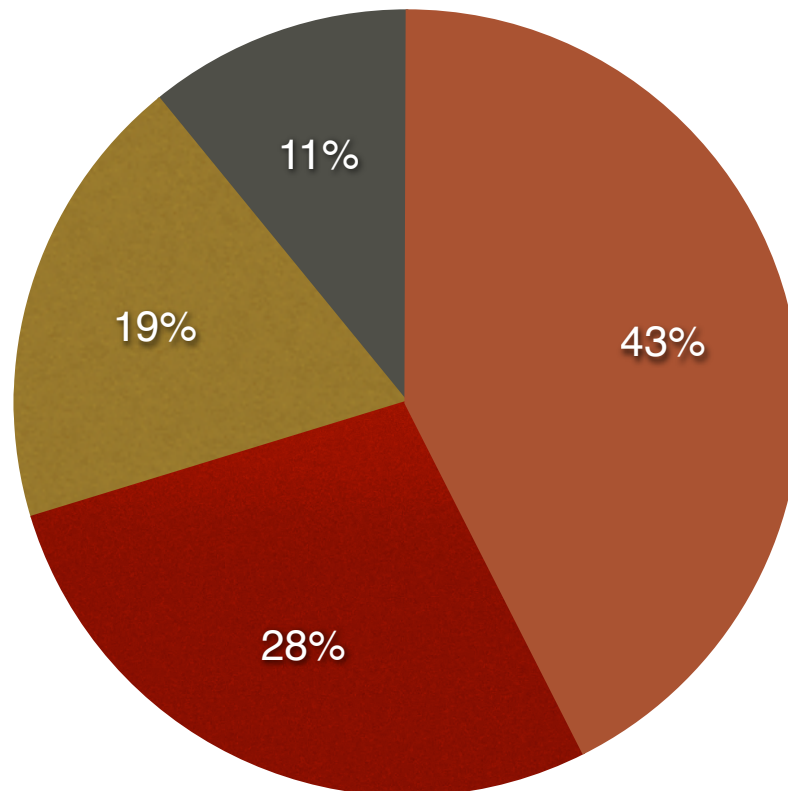


## Food Insecurity

In addition to experiencing hunger, we asked students a set of five questions that assessed their food insecurity. Students responded to the following (using the time frame “in the past year”): 1) Worried that food would run out; 2) Food had run out and they had no money to get more; 3) Were not able to eat a balanced meal; 4) Meals included cheap foods; 5) Meals were getting smaller. Student’s responses to these questions included: never, sometimes, and a lot. Students could score a total as low as zero, where there was no food insecurity, and as high as ten where there was high food insecurity. For the group of students surveyed, the average score for the food insecurity was 2.0, indicative that the majority of students were reporting some food insecurity though nearly 43 percent reported no food insecurity (score of 0 recorded on all five questions). Figure 2.1 shows the distribution of all 5th-7th grade students categorized by how much food insecurity they experienced. Clearly, food insecurity is a noticeable problem among this group of Owl Creek students--thirty percent reported moderate or high levels of food insecurity. It is important to note that while nearly one-third report moderate to high insecurity, that number is significantly lower than the percentage of students eligible for free/reduced lunch--a percentage often used as a proxy for food insecurity and is likely an overestimate of the problem.

**Figure 2.1**  
Food Insecurity Among Owl Creek Students: Grades 5-7

● No Insecurity ● Low Insecurity ● Moderate Insecurity ● High Insecurity



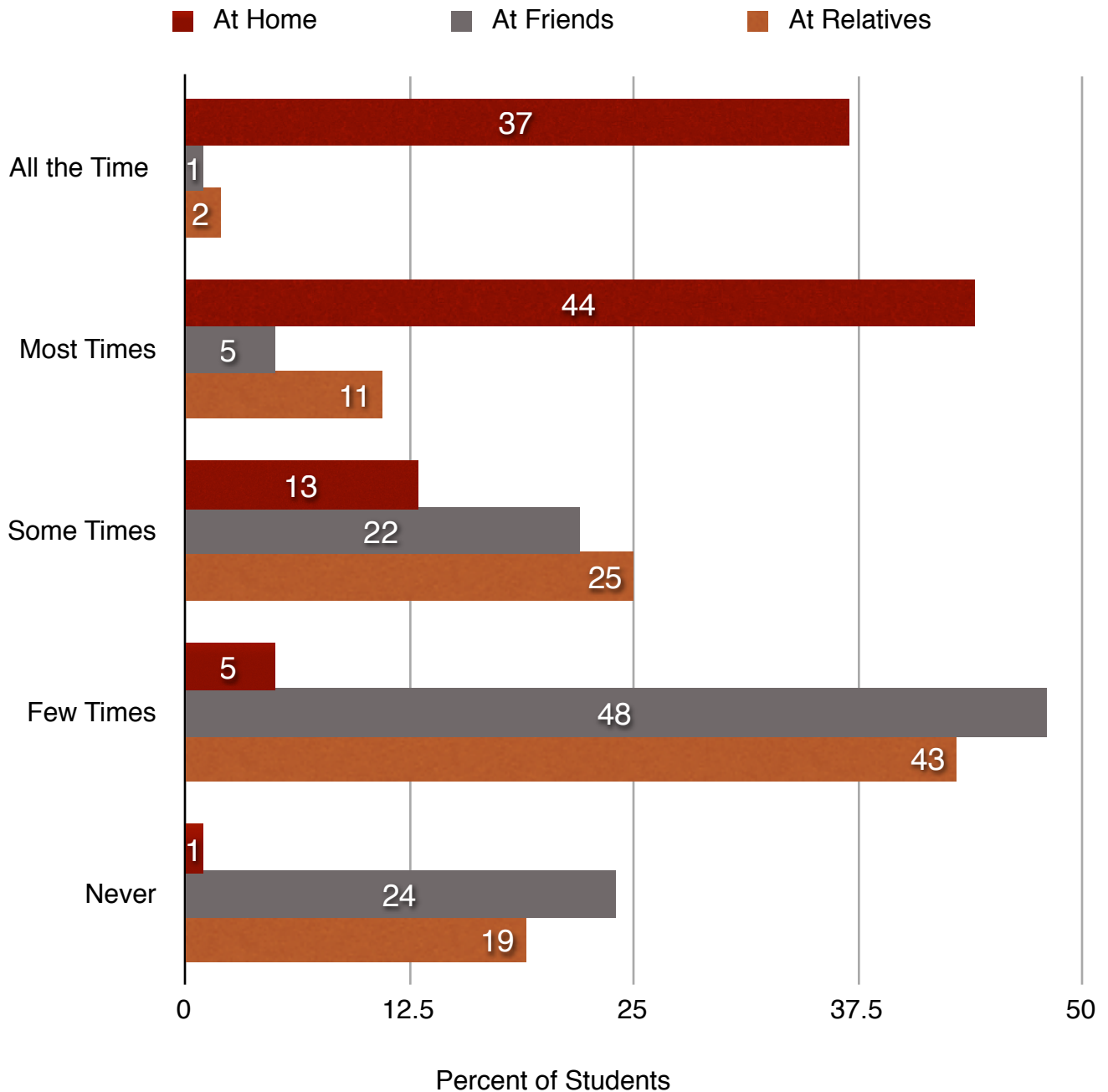
Percent of Students



Beyond hunger and food insecurity, we wanted to learn more about where students were eating the majority of their meals outside of school. Nearly 75 percent of students reported they ate meals with their family “all or most of the time”; eighty percent of students reported eating meals with family **at home** as opposed to somewhere else. The “other” places where students reported eating were with friends, relatives, at convenience stores, as well as at fast food and family restaurants. Table 2.2 shows the percentages of students eating “in” as opposed to going out somewhere to eat. While eating at home is clearly the popular choice, over one-third of the students reported eating at their friends or relatives house at least “a few times” in the past year. This finding is important. It suggests that among those students who might experience some degree of food insecurity at home, that insecurity may be mitigated because they are able to obtain meals at their relatives or friend’s house.

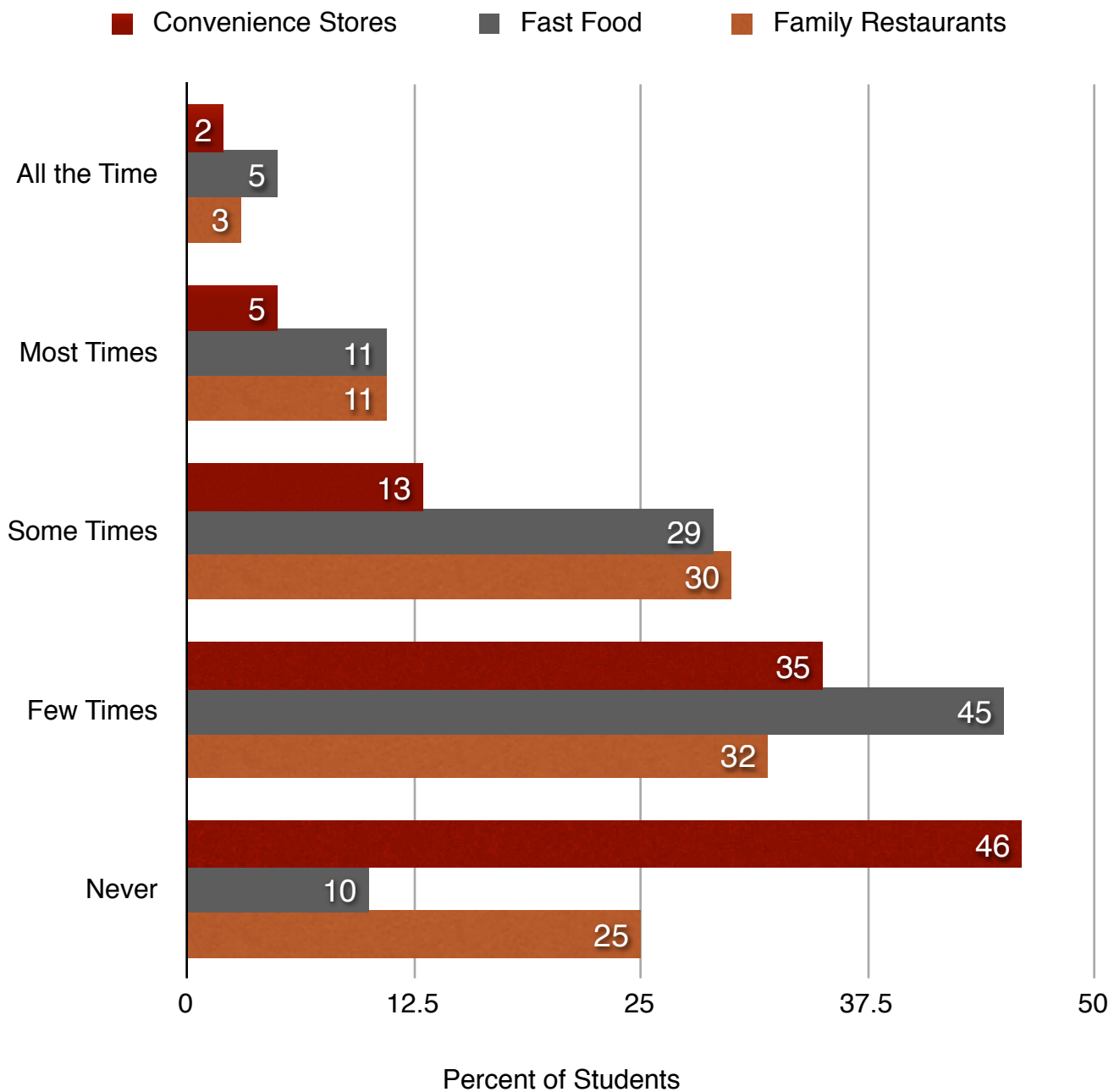


**Table 2.2**  
Places to “Eat In” Among Owl Creek Students: Grades 5-7



Just as important, but for a different set of reasons, we also were interested in how much students reported “eating out.” As seen in Table 2.3, while a large number of students did not report “eating out” at convenience stores or gas stations, nearly 20 percent reported eating meals there some, most, or even all the time. Likewise, a large percentage of students reported eating their meals at fast food restaurants; 16 percent reported eating fast food most or all of the time. This finding is extremely important to understanding the health issues related to food and nutrition particularly as it relates to obesity in the United States. Thus, regardless of what the school and the state do to fight the uphill battle of providing healthy, balanced meals, if students go home and eat unhealthy, high-fat foods, little impact is likely when it comes to changing diet or impacting health outcomes in the K-12 population.

