Halifax County, NC Youth Activity and Nutrition Survey (YANS)

Findings Report
December 2015

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GPIRED
Healthy Communities Research Group

EAST CAROLINA

Participation

- Invited all four middle schools and the Tribal School
- Chaloner had full participation (465 students)
- Weldon had some participation (74 students)
- 28 marked no or other school

Total 567 students, with usable **N = 502**

Survey Instrument Focus

- 23 questions – Ages 10 to 14, 6th to 8th grade
- Demographics
- Height/Weight = BMI for dependent variable
- Nutrition
- Physical and Other Out of School Time Activity
- Transportation
- Safety
- Parental and Social Engagement

Grade and Gender Distribution of Survey Respondents

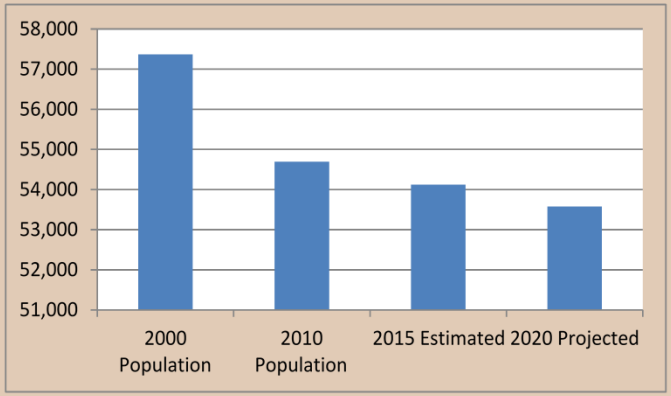
Grade	Percentage
6th	32%
7th	45%
8th	22%
Total	100%
Gender	**Percentage**
Girls	58%
Boys	42%

Demographics

Summary Demographics	Halifax County	State of North Carolina
Population	54,120	10,014,449
Number of Households	22,027	3,945,351
Avg. Household Size	2.39	2.47
Median Age	42.8	38.2
Median Household Income	$30,816	$46,306

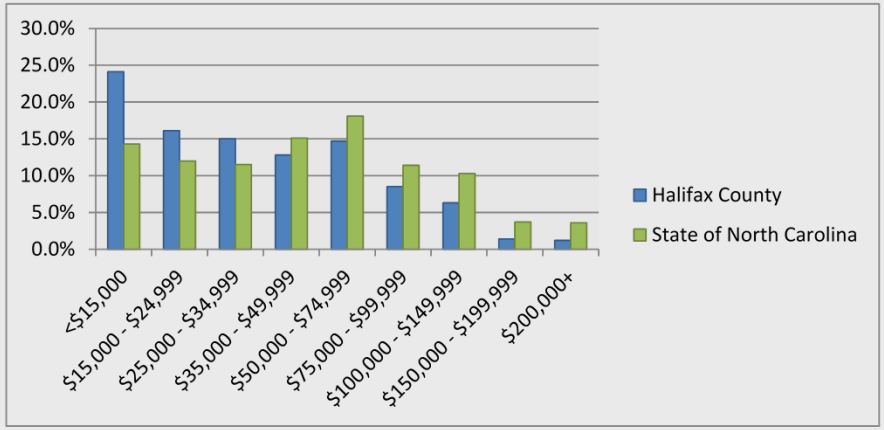
6% are ages 10 to 14, or about 3,250

Figure 1: Halifax County, North Carolina, Population Growth Trend



Source: Esri Business Information Solutions.

Annual Household Income Distribution Comparison for Halifax County and the State of North Carolina (2015)