**Table 2.3**  
Places to “Eat Out” Among Owl Creek Students: Grades 5-7



## Students and Their Friends

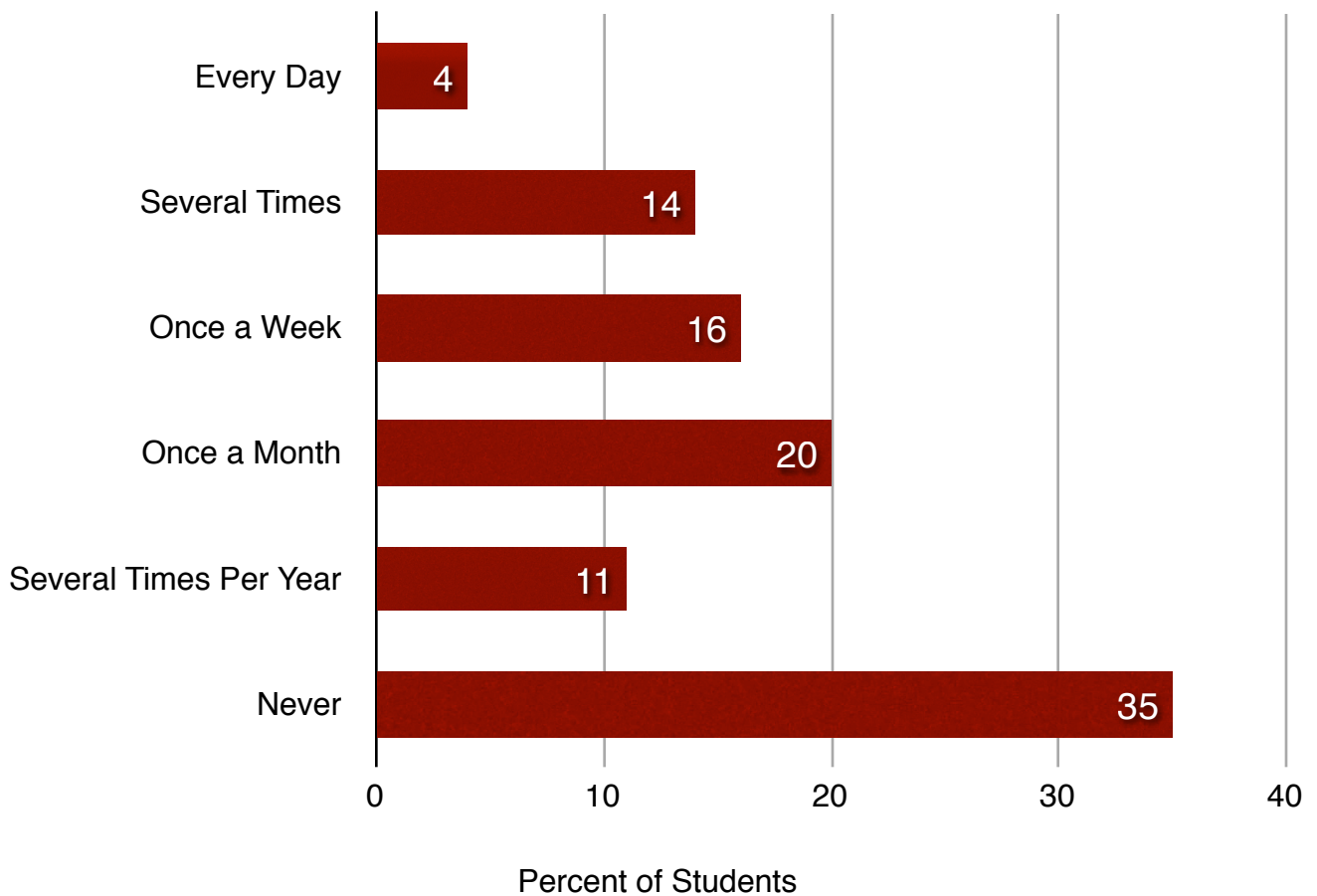
Students spend the majority of their waking time at school. As a result, the friendships they develop and the social associations they engage in are both important to them while in school but are often critical to shaping their lives through adulthood. Who students associate with is important, but just as important is the size of their social networks, and what types of activity or social capital these networks are used for. Because we were interested in whether or not social relationships influenced food insecurity and health outcomes among students, most of the social network/capital questions are related to food. As seen in Table 2.2, where



students ate their meals; less than 25 percent said they never ate at their friend’s house, while more than 60 percent said they ate there a few or some times in the past year. In addition to where student’s ate their meals outside of school, we also asked students whether or not they had a best friend and if so, how often did they eat at one another’s house? Of the 334 students surveyed, only 10 answered that they did not have a best friend. On average, students reported having, 5 close friends (people that they see or have daily contact with). While some students said they only had one or two close friends, 25 percent said they had 8 or more close friends.

If we focus just on the friend that students reported as their “best friend,” a typical pattern emerges with regards to how much contact and what type of contact they have with these friends. For example, nearly 80 percent of students said they saw their best friend every day or at least several times a week. That number was slightly lower for other types of contact (phone, text, Facebook, etc.), though 60 percent still reported being in touch with their best friend every day or at least several times a week using some other means. When asked how often they ate meals with their best friend outside of school, nearly one-third of the students reported at least once a week and in some cases, several times a week or every day. The results seen in Table 2.4 show a more engaged pattern of eating than it did in Table 2.2 when we asked students about eating with their friends generally.

**Table 2.4**  
Eating Meals with Best Friend Among Owl Creek Students:  
Grades 5-7



## Social Capital and Food Insecurity

The majority of this report attempts to address single-order questions, i.e. how much food insecurity is there among Owl Creek students in grades 5-7? Nevertheless, it seems important that we should examine the relationship between friendship ties/social capital and food insecurity. The argument has been made that some forms of social capital (relationships) can be important to lessening food insecurity among adults. Several studies report lower food insecurity among adults living in communities that provide better opportunities for social associations among adults and families, have more food-related services, and report higher levels of religious capital (attendance & religiosity).

In our study, we developed a summary measure for social capital by combining the questions on friends and friendship activity and a summary measure of food insecurity that is similar to the one developed by the USDA. This adapted version of the food insecurity measure has been used on children under the age of 18 and is noted as being both a valid and reliable indicator of food insecurity, regardless of whether students reported being hungry. As expected the correlation between these two variables is negative (-.180). The correlation is statistically significant and as predicted, the greater the social support/capital the less likely someone would experience food insecurity.





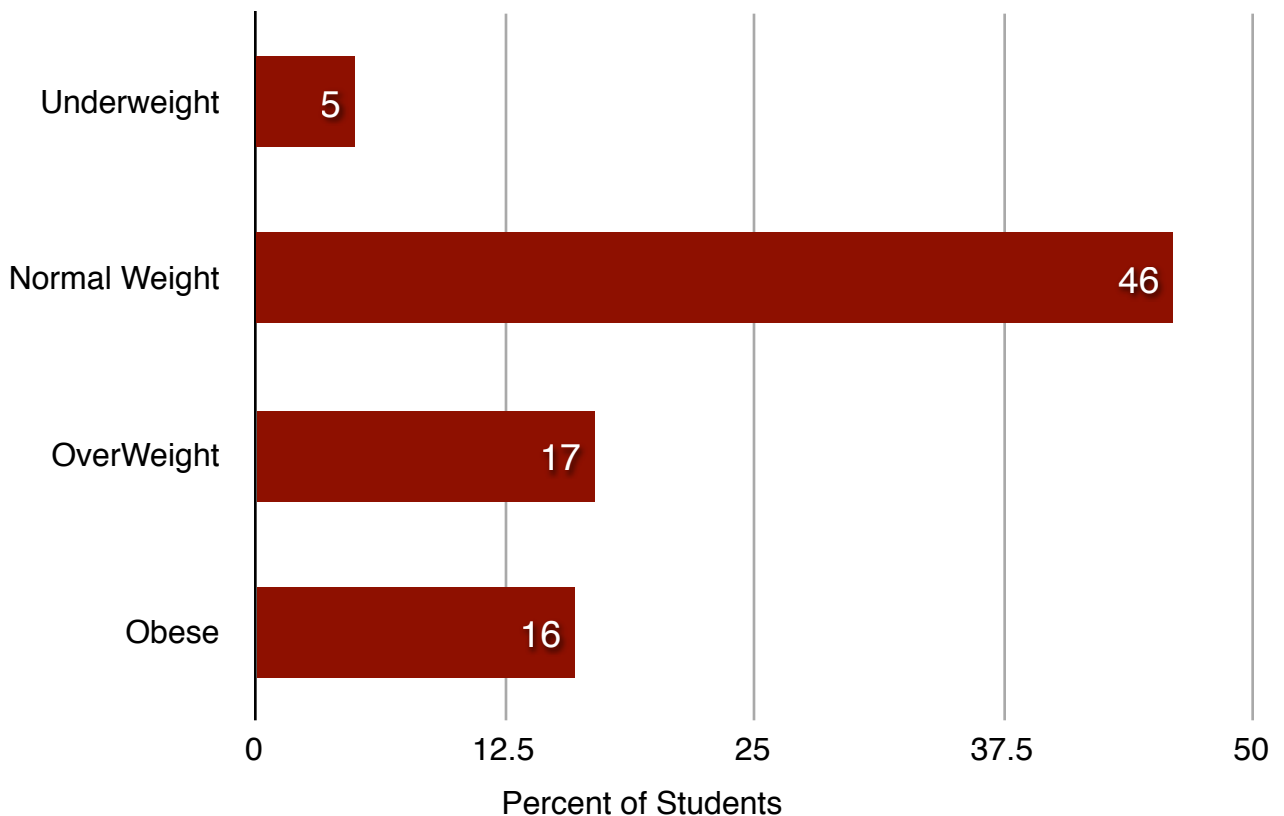
# Chapter 3

## Health and Well-Being

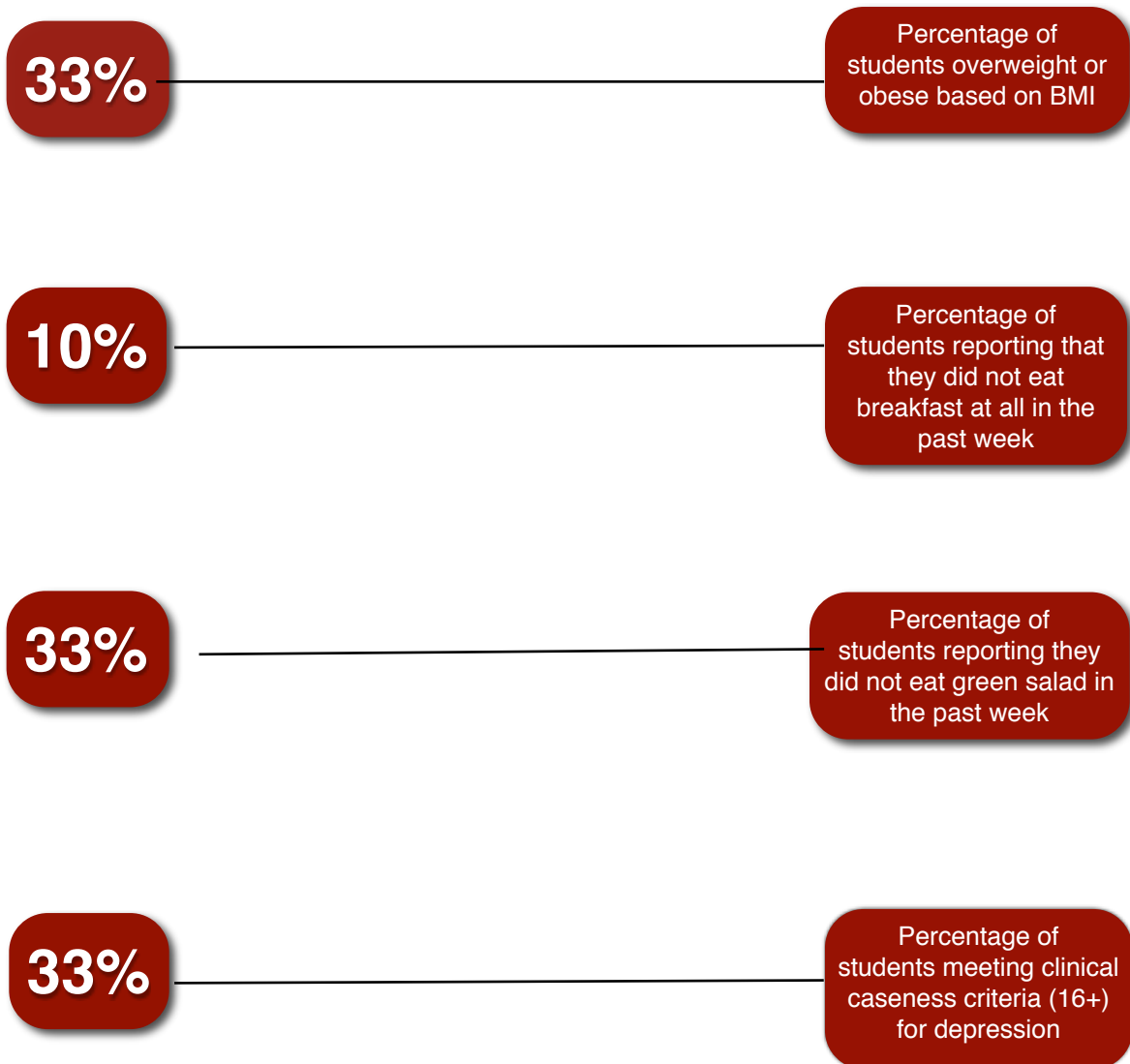
## Introduction

An important part of the health and well-being equation for students is their weight status. Many students worry about their weight. Some students are considered to be too skinny and thus potentially vulnerable to bullying or physical abuse, while others are too heavy and likewise vulnerable to bullying and verbal abuse. For our purposes, because of the significant health risks, we focus on those student's reporting height and weight that puts them at risk for being overweight or obese. There are multiple standards used to create BMI (body mass index) rankings for children and adults. The standard reported in this chapter is established by the Centers for Disease Control and Prevention (CDC). Since the average age of the students surveyed was 11 years old, we first examine weight status for the entire sample assuming an average age of 11. Given the percentile rankings used by the CDC, 33 percent of the surveyed students would fall into the overweight or obese category. That is higher than found in the general population for children (male/female) 11 years old in Arkansas and the United States.

**Table 3.1**  
Reporting Weight Status Among Owl Creek Students:  
Grades 5-7



# By The Numbers



## Health and Nutrition

In addition to weight status, we also asked students to what extent they engaged in healthy eating behaviors in the week prior to the survey. A series of ten questions asked students how often in the past week they ate certain types of foods (vegetables, potatoes, carrots, salads, etc.); drank specific types of drinks (milk, fruit juice, soda, etc.) had breakfast, and exercised vigorously including their physical education class. Not surprising, a large number of students had not eaten a green salad, carrots, potatoes or other healthy vegetables in the past week. Table 3.2. shows that nearly one-third of the students ate limited vegetables during the week. Interestingly, nearly 60 percent reported eating fruit at least four or more times during the week prior to the survey (not shown here).

**Table 3.2**  
Healthy Eating Among Owl Creek Students: Grades 5-7

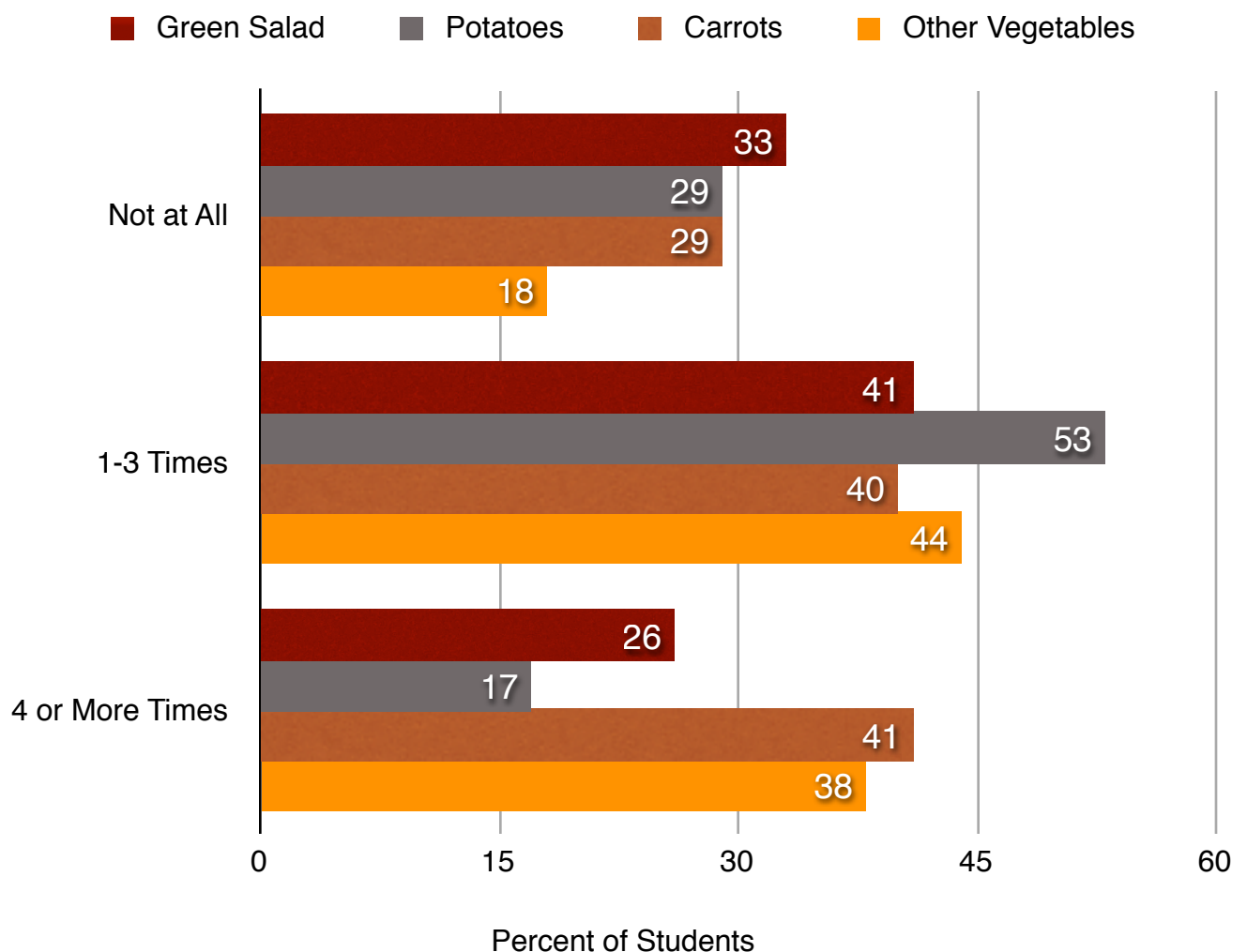
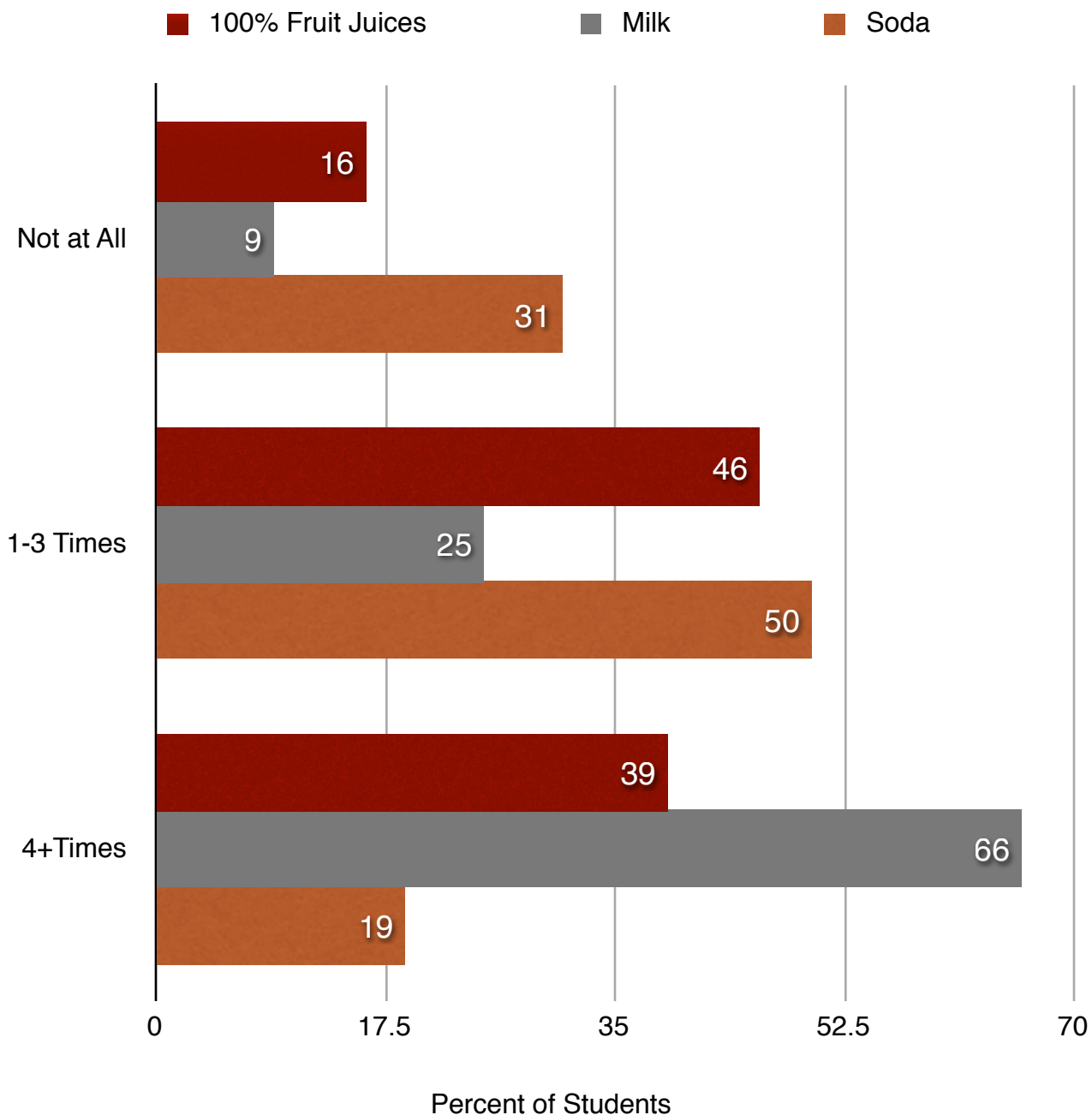


Table 3.3 includes responses from students regarding what they were drinking the week prior to the survey. The results show that there are more students getting access to healthy drinks as opposed to healthy foods. Less than 17 percent of students reported **not** drinking 100% fruit juice at all during the last week prior to the survey and an even smaller number reported **not** drinking milk (9%). Perhaps just as important to considering what good things students were drinking, we also were interested in how much soda students were drinking on a

weekly basis. We asked them how often they drank soda, not including diet or caffeine-free soda. The results in Table 3.3 are somewhat encouraging; nearly one-third said they drank no soda at all the week prior to the survey. Nevertheless, half of the students surveyed reported drinking soda 1-3 times a week and almost 20 percent said they drank it four or more times in the past week. Certainly this group of students who are drinking caffeinated soda nearly every day is the group at highest risk for negative health outcomes including obesity, diabetes, hypertension, etc.

**Table 3.3**  
Healthy Drinking Among Owl Creek Students: Grades 5-7





A final question students were asked related to their physical health was: “How often did you get to where you were breathing hard and your heart rate increased (including physical education class)?” Sixteen percent of the students reported not at all in the last week and 45 percent reported only 1-3 times in the past week. Physical exercise is clearly linked to positive social, academic and health outcomes; the majority of 5th-7th grade students (nearly two-thirds) are not engaging in the required minimum of physical activity outside of the school setting.



### Psychological Health

In addition to physical health risks and nutrition, we asked students questions related to their self-esteem and mental health--specifically questions about symptoms related to depression. A number of recent studies highlight the relationship between physical health outcomes and mental health; research shows that children and adolescents with high BMI scores often have low self-esteem and report significant depressive symptomatology.

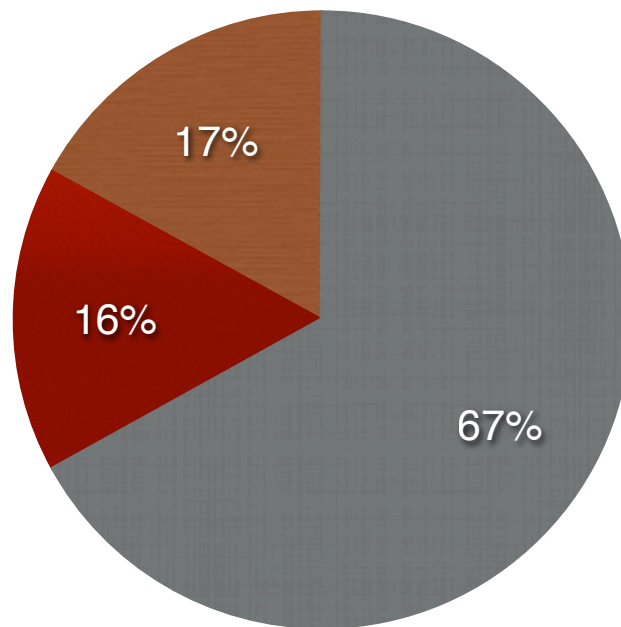
In this study, we constructed a valid and reliable indicator of self-esteem. Rosenberg's self-esteem is a self-evaluation tool that helps to create general markers of low and high self-esteem based on the scaled responses to a set of 10 questions (Rosenberg 1965). These questions ask students whether they strongly agree, agree, strongly disagree, or disagree with statements like: “I am a person of worth;” “I have a number of good qualities;” “I can do things as well as most people;” etc. The self-esteem scale can range from 0-30 with a score of 17 usually noted as low self-esteem. The average score for 5th-7th grade Owl Creek students was 23; approximately 10 percent reported scores in the “low self-esteem” range.