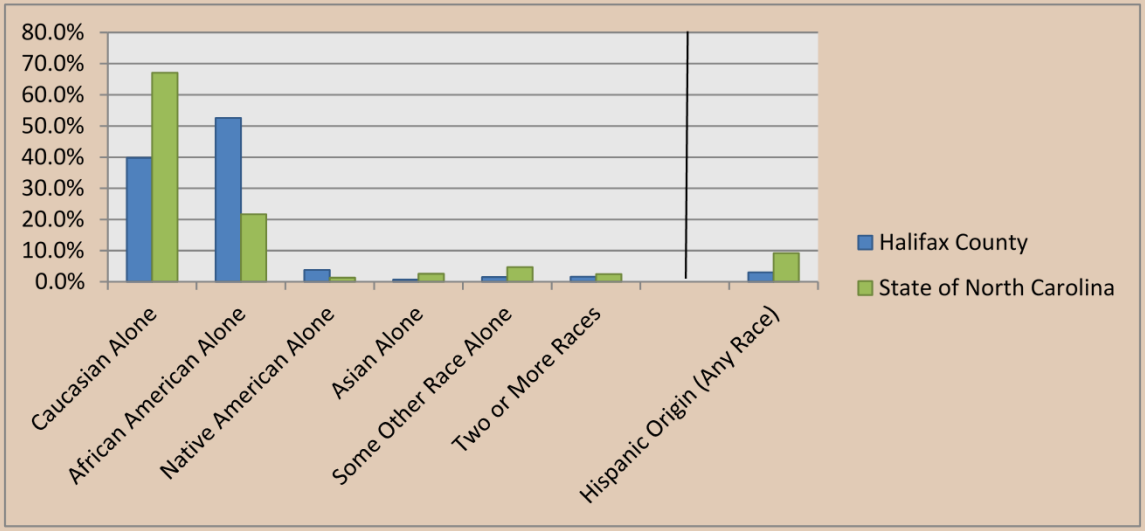
Source: Esri Business Information Solutions, 2015.

24% of household incomes less than $15,000 per year

Table 1: Racial/Ethnic Background – Survey Respondents vs. Halifax County Residents

Racial/Ethnic Breakdown from Student Respondents	YANS Percentage	Halifax County Percentage
African American/Black	31%	53%
Asian	3%	1%
Latino/Hispanic	2%	3%
Native American	3%	4%
White/Caucasian	52%	40%
Mixed race/Ethnicity	9%	N/A

Figure 1: Race/Ethnicity Statistics for Halifax County and for the State of North Carolina (2015)



Chaloner has higher White population

Body Mass Index (BMI) for Youth

Body Mass Index
Primary response variable measured. Student self-report of weight (they weighed themselves privately just prior to taking the survey) and height (an attendant measured their height for them just prior to survey) using the standard BMI percentage calculation of:
weight (lb) / [height (in)]2 x 703 = BMI
(CDCP, 2014)

Halifax County BMI Category Percentages by Gender

Sex		Frequency	Valid Percent
Girl	Underweight	43	16.0
	Healthy Weight	146	54.3
	Overweight/Obese	80	29.7
	Total	**269**	**100.0**
Boy	Underweight	23	9.9
	Healthy Weight	130	55.8
	Overweight/Obese	80	34.3
	Total	**233**	**100.0**
		Total OW/Obese	**32.0%**

Underweight - Female: BMI <16.5; Male: BMI < 15.5
Healthy weight - Female: 16.5 ≤ BMI ≤ 22.8; Male 15.5 ≤ BMI ≤ 22.5
Overweight/obese (Female BMI > 22.8; Male BMI > 22.5

Comparisons of Halifax County YANS vs. Other County, State, and National BMI Level Reporting

Jurisdiction	OW&OB %	Ages	Source	Source Date
Nationwide - adults	*68.5%*	*20+*	*JAMA/ NHANES*	*2014*
Nationwide - youth	34.4%	*12 to 19*	JAMA/ NHANES	2014
YRBSS - nationwide	30.3%	*9th to 12th grade*	CDC YRBSS	2013
Statewide - NC	34.2%	*2 to 18*	HCCHA	2015
Halifax County	36.3%	*2 to 18*	HCCHA	2015
HC YANS Self-Report	**32.0%**	***10 to 14***	**YANS**	**2015**

Note: BMI increases with age for all studies.
In children and adolescents age 2 to 19 years, obesity was defined as a body mass index (BMI) at or above the 95th percentile of the sex-specific CDC BMI-for-age growth charts, and overweight is defined as 85th to 95th percentile.