Another way to examine psychological health was to ask students questions about symptoms they may or may not be experiencing that are related to depression. The goal of course was not to make a diagnosis but rather to summarize each student's responses to these questions that assessed how often in a two-week period they experienced specific symptoms. These questions ranged from how often they felt sad, lonely, anxious, to had they

had trouble eating, sleeping, getting going etc. While the assessment used (C-ESD) may be more reflective of general emotional distress than clinical depression, it is a very reliable and valid indicator that has been shown to be a good benchmark for use in assessing depressive symptoms in both children and adults. The depression symptom scale could range from 0-60. Figure 3.1 shows the percentage differences for students who scored lower than 16 (healthy); students scoring greater than 16 and less than 21 (possible clinical caseness) and students scoring 21+ (probable clinical caseness). Each successive jump suggests greater severity in symptoms (number and frequency) and the greater likelihood that if the student spent time with a trained, clinical counselor or therapist they would likely reach this conclusion about their current emotional health. It seems important to note that a third of this sample of 5th-7th grade students are experiencing some elevated emotional distress.

**Figure 3.1**  
Depression Categories For Owl Creek Students:  
Grades 5-7

● Healthy    ● Possible Clinical Caseness    ● Probable Clinical Caseness





# Chapter 4

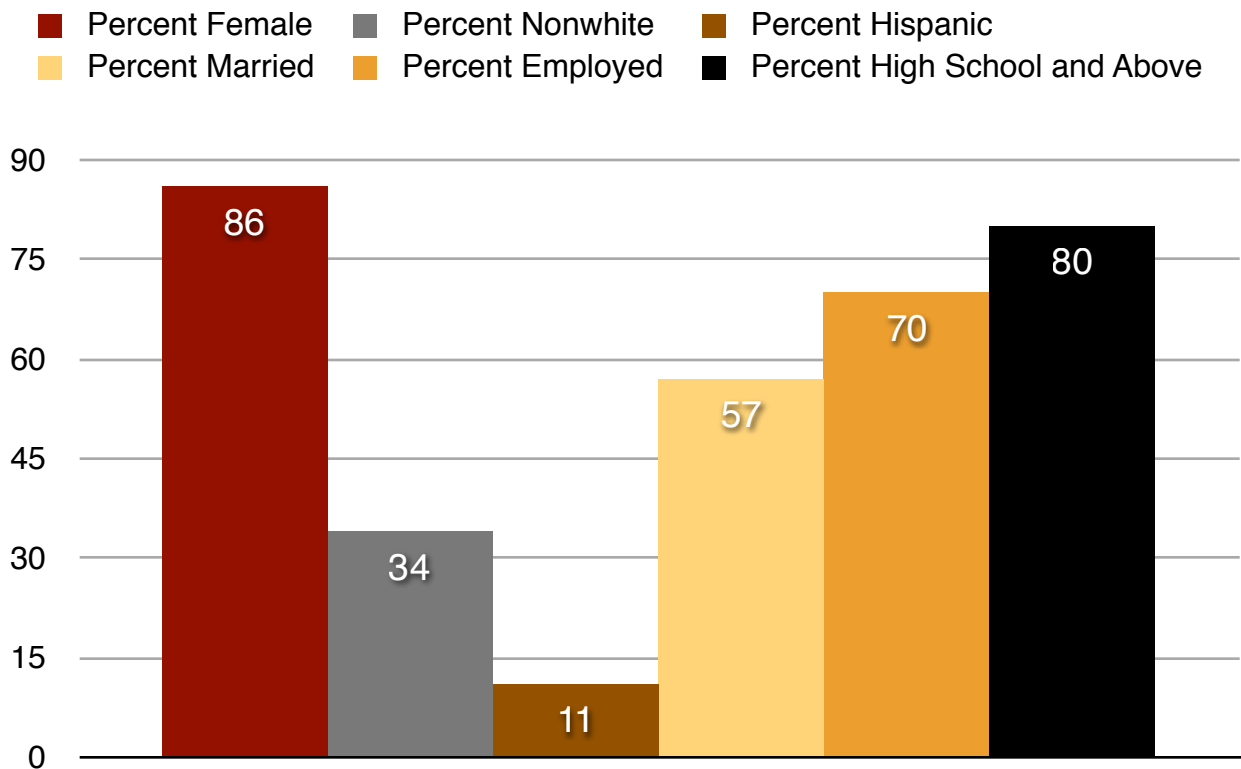
## Student's Families

## Introduction

In addition to surveying 5th-7th grade students at Owl Creek school, we asked the parents of these students to participate in a survey of their socio-demographic background, health and nutrition, food insecurity, social capital, and mental health. In some cases, we asked the same questions that we did of students and in other cases, asked them different questions.

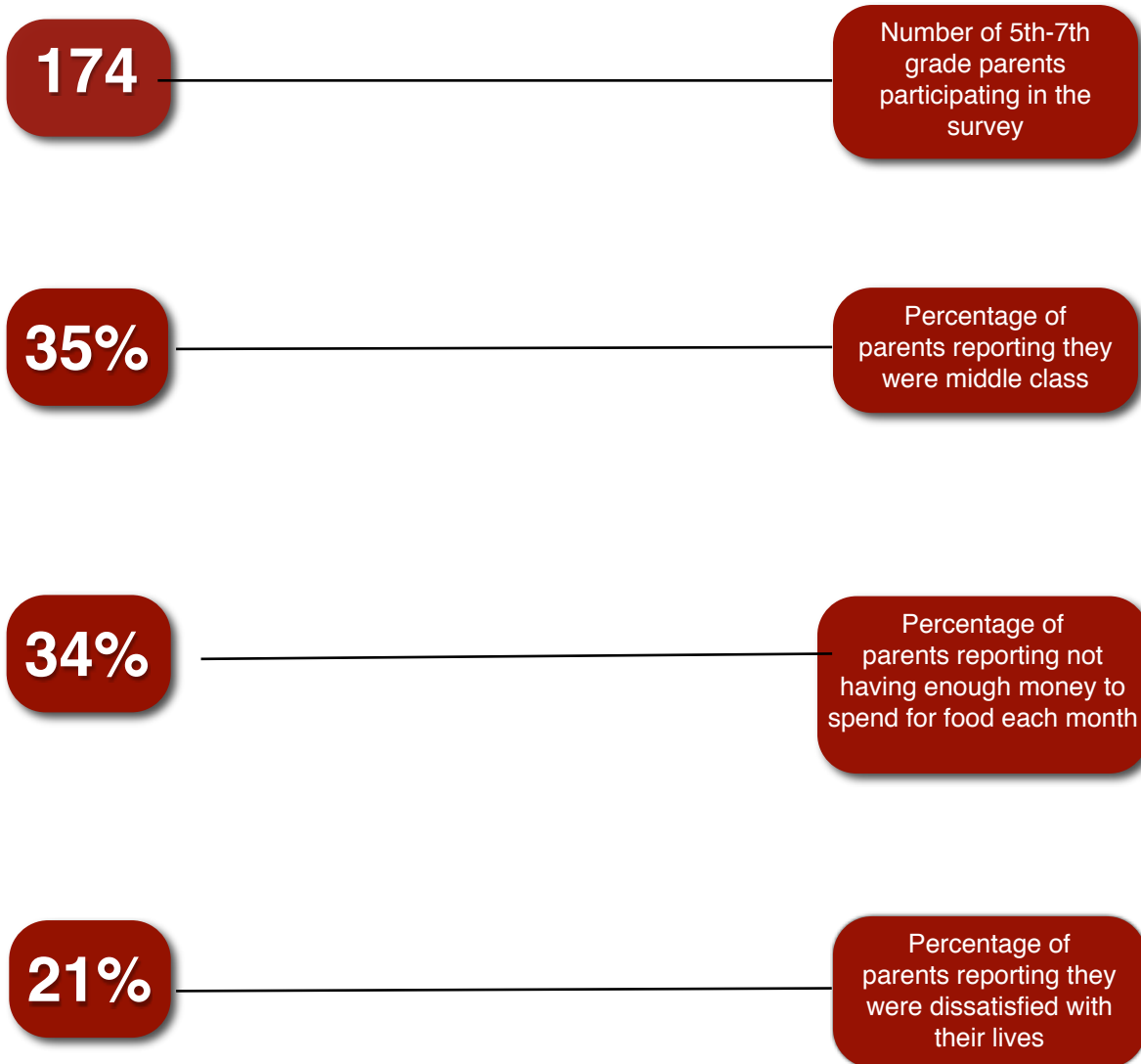
After students completed the survey, a letter of explanation, consent and a parent survey (Spanish translated for those students requesting one) was sent home asking parents to fill it out and return it in a timely manner. As an incentive to their returning these completed surveys, we offered them a Wal-Mart gift card. Of the 334 surveys sent home, we received 174 (52%). This return rate, given the circumstances, was relatively high and we feel it does an adequate job of representing the majority of parents of 5th-7th grade Owl Creek students. In Table 4.1 we present some of the background characteristics of the parents surveyed.

**Table 4.1**  
Sociodemographics of Owl Creek Parents



The majority of parents responding to the survey were mothers; with a high school education or more; employed; and married. The diversity of the school is well represented with 34 percent of parents responding to the survey reporting their race to be something other than “White.” In addition, 11 percent of parents responding were Hispanic--another important reason why both English and Spanish translated surveys were provided to both students and their parents if requested.

# By The Numbers



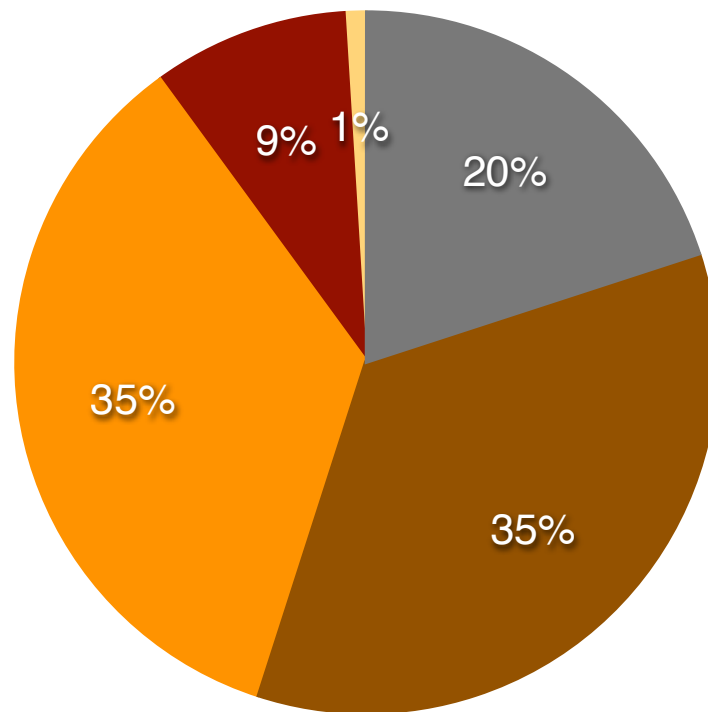
## Family Background

While the majority of families were intact (57%), a large number of families reported having multiple children and adults living with them. Seventy percent of parents responding to the survey said they had more than one child; 6 percent of parents surveyed reported having one or more adults living with them that were not immediate family members.

As discussed earlier, parents ranking of their social class appears to be vastly different than their child's description. As noted in Figure 4.1, ten percent of the parents viewed themselves as Upper or Upper-Middle class which contrasted significantly with 42 percent of the students reporting being Upper or Upper-Middle class. That is four times the difference in rankings between these two subjective assessments and points to a major discrepancy in how children and their parents come to understand social class.

**Figure 4.1**  
Social Class Ranking of Owl Creek Parents

Lower Class  
  Lower-Middle Class  
  Middle Class  
  Upper-Middle Class  
 Upper Class

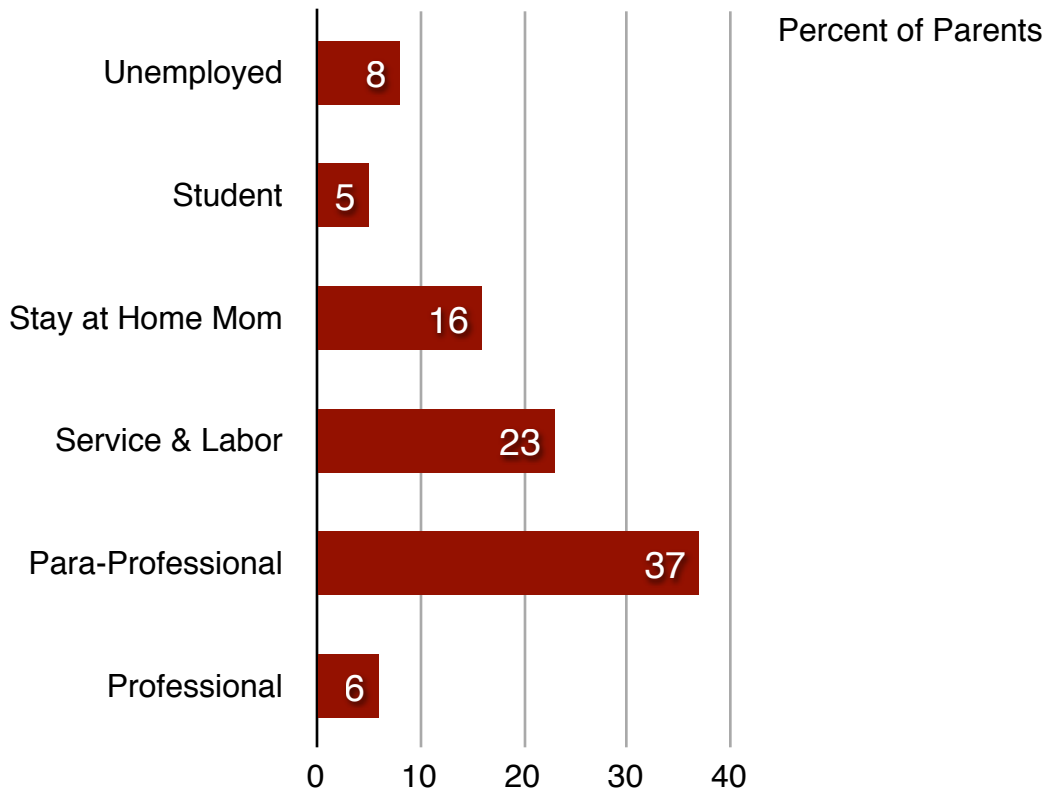


Percent of Parents

In addition to social class assessment, we asked parents what their current occupation was and then recoded those answers into several broad groupings. Table 4.2 shows that 8 percent reported being unemployed which is very close to the current unemployment rate for Northwest Arkansas; 16 percent reported being stay-at-home mothers. Over one-third of the parents surveyed reported working in administrative or para-professional jobs. This finding coincided with the average number of education years parents reported as 13 years. Equally important were the 23 percent of parents reporting they were working as laborers or in the

service industry. It is important to keep in mind that the primary respondents to this questionnaire were women; over 80 percent of the respondents were women and they are only reporting their occupation and not their husband's/partners.

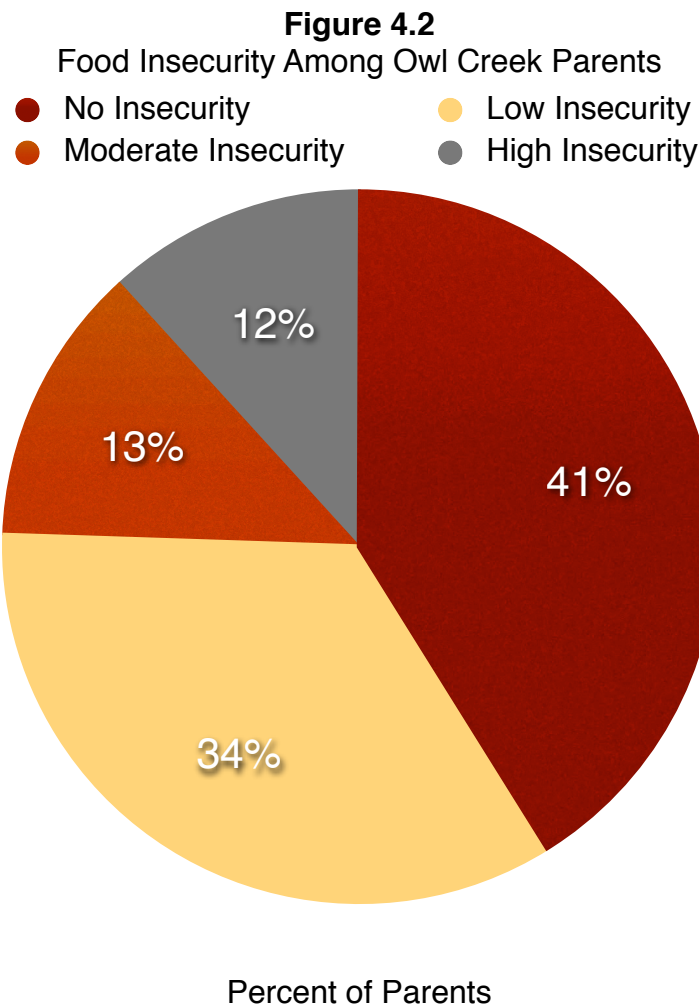
**Table 4.2**  
Occupational Groupings of Owl Creek Parents





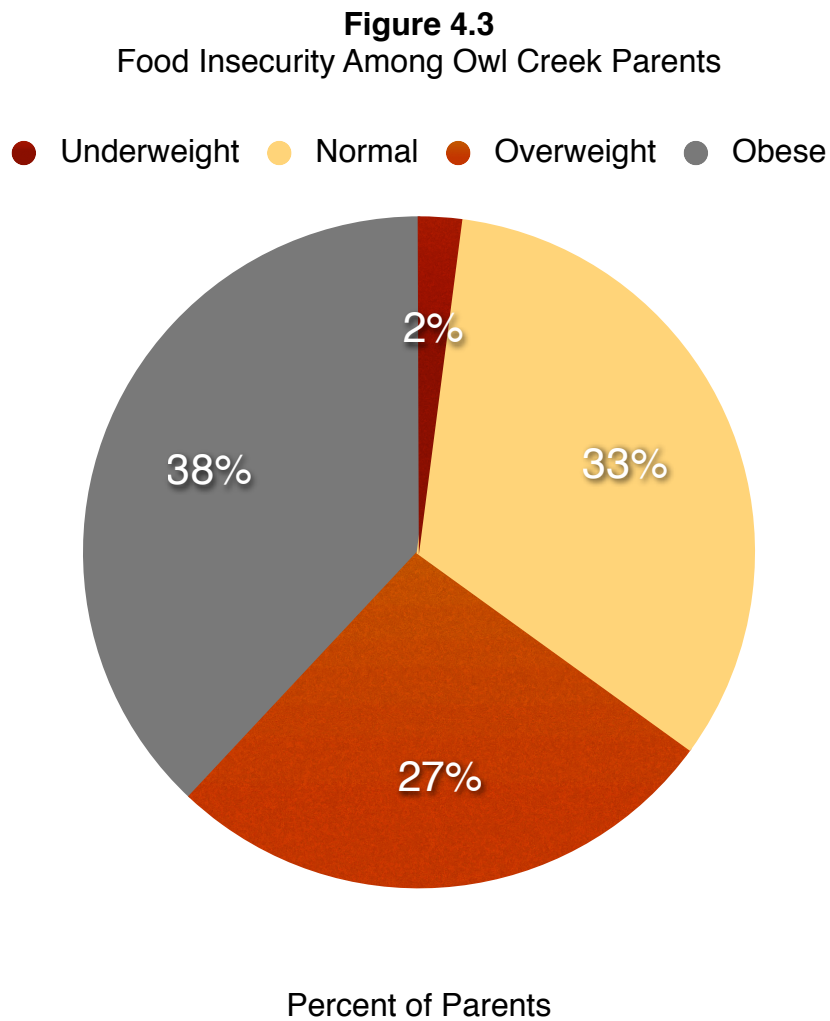
## Food Insecurity

Similar to students, we asked parents a series of questions related to their food insecurity. These questions were similar to those used by the USDA to assess degrees of food insecurity among adults. Keeping in mind that 30 percent of students sampled reported they experienced moderate or high food insecurity; Figure 4.2 shows that a slightly higher percentage of adults reported moderate to high food insecurity (40%). This discrepancy may be more related to the difference in questions than the significance in assessment between child and parent though previous research suggests that these two groups often assess hunger and food insecurity differently. While hunger is a real circumstance for children as reported earlier, 27 percent of the parents surveyed said there were times when they were forced to eat less than they should.



## Health and Nutrition

Similar to their children, we asked parents to estimate both their height and weight so that we could calculate BMI. The BMI was calculated in the same way that it was for student's using the CDC chart for guidelines to determine who was underweight, normal, overweight, and obese. These are standards set for both male and female adults. Per Figure 4.3, the percentage of parents, on average, that are overweight or obese is considerably higher than the percentage of students reporting their height and weight earlier in Chapter 3.

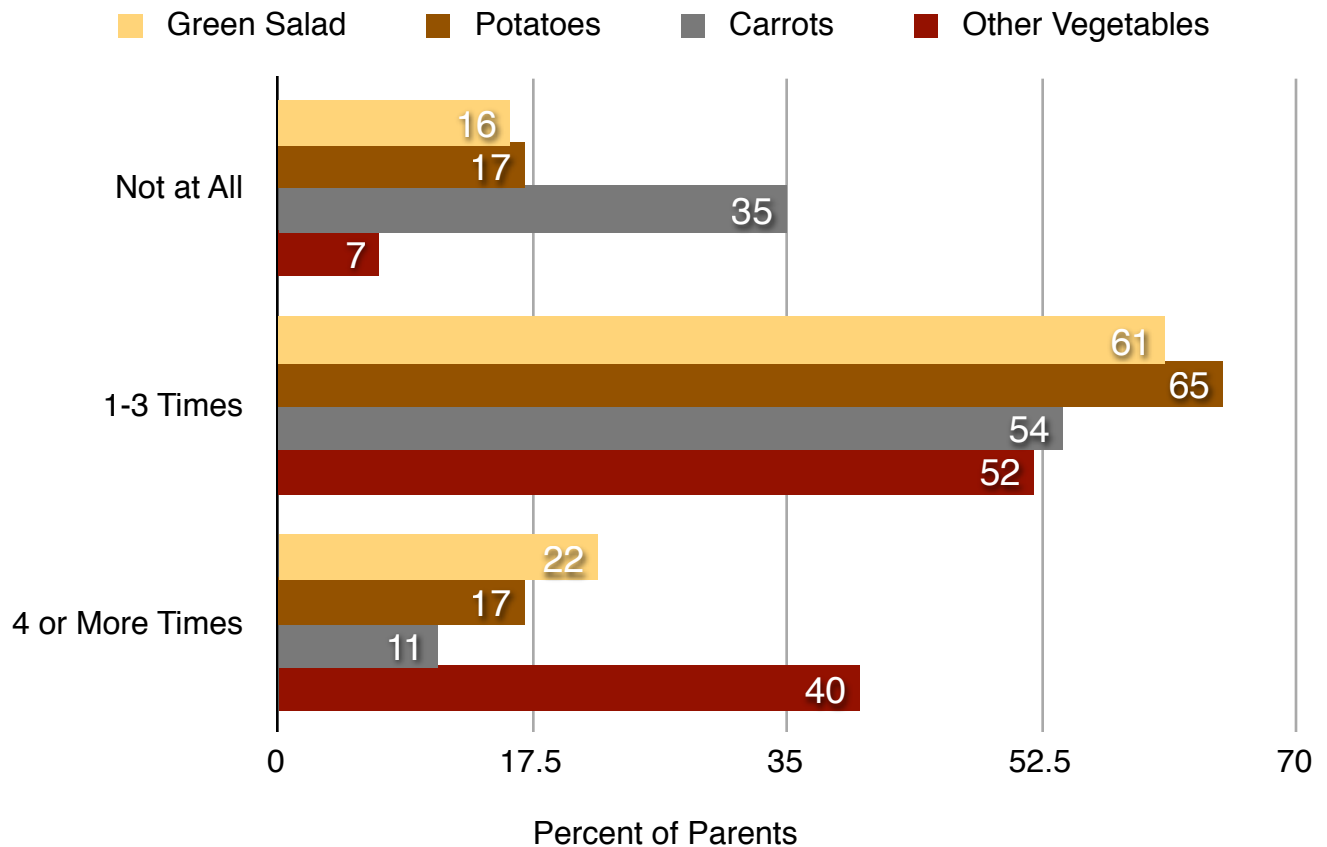


The finding that a larger percentage of parents are obese is of course troubling and an important risk factor for young students who are influenced at this age when it comes to healthy approaches to eating, exercise, nutrition, and health. In addition, 27 percent of parents surveyed were overweight and at risk for obesity.



Certainly an important part of the health and nutrition story for parents is what they are eating and how often. Similar to their children, we asked parents a set of questions about how often they ate certain foods or drank certain kinds of liquids. The answers were different from students and somewhat surprising given the current weight status of those parents responding to the survey. Focusing on healthy food consumption, Table 4.3 highlights an important part of the family nutrition story.

**Table 4.3**  
Eating Healthy Among Owl Creek Parents



Parents are certainly more likely to report eating healthy than their children; other than carrots the parents responding to this survey reported eating vegetables “not at all” less than 20 percent of the time. While the percentages for eating 1-3 times look similar to the pattern we observed earlier among students, like their children, the majority of parents generally are not eating vegetables of any kind “4 or more times” in a given week.