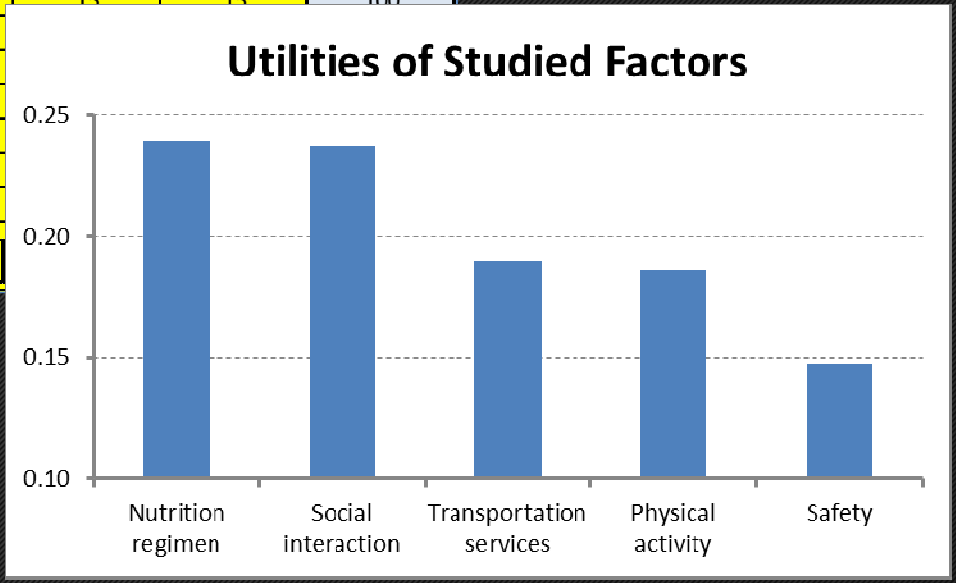
Other Variables of Interest

Factors may reduce obesogenic behaviors of children age 8-14 years.

Utilities of each factor

Round 1

Participants	Nutrition regimen	Social interaction	Transportation services	Physical activity	Safety	Sum
1	30	20	20	20	10	100
2	20	20	30	15	15	100
3	20	30	10			
4	20	30	10			
5	30	20	15			
6	25	15	15			
7	25	20	10			
8	20	30	10			
9	[illegible]	[illegible]	[illegible]			
10	[illegible]	[illegible]	[illegible]			



Nutrition

Frequency of Having Eaten Breakfast - Results by Gender

Students skipped at least one breakfast (Missing =16)			
Sex		**Frequency**	**Percent**
Girl	Ate	232	86.2
	Skipped	27	10.4
	Total	259	96.3
	System	10	3.7
	Total	**269**	**100.0**
Boy	Ate	207	88.8
	Skipped	14	6.3
	Total	221	94.8
	System	12	5.2
	Total	**233**	**100.0**

Twenty-three-point-six percent (23.6%) of girls and 32.1 percent boys didn't eat breakfast at least once.

In examining the correlational relationship between BMI score and the number of meals (breakfast) skipped. There was no significant positive relationship between two variables for either male ($r=-0.016$, $p>.05$) or female students ($r=.035$, $p>.05$).

Sugar Sweetened Beverages

Percent who Drank Sugared Soda by Gender

Girls and Boys - Whether drank sugar soda or not				
Sex			**Frequency**	**Valid Percent**
Girl	Valid	No	77	29.4
		Yes	185	70.6
		Total	262	100.0
	Total		269	
Boy	Valid	No	70	31.5
		Yes	152	68.5
		Total	222	100.0
	Total		233	100.0

Seventy-point-six percent (70.6%) of girls and 68.5 percent of boys drank a sugar soda on the previous day.

Those students who drank soft drinks appear to have slightly lower BMI scores than those who didn't drink soft drinks, but the difference between two groups was not statistically significant.
(Female: Mean difference ($\bar{X}$) =.57, p=.432; Male: mean difference ($\bar{X}$)=.29, p=.722).