Just as important to the health equation is how much exercise parents are getting. We observed in an earlier chapter that only 16 percent of students responded “not at all” to the question: “How often did you get to where you were breathing hard and your heart rate increased”? For parents, that percentage jumped to 41 percent. The combination of poor diet and lack of exercise is clearly having an impact on the health and well-being of the parents as much, if not more, as their children.

## Social/Psychological Health

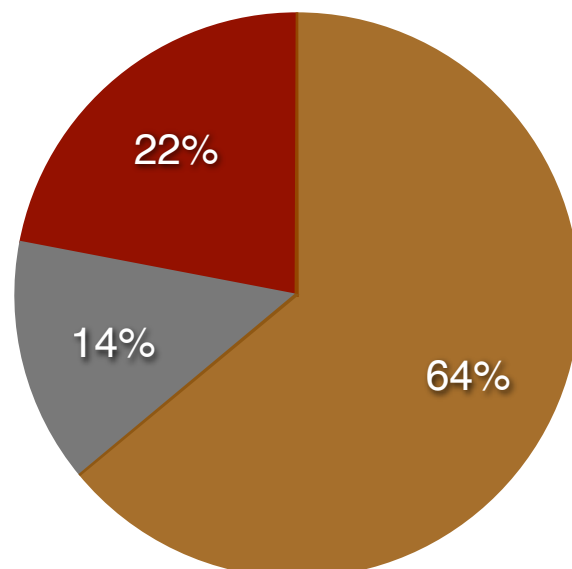
Similar to the students that we surveyed, we also asked the parents questions about their mastery and mental health--symptoms of depression. Research has demonstrated that poor maternal/parental psychological health has important ramifications for their children. Similar to the work on youth under the age of 18, research shows a direct link between BMI and adult depressive symptomatology.

In this part of the study, we asked a series of questions to parents about two important psychological conditions: depressive symptoms and mastery (locus of control). For the parents we asked a set of questions that assessed their sense of control over things that happened to them and how they handle personal crises, their future, and the general tasks of life. The measure consists of 7 items which were answered on a 4-point (strongly agree, agree, disagree, strongly disagree) scale with a range of 0-21. The average score for the parents that were surveyed was 14; generally a low sense of control/mastery is indicated with a score of less than 11; twenty-three percent of the parents surveyed scored low on the locus of control measure.

Finally, we examined depressive symptoms. Similar to their children, we asked a series of questions that assessed how often they experienced a particular symptom over the past two weeks prior to the survey. These questions ranged from how often they felt sad, lonely, anxious, as well as having trouble eating, sleeping, getting going, and staying focused. The assessment scale was the same one that we used for students--CESD which was again more reflective of general emotional distress than clinical depression. Nevertheless, this scale has been routinely used in preliminary diagnoses for both adults and children. The range of responses for each question was 0 (no experiencing the symptom at all) to 3 (experiencing the symptom most of the week). Figure 4.4 looks similar to the distribution of symptoms for students; about two-thirds of the parents reported healthy symptomatology and one-third reported signs of clinical depression. This finding is particularly important because of the link between child and parent's depression and their quality of life outcomes.

**Figure 4.4**  
Depression Categories Among Owl Creek Parents

● Healthy    ● Possible Clinical Caseness    ● Probable Clinical Caseness





# Chapter 5

## Observations and Conclusions

## Introduction

In 2011, the USDA reported that nearly 15 percent of all households in the United States had experienced some degree of food insecurity. In Arkansas, approximately 19 percent of households reported food insecurity; Washington and Benton County estimates are similar and report as many as one-quarter of households experience some food insecurity over the past year. While we know that hunger is not a new problem in the United States, it is a growing one that has received considerable attention from policymakers, school administrators, teachers, and parents over the last several years. The United States has trouble providing food, clothing, and shelter to millions of Americans and the story below seems all too common:

“Jesse, a teenager from Harts, West Virginia dreams of graduating from high school and attending prom. While her friends buy prom dresses and arrange after parties, she struggles to feed her sisters and brothers. As other families choose between colleges, she must choose between medical care and welfare.

As many of her friends live the life a carefree adolescent, Jesse assumes the role of the caretaker in her family. The oldest of three children, she must look after her siblings while her father ekes out a living driving a truck. Her father is a hardworking man, but his 12 to 15-hour shifts don't provide enough income to pay the bills. She begins her days early, after her father leaves for work. She wakes up her brother and sister, feeds them and sends them to school. After attending classes all day, she fixes dinner, helps her siblings with class assignments and puts them to bed—all before starting her own homework.

Although the family isn't homeless, they have only \$120 each month to buy food. Often, there isn't enough to last the month, so Jessie is forced to turn to charities for help. Her family suffers from the constant struggle to make ends meet. For example, choosing inexpensive over healthy foods has hurt the family's health; Jessie's father has a heart condition and struggles against obesity—the result of high fat, processed foods that so frequently make up a low-income diet. Jessie's dream of going to college is tempered by fears that her father will need her close to home, especially as he faces growing health problems.” (UN Works, 2011)

So why are these statistics and Jessie's story important to Owl Creek School, or Fayetteville Schools, or any school district for that matter? Why do schools need to be concerned about one more social problem that appears to be growing? In part, the answer to this question lies in our general understanding of poverty and how it impacts children and families generally, and students and their academic and social progress specifically. Hunger, poor physical and mental health, poor nutrition, homelessness, and exposure to risk have all been identified as important to effecting student outcomes. While often the roots of these problems are not found in the school, they clearly impact the success of the student and in turn, the success of the school. Some might argue that combating complicated social problems is not the job of schools. However, understanding these problems armed with valid and reliable data, can serve to better inform school administrators, counselors, and teachers of the challenges they face and the programming/curriculum they design to help students that are struggling economically and academically. While the aggregate data that exists for schools is useful, having individual-level data along with data on student's families, is vital to understanding the extent of specific problems afflicting students and their overall well-being. At present, there is no comprehensive data collection on schools (in any district in Northwest Arkansas) like that presented in this report.

This report provides insight into a number of critical issues adolescents and their families struggle with in their daily lives, their work in school, their relationships with others, and their trajectory toward adulthood. While we could have focused on other topics, this study was primarily interested in providing some insight into the interrelationships between food insecurity, weight status, health/nutrition, and social relationships—and how and why they are impacting both Owl Creek students and their families.

The following is meant to be a summary of what we think are some of the most important findings from the study that inform our understanding of Owl Creek students and their families well-being. This list is partly a review of what was discussed in the body of the report, but also a collection of observations when taken in total, provide a comprehensive summary of the challenges that schools face as they continue to try and reconcile their role in the socialization process.

## Summary Observations

(STUDENT BACKGROUND) N =334

- 21 percent self-identified as Hispanic, Latino or Spanish origin
- 48 percent self-identified as some other race besides Caucasian
- More than one-third of the students live in non-intact families
- Only 21 percent of students considered themselves to be Middle-Lower or Lower class

(PARENT BACKGROUND) N =174

- 11 percent self-identified as Hispanic, Latino or Spanish origin
- 35 percent self-identified as some other race besides Caucasian
- 43 percent reported their marital status as something other than married
- 55 percent considered themselves to be Middle-Lower or Lower class

(STUDENT HUNGER AND FOOD INSECURITY)

- 30 percent reported moderate to high food insecurity
- Nearly half reported experiencing hunger “some of the time” in the past year
- 57 percent reported they ate free/reduced lunch at school
- 12 percent reported they didn’t have enough money to spend on things like food
- Only 36 percent reported growing their own fruits/vegetables

(PARENT HUNGER AND FOOD INSECURITY)

- 40 percent reported moderate to high food insecurity
- 15 percent reported that it was difficult to get to the nearest place to buy food
- One-third of parents said they did not have enough money to spend on things like food
- Parents reported spending an average of \$478.00 on food per month
- 18 percent reported they were worried that their food for the month would run out

(STUDENT HEALTH AND NUTRITION)

- 15 percent reported they ate their meals at fast food restaurants most or all of the time
- One-third of the students reported not eating any green salad in the past week
- One-third of the students had BMI classifications of overweight or obese
- One-third of students scored 16 or higher on the depression scale (clinical caseness)

(PARENT HEALTH AND NUTRITION)

- 21 percent said they were dissatisfied with their current life
- 13 percent reported not eating breakfast at all during the past week
- More than two-thirds of parents had BMI classifications of overweight or obese
- One-third of parents scored 16 or higher on the depression scale (clinical caseness)



These observations are meant to summarize the core of this report. They are in no way a substitute for the detail presented, rather they provide some overview of the problems and struggles of Owl Creek students and their parents. There are of course many different ways to interpret this data and in fact, we would argue that the data suggest in many cases a majority of Owl Creek students and their families experience healthy lifestyles, good nutrition, and outstanding physical and mental health. In addition, Owl Creek school is already engaged in a number of programs that are aimed at addressing need and understanding both among students and their parents. Owl Creek is a Title I school, and receives Title I funds that help provide a social worker, who assists families with accessing the district food pantry and provides a weekly snack pack program for 20 students in our school who are at-risk of not eating over the weekend. In addition, Owl Creek has a 21st Community Learning Center Grant, which provides after-school clubs three days a week. One of the clubs is Healthy Cooking/Gardening Club. The clubs provide a healthy snack each day, and they also have a weekly parent involvement activity which includes a healthy cooking class for families 6 times per year. The after-school clubs and parent activities are at no cost to families. While recognizing the importance of these programs and their impact on students and their families, we attempt to highlight some of the problems gleaned from this rich, individual-level data to help school administrators, counselors, and teachers better understand the nuance of daily life for their constituents.

## Recommendations

So what does this all mean for Owl Creek and Fayetteville Schools? Clearly the more information we have about students and their families, the more likely it is that we can develop intervention programming to help curb some of the negative circumstances that students and their families confront outside of the school setting. The following recommendations are meant to be suggestions, based on a careful analysis of the data collected. These recommendations might vary considerably from one school to the next. Thus it is important for all schools to consider this type of comprehensive data collection that assists schools in being better informed about their students and families. Currently, Arkansas participates in a statewide data collection of middle and high-school students reporting risk behaviors (drugs/alcohol use, tobacco use, violence exposure, etc.) that provides an important summary; knowledge about health, nutrition, and food insecurity are not collected in these surveys and represent an important gap in our knowledge about risk. As a result, we suggest:

**Recommendation #1:** Owl Creek and Fayetteville schools consider implementing a comprehensive data collection effort focusing on health, nutrition, food insecurity and other important domains impacting academic and social progress of their students.

While certainly not a new problem, food insecurity and hunger have captured the attention of funders, policymakers, nonprofits, and communities across the United States. Arkansas is clearly a state in trouble and by most independent accounts it has an abnormally high rate of reported food insecurity. This high rate of food insecurity translates at the local level and clearly a significant minority of both students and families report problems related to access of food and access to healthy food. No school can tackle such a complicated problem on its own, however through partnership and combined efforts of school, parents, farms, service providers, and the community, programs can be developed or expanded to quell the rising tide of hunger and poverty and its impact on student success. Education of students and their families is important but often falls short. For example, offering nutritional advice and curriculum without real opportunities to have access to healthy fruits and vegetables defeats the purpose and enables the cycle of poor health and nutrition to continue. As a result, we suggest:

**Recommendation #2:** Owl Creek and Fayetteville schools consider expanding their outreach programs that embrace local farmers and food distribution efforts.

Farm to school programs have been an important part of the education of students and their families about eating healthy, but despite these efforts, students and their families report food insecurity and problems related to accessing healthy foods. One possible way to help alleviate the problem of access is to identify farmers who are willing to provide fresh produce throughout the year at a low or no-cost option to students and their families who have been identified by school personnel as food insecure. There are a number of ways this could be translated at the local level in Fayetteville. For example, schools could develop their own farmer’s market with produce supplied by local farmers or grown in their school’s community garden. This food would be distributed on a controlled “need” basis and would engage the schools and their students with farmers in a way that would move beyond the “good intentioned handout”.

Food insecurity and poor nutrition is often times the result of how organizations try to meet emergency hunger needs based on their donations. Many schools have started to find ways to help support local food bank efforts. One strategy might be for **every school** to consider developing a strategy, through the support of local agencies, advocacy groups, book clubs, churches, and the community as a whole, to receive large food donations that could be distributed weekly to help students and their families meet basic nutritional requirements that they are unable to meet on their own. As a result of this need we suggest:

**Recommendation #3:** Owl Creek and Fayetteville schools consider developing a food bank in each of their schools. These food banks could be supported through donations from groups around the region, looking to “adopt” schools and help support efforts to combatting food insecurity. In addition, schools might consider reaching out to local food vendors/suppliers to acquire fresh foods for weekly distribution to students and families in need.

Finally, the data are indicative of a disjoint between what takes place at school and at home. Parents report different eating habits than students. Parents report considerably higher BMI scores than students. Parents and students report similar levels of food insecurity. As a result, the data seem to point to a bigger health problem than any one school could handle. While the school continues to develop strategies to increase healthy eating habits, developing and expanding programming that engages parents and their children in how to shop, cook, and increase access to healthy foods is clearly important. Again, no matter how often schools talk about or demonstrate healthy cooking, if family’s access to these foods is severely limited, it will likely translate into problems with food security and nutrition. To help address these problems we suggest:

**Recommendation #4:** Owl Creek and Fayetteville schools consider finding ways to expand their current educational outreach on health and nutrition to students and their families. Several suggestions that might help to improve this kind of outreach: offer cooking classes to both parents and students; expand offerings throughout the district using multiple times and locations to attract more diverse participants; engage local restaurants/ chefs into the educational process; develop summer or off-calendar opportunities for students to participate in local farm initiatives, community gardening, farmer’s markets, and service opportunities. Additionally, schools may want to reach out to their local county extension office(s) for

assistance with planning curriculum, engaging farmers, and expanding cooking class opportunities.

There are already great things happening at Owl Creek and in schools throughout the Fayetteville district. The proactive approach of the administrations both at the district and local school level is commendable. Addressing poverty, hunger, homelessness, food insecurity, and overall health is a complicated equation. We hope that this report provides some assistance in both better understanding the scope of the problem, and the kinds of programming and outreach that can help to alleviate the problem.

# Appendix A

## Survey Methodology

The purpose of the Owl Creek survey(s) were to provide insight into health, nutrition, social capital and food insecurity among Owl Creek 5th-7th grade students and their parents. The dual survey strategy, detailed below, focused only on these grades, students enrolled and present on the day of administration, and those parents returning the completed surveys in a timely manner.

## Methodology

The strategy was to administer two separate surveys:

1. *Student survey administered to all 5th-7th grade students on September 21, 2012*-The final sample of Owl Creek students was 334. There were a total of 361 students enrolled in these three grades; ninety-two percent of the students responded to our request to take the survey, less than 10% were absent when the survey was administered.
2. *Trained volunteers administered the survey*-In an effort to eliminate any differences in literacy across classrooms or grades, trained volunteers went into 13 classrooms and read aloud the survey to the students. Students were instructed to follow along and if they had any questions to quietly raise their hand and their questions would be addressed. If a student needed a Spanish translated survey, they were asked prior to the administration of the survey. Only a few Spanish translated surveys were requested by students.
3. *Upon completion, students were provided with school supplies, coupons for their cafeteria, and donated reusable shopping bags from Wal-Mart.* We received donations from the University of Arkansas Bookstore, and Wal-Mart stores. These donations were used as incentives for the completion of the student surveys. After the students completed their surveys, they were given an envelope to take home to their parents which contained a parent survey.
4. *Surveys were returned by 174 (52%) parents of 5th-7th grade students*-A self-administered survey was sent home to parents in order to assess family background, nutrition, social capital, food insecurity, and health. Parents were asked to fill out the survey, sign the consent form, and return them along with their address in a pre-addressed/postage paid envelope. As an incentive to complete the survey, parents were sent a \$20 Wal-Mart gift card when their surveyed was completed and returned.

# Appendix B

## Survey Instruments

**I would like you to answer a few questions about yourself and your behaviors. There are NO RIGHT OR WRONG ANSWERS. This is NOT a test. Your name will NOT be on this survey so no one will know how you answer these questions. Please answer exactly how you feel. If you have questions or don't understand a question, raise your hand. Remember your answers are confidential.**

**Put a check or write on the appropriate line for each question. Do not leave any questions blank.**

**STUDENT SURVEY**

1. How old are you? \_\_\_\_\_ 2. What grade are you in? \_\_\_\_\_5<sup>th</sup> \_\_\_\_\_6<sup>th</sup> \_\_\_\_\_7<sup>th</sup>

3. What is your sex? \_\_\_\_\_ Male \_\_\_\_\_ Female

4. What is your race? **(CHECK ONLY ONE)**

\_\_\_\_\_ Black \_\_\_\_\_ White \_\_\_\_\_ Asian \_\_\_\_\_ American Indian \_\_\_\_\_ Pacific Islander \_\_\_\_\_ Other  
**(specify)**

5. Are you of Hispanic, Latino, or Spanish origin? \_\_\_\_\_Yes \_\_\_\_\_No

6. Using your best estimate, what is your current: **Weight** \_\_\_\_\_pounds **Height** \_\_\_\_\_ft. \_\_\_\_\_inches

7. Who do you live with **most of the time?** **(CHECK ONLY ONE)**

- |                                  |                                   |
|----------------------------------|-----------------------------------|
| _____ Both parents               | _____ Grandparents                |
| _____ One parent and step parent | _____ Aunt or Uncle               |
| _____ Mother                     | _____ Other _____ Please specify. |
| _____ Father                     |                                   |
| _____ Brother or Sister          |                                   |

**(CHECK ONLY ONE)**

8. Thinking about the **money** your family has and the **things** they own, would you think of your family as ...

- \_\_\_\_\_ Upper Class
- \_\_\_\_\_ Between Upper and Middle Class
- \_\_\_\_\_ Middle Class
- \_\_\_\_\_ Between Lower and Middle Class
- \_\_\_\_\_ Lower Class

9. What grades do you mostly get in school?

- \_\_\_\_\_ Mostly D's and F's
- \_\_\_\_\_ Mostly C's and D's
- \_\_\_\_\_ Mostly C's
- \_\_\_\_\_ Mostly B's and C's
- \_\_\_\_\_ Mostly A's and B's
- \_\_\_\_\_ Mostly A's

10. Did you attend school in Fayetteville last year?

\_\_\_\_\_ Yes \_\_\_\_\_ No



**Now please answer some questions about your friends.**

11. How many close friends (people you see or have daily contact with) do you have? \_\_\_\_\_

12. Some people have a person that they think of as their best friend, while other people do not. What about you, do you have a best friend? (If 'several' answer 'yes') \_\_\_\_\_Yes \_\_\_\_\_No

**Please answer questions 13-15 ONLY if you answered "Yes" to question 12. If you answered "No" to question 12, please wait until I instruct everyone to answer question 16 and continue the survey.**

13. How often do you see your best friend? If you have more than one, please tell us about the friend you see **most often**.

- \_\_\_\_\_ He/ She lives with me
- \_\_\_\_\_ Every day
- \_\_\_\_\_ Several times a week
- \_\_\_\_\_ Once a week
- \_\_\_\_\_ At least once a month
- \_\_\_\_\_ Several times a year/less often
- \_\_\_\_\_ Never or hardly ever

14. And how often do you have any **other** contact with this friend, either by telephone, e-mail, text message or Facebook?

- \_\_\_\_\_ Every day
- \_\_\_\_\_ Several times a week
- \_\_\_\_\_ Once a week
- \_\_\_\_\_ At least once a month
- \_\_\_\_\_ Several times a year/less often
- \_\_\_\_\_ Never or hardly ever

15. How often do you and your best friend eat together at your house or theirs?

- \_\_\_\_\_ Every day
- \_\_\_\_\_ Several times a week
- \_\_\_\_\_ Once a week
- \_\_\_\_\_ At least once a month
- \_\_\_\_\_ Several times a year/less often
- \_\_\_\_\_ Never or hardly ever

**Those who answered "No" to question 12 may continue answering the survey now. The rest of the questions are answered by everyone.**

**16.** Thinking about your nearest place to **buy food**, how easy or difficult would it be to get there from your home by walking, riding your bike, or taking the bus?

\_\_\_\_\_ Fairly easy \_\_\_\_\_ Very Easy

\_\_\_\_\_ Fairly difficult

\_\_\_\_\_ Very difficult

**17.** Thinking about your nearest place to **play**, how easy or difficult would it be to get there from your home by walking, riding your bike, or taking the bus?

\_\_\_\_\_ Fairly easy \_\_\_\_\_ Very Easy

\_\_\_\_\_ Fairly difficult

\_\_\_\_\_ Very difficult

**18.** Thinking about the money you have to spend on everyday things, like food, would you say this is:

\_\_\_\_\_ More than enough

\_\_\_\_\_ Enough

\_\_\_\_\_ Not enough

**19.** How happy are you with school right now?

\_\_\_ Very unhappy

\_\_\_\_\_ Unhappy

\_\_\_\_\_ Happy

\_\_\_\_\_ Very happy

20. Suppose you didn't have money for lunch. Who would you turn to **first** for help?

- Parent(s)
- Other adult relative (18 or older)
- Teacher or staff at school
- Brother or Sister
- Other relative (under 18)
- Best friend
- Other friend
- Other

21. How do you pay for your school lunch?

- Free
- Reduced Price
- Parents Pay
- Parents Pack my Lunch
- Other

Thinking about the things that have happened to you over the last month (30 days), answer the following questions.

During the Past Month	None	One Time	2 or 3 Times	4 or 5 Times	Six or More
22. How many times have you been in the principal's office?					
23. How many times did you cut or skip school without an excuse?					
24. How many times did you miss school because you were sick?					
25. How many times did you receive detention or suspension for trouble that you got into in school?					

Thinking about the places you usually eat, answer questions 26-33.

How often do you...	Never	Few times	Some of the time	Most of the time	All of the time
26. How often during the week do you <b>feel hungry</b> at home because there is not enough food?					
27. How often do you eat meals with your <b>family</b> ?					
28. How often do you eat meals at your <b>home</b> ?					
29. How often do you eat meals at a <b>friend's</b> house?					
30. How often do you eat meals at a <b>relative's</b> house?					
31. How often do you eat food from a <b>convenience store</b> or a <b>gas station</b> ?					
32. How often do you eat meals at a <b>fast food</b> restaurant?					
33. How often do you eat meals at a <b>family restaurant</b> ?					

Thinking about your experiences with food over the past year, answer questions 34-38.

Over the Past Year	A lot	Sometimes	Never
34. Did you <b>worry</b> that food at home would run out before your family got money to buy more?			
35. Did the food that your family bought <b>run out</b> and you didn't have money to get more?			
36. How often were you not able to eat a <b>balanced meal</b> because your family didn't have enough money to buy food?			
37. Did your meals include a few kinds of <b>cheap foods</b> because your family was running out of money to buy food?			
38. Have your meals been <b>smaller</b> because your family didn't have enough money to buy food?			

**Thinking about your eating and exercise habits over the past week, answer questions 39-48.**

During the Past Week	Not at all	1-3 times	4 or more
39. How often did you get to where you were breathing hard and your heart rate increased? (including your P.E. class)			
40. How often did you drink 100% fruit juices such as orange juice, apple juice, or grape juice? (Do not count punch, Kool-Aid, sports drinks, or other fruit-flavored drinks.)			
41. How often did you eat fruit? (Do not count fruit juice.)			
42. How often did you eat green salad?			
43. How often did you eat potatoes? (Do not count French fries, fried potatoes, or potato chips)			
44. How often did you eat carrots?			
45. How often did you eat other vegetables? (Do not count green salad, potatoes, or carrots)			
46. How often did you drink soda or pop, such as Coke, Pepsi, or Sprite? (Do not count diet soda or pop)			
47. How often did you drink milk? (Count the milk you drank from a glass or cup, carton, or with cereal. Count the half pint of milk served at school as one glass)			
48. How often did you eat breakfast?			

Thinking about how you have felt over the last couple weeks, answer questions 49-59.

During the past weeks, how often have you...	Less than one day	1-2 days	3-4 days	5-7 days
49. Felt sad?				
50. Felt lonely?				
51. Had crying spells?				
52. Felt that you could not shake off the blues even with help from friends and family?				
53. Thought your life had been a failure?				
54. Not been able to get going?				
55. Had trouble sleeping?				
56. Felt tense and anxious?				
57. Worried a lot about little things?				
58. Felt like everything was an effort?				
59. Had trouble keeping your mind on what you were doing?				

**Thinking of how you feel about yourself, answer questions 60-69.**

I Feel That...	Strongly Agree	Agree	Disagree	Strongly Disagree
60. I am a person of worth, at least on an equal plane with others.				
61. I have a number of good qualities.				
62. I am inclined to feel that I am a failure.				
63. I can do things as well as most other people.				
64. I do not have much to be proud of.				
65. I take a positive attitude toward myself.				
66. I am satisfied with myself.				
67. I could have more respect for myself.				
68. I feel useless at times.				
69. I think I am no good at all.				

**You did it!!! Great job! Please do not talk about your answers to other students. If you have any questions about the survey, you can ask your teacher or parents.**



**INSTRUCTIONS:**

**I would like you to answer a few questions about yourself and your behaviors. There are NO RIGHT OR WRONG ANSWERS. This is NOT a test. Your name will NOT be on this survey so no one will know how you answer these questions. Please answer exactly how you feel. Put a check or write on the appropriate line for each question. Please do not leave any questions blank.**

**PARENT SURVEY**

1. How old are you? \_\_\_\_\_ 2. What is your sex? \_\_\_\_\_ Male \_\_\_\_\_ Female

3. What is your race? **(CHECK ONLY ONE)**

\_\_\_\_\_ Black \_\_\_\_\_ White \_\_\_\_\_ Asian \_\_\_\_\_ American Indian \_\_\_\_\_ Pacific Islander \_\_\_\_\_ Other  
(Specify)

4. Are you of Hispanic, Latino, or Spanish origin? \_\_\_\_\_ Yes \_\_\_\_\_ No

5. Using your best estimate, what is **your** current: **Weight** \_\_\_\_\_ pounds **Height** \_\_\_\_\_ ft. \_\_\_\_\_ inches

6. Using your best estimate, what is your **child's** current: **Weight** \_\_\_\_\_ pounds **Height** \_\_\_\_\_ ft. \_\_\_\_\_ inches

7. How many people currently live in your household? \_\_\_\_\_ people.

8. Are any of the people currently living in your household NON-Family members? \_\_\_\_\_ yes \_\_\_\_\_ no

9. IF THERE ARE NON-FAMILY MEMBERS LIVING IN YOUR HOUSEHOLD, HOW MANY? \_\_\_\_\_

10. Starting with 1<sup>st</sup> Grade, how many years of formal education have you had? \_\_\_\_\_ yrs

11. What is your current occupation? \_\_\_\_\_.

12. Which relationship status accurately describes you at this time?

**(CHECK ONLY ONE)**

\_\_\_\_\_ Married

\_\_\_\_\_ Divorced

\_\_\_\_\_ Separated

\_\_\_\_\_ Widowed

\_\_\_\_\_ Never Married

13. Thinking about the **money** your family has and the **things** they own, would you think of your family as ....

**(CHECK ONLY ONE)**

\_\_\_\_\_ Upper Class

\_\_\_\_\_ Between Upper and Middle Class

\_\_\_\_\_ Middle Class

\_\_\_\_\_ Between Lower and Middle Class

\_\_\_\_\_ Lower Class

14. Does your child(ren) get regular checkups by a doctor?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

15. Have you ever been told by a doctor that you had diabetes?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

**Now please answer some questions about your friends.**

16. How many close friends (persons that you see or have contact with daily) do you have? \_\_\_\_\_

17. Do you have a best friend? (If 'several' answer 'yes') \_\_\_\_\_ Yes \_\_\_\_\_ No

**THIS IS A SKIP QUESTION. BE SURE TO READ INSTRUCTIONS CAREFULLY. Please answer questions 18-20 ONLY if you answered "Yes" to question 17. If you answered "No" to question 17, please skip 18-20 and resume the survey on question 21.**

18. How often do you see your best friend? If you have more than one, please tell us about the friend you see **most often**.

\_\_\_\_\_ He/ She lives with me  
 \_\_\_\_\_ Every day  
 \_\_\_\_\_ Several times a week  
 \_\_\_\_\_ Once a week  
 \_\_\_\_\_ At least once a month  
 \_\_\_\_\_ Several times a year/less often  
 \_\_\_\_\_ Never or hardly ever

19. And how often do you have any **other** contact with this friend, either by telephone, e-mail, text message or Facebook?

\_\_\_\_\_ Every day  
 \_\_\_\_\_ Several times a week  
 \_\_\_\_\_ Once a week  
 \_\_\_\_\_ At least once a month  
 \_\_\_\_\_ Several times a year/less often  
 \_\_\_\_\_ Never or hardly ever

20. How often do you and your best friend eat together at your house or theirs?

\_\_\_\_\_ Every day  
 \_\_\_\_\_ Several times a week  
 \_\_\_\_\_ Once a week  
 \_\_\_\_\_ At least once a month  
 \_\_\_\_\_ Several times a year/less often  
 \_\_\_\_\_ Never or hardly ever

**Those who answered "No" to question 15 may continue answering the survey now. The rest of the questions are answered by everyone.**

21. Please tell me how often you have been bothered by the following problems over the last 6 months.

Over the last 6 months, have you been bothered by...	Most or all of the time	Occasionally	Some or a little of the time	Rarely	Never
Not having a close companion.					
Not having enough friendships.					
Not seeing enough of people you feel close to.					

Now, please answer some questions about your social life.

**22. With how many of the people in the following categories do you keep routine contact?**

	All	Most	Some	Few	None
Your family members					
Your relatives					
People in your neighborhood					
Your friends					
Your coworkers					

**23. Among the people in each of the following five categories, how many can you trust?**

	All	Most	Some	Few	None
Your family members					
Your relatives					
People in your neighborhood					
Your friends					
Your coworkers					

**24. Among the people in each of the following categories, how many will definitely help you upon your request (for food, money, housing, etc.)?**

	All	Most	Some	Few	None
Your family members					
Your relatives					
People in your neighborhood					
Your friends					
Your coworkers					

**25. When people in all the five categories are considered, how many possess the following assets/resources?**

	All	Most	Some	Few	None
Certain political power					
Wealth/owners of a company					
Broad connections with others					
High reputation/influential					
High school diploma or more education					
A professional job					

26. Thinking about the nearest place to **buy food**, how easy or difficult would it be to get there from your home by walking, riding a bike, or taking the bus?

\_\_\_\_\_ Very easy

\_\_\_\_\_ Fairly easy

\_\_\_\_\_ Fairly difficult

\_\_\_\_\_ Very difficult

27. Thinking about the nearest place for your child to **play**, how easy or difficult would it be to get there from your home by walking, riding a bike, or taking the bus?

\_\_\_\_\_ Very easy

\_\_\_\_\_ Fairly easy

\_\_\_\_\_ Fairly difficult

\_\_\_\_\_ Very difficult

28. Thinking about the money you have to spend on everyday things, **like food**, would you say you have:

\_\_\_\_\_ More than enough

\_\_\_\_\_ Enough

\_\_\_\_\_ Not enough

29. Now I'd like you to estimate the total amount of money you spend on food each month (excluding any assistance)?

\$ \_\_\_\_\_.

30. How satisfied are you with your life right now?

\_\_\_\_\_ Very satisfied

\_\_\_\_\_ Somewhat satisfied

\_\_\_\_\_ Somewhat dissatisfied

\_\_\_\_\_ Very dissatisfied

31. Suppose your child didn't have money for lunch. Who do you think they would turn to **first** for help?

- Parent(s)
- Other adult relative (18 or older)
- Teacher/staff at school
- Brother or Sister
- Other relative (under 18)
- Best friend
- Other friend
- Other

32. How does your child pay for school lunch?

- Free
- Reduced Price
- I Pay or Pack Their Lunch
- Other

Thinking about your experiences with food over the past 12 months, tell us how true the following statements (33-36) are for your household.

Over the Past Year	Often True	Sometimes True	Never
33. (I/We) worried whether (my/our) food would run out before (I/we) got money to buy more.			
34. The food that (I/we) bought just didn't last, and (I/we) didn't have money to get more.			
35. (I/We) couldn't feed (my/our) (child/children) a balanced meal, because (I/we) couldn't afford that.			
36. (I/We) relied on only a few kinds of low-cost food to feed (my/our) (child/children) because (I was/we were) running out of money to buy food.			

37. In the last 12 months, since September of last year, did you ever cut the size of (your child's/any of the children's) meals because there wasn't enough money for food?

- Yes
- No

If yes, how often did this happen

- Some months, but not every month
- Only 1 or 2 months
- Almost every month

38. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money to buy food?

- Yes
- No

39. In the last 12 months, did (your child/any of the children) ever skip meals because there wasn't enough money for food?

Yes  
 No

**If yes**, how often did this happen?

Some months, but not every month  
 Only 1 or 2 months

Almost every month

40. In the last 12 months, (was your child/were the children) ever hungry but you just couldn't afford more food?

Yes  
 No

41. In the last 12 months, did (your child/any of the children) ever not eat for a whole day because there wasn't enough money for food?

Yes  
 No

**If yes**, how often did this happen?

Almost every month  
 Some months, but not every month  
 Only 1 or 2 months

**Thinking about your eating and exercise habits over the past week, answer questions 42-51.**

During the Past Week	Not at all	1-3 times	4 or more
42. How often did you get to where you were breathing hard and your heart rate increased?			
43. How often did you drink 100%% fruit juices such as orange juice, apple juice, or grape juice? (Do not count punch, Kool-Aid, sports drinks, or other fruit-flavored drinks.)			
44. How often did you eat fruit? (Do not count fruit juice.)			
45. How often did you eat green salad?			
46. How often did you eat potatoes? (Do not count French fries, fried potatoes, or potato chips)			
47. How often did you eat carrots?			
48. How often did you eat other vegetables? (Do not count green salad, potatoes, or carrots)			
49. How often did you drink soda or pop, such as Coke, Pepsi, or Sprite? (Do not count diet soda or pop)			
50. How often did you drink milk? (Count the milk you drank from a glass or cup, carton, or with cereal.			
51. How often did you eat breakfast?			



Thinking about how you have felt over the last couple weeks, answer questions 52-62.

During the past weeks, how often have you...	Less than one day	1-2 days	3-4 days	5-7 days
52. Felt sad?				
53. Felt lonely?				
54. Had crying spells?				
55. Felt that you could not shake off the blues even with help from friends and family?				
56. Thought your life had been a failure?				
57. Not been able to get going?				
58. Had trouble sleeping?				
59. Felt tense and anxious?				
60. Worried a lot about little things?				
61. Felt like everything was an effort?				
62. Had trouble keeping your mind on what you were doing?				

Reading the next statements, mark the box corresponding to your level of agreement or disagreement.

	Strongly Agree	Agree	Disagree	Strongly Disagree
63. You have little control over the things that happen to you.				
64. There is really no way that you can solve some of the problems you have.				
65. There is little you can do to change many of the important things in your life.				
66. You often feel helpless in dealing with the problems in life.				
67. Sometimes you feel you are being pushed around in your life.				
68. You can do just about anything you set your mind to do.				
69. What happens to you in the future depends mainly on you.				

**This is the end of our questionnaire. Please mail this survey back to us with the pre-stamped and addressed envelope we have provided. Thank you very much for your time!**

**If you are interested in receiving a \$20.00 gift card from Wal-Mart for your participation, you must put your mailing address on the space provided on the consent form. Thank you again for your cooperation.**



# Appendix C

## IRB Permissions

July 16, 2012

MEMORANDUM

TO: Kevin Fitzpatrick

FROM: Ro Windwalker  
IRB Coordinator

RE: New Protocol Approval

IRB Protocol #: 12-06-744

Protocol Title: *Health, Nutrition and Food Security Among Owl Creek Students*

Review Type: EXEMPT EXPEDITED FULL IRB

Approved Project Period: Start Date: 07/16/2012 Expiration Date: 07/09/2013

Your protocol has been approved by the IRB. Protocols are approved for a maximum period of one year. If you wish to continue the project past the approved project period (see above), you must submit a request, using the form *Continuing Review for IRB Approved Projects*, prior to the expiration date. This form is available from the IRB Coordinator or on the Research Compliance website (<http://vpred.uark.edu/210.php>). As a courtesy, you will be sent a reminder two months in advance of that date. However, failure to receive a reminder does not negate your obligation to make the request in sufficient time for review and approval. Federal regulations prohibit retroactive approval of continuation. Failure to receive approval to continue the project prior to the expiration date will result in Termination of the protocol approval. The IRB Coordinator can give you guidance on submission times.

**This protocol has been approved for 350 participants.** If you wish to make *any* modifications in the approved protocol, including enrolling more than this number, you must seek approval *prior to* implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 210 Administration Building, 5-2208, or [irb@uark.edu](mailto:irb@uark.edu).

July 9, 2012

MEMORANDUM

TO: Kevin Fitzpatrick

FROM: Ro Windwalker  
IRB Coordinator

RE: New Protocol Approval

IRB Protocol #: 12-06-752

Protocol Title: *Health, Nutrition and Food Security Among Owl Creek Parents*

Review Type: EXEMPT      EXPEDITED      FULL IRB

Approved Project Period:      Start Date: 07/09/2012      Expiration Date: 07/08/2013

Your protocol has been approved by the IRB. Protocols are approved for a maximum period of one year. If you wish to continue the project past the approved project period (see above), you must submit a request, using the form *Continuing Review for IRB Approved Projects*, prior to the expiration date. This form is available from the IRB Coordinator or on the Research Compliance website (<http://vpred.uark.edu/210.php>). As a courtesy, you will be sent a reminder two months in advance of that date. However, failure to receive a reminder does not negate your obligation to make the request in sufficient time for review and approval. Federal regulations prohibit retroactive approval of continuation. Failure to receive approval to continue the project prior to the expiration date will result in Termination of the protocol approval. The IRB Coordinator can give you guidance on submission times.

**This protocol has been approved for 350 participants.** If you wish to make *any* modifications in the approved protocol, including enrolling more than this number, you must seek approval *prior to* implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 210 Administration Building, 5-2208, or [irb@uark.edu](mailto:irb@uark.edu).