Out of School Time Physical Activities

Number of Study Participants Engaged in Physical Activity per Week						
	Organized Physical activity	Outdoor activity	Youth Group activity	Park & Rec Center	Other activities	Doing more than one activity
Total	239 (47.6%)	300 (65.7%)	80 (15.9%)	184 (36.7%)	78 (15.5%)	282 (56.2%)
Female	135 (50.2%)	178 (66.2%)	54 (20.1%)	105 (39.0%)	41 (15.2%)	159 (59.1%)
Male	104 (44.6%)	152 (65.2%)	26 (11.2%)	79 (33.9%)	37 (15.9%)	123 (52.8%)

- Outdoor activities have highest participation for both girls and boys at **66%**
- **37%** of all students report participating in recreation center activities
- **48%** participate in organized physical activities (primarily sports)

Time on Non-Active Activities

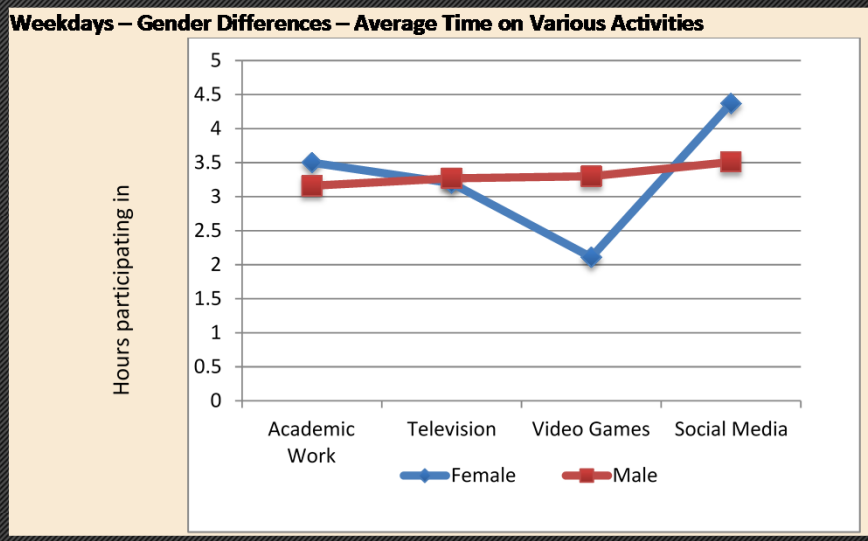
WeekDAY Activities – Hours per Weekday

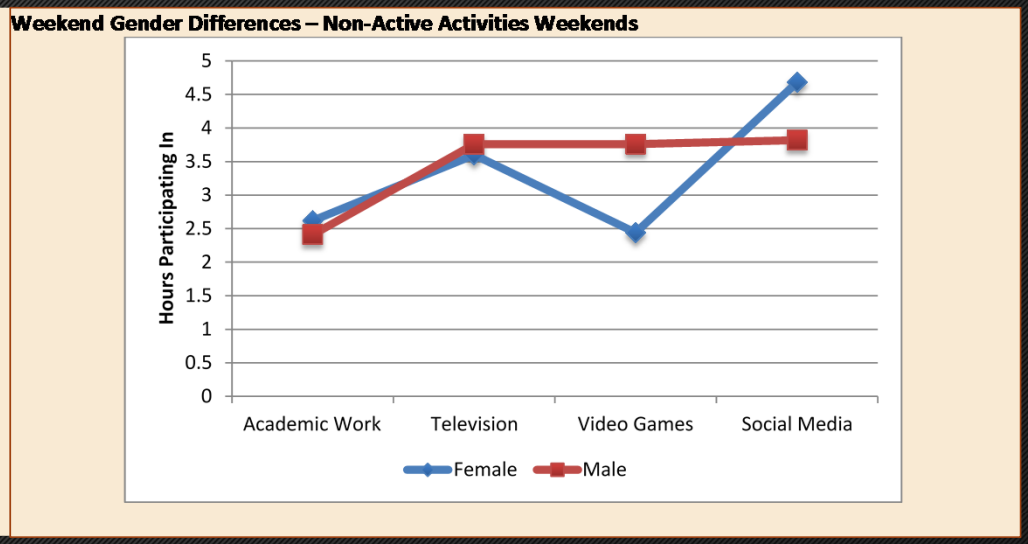
	Academic activities	Watch TV	Play video games	Social media, texting, on phone	Total Hours Non-Active during week
Mean	3.34	3.23	2.66	3.97	**=13.2**
Mode	2	2	1	6	
Std. Deviation	1.700	1.561	1.763	1.771	

WeekEND Activities – Hours per Weekend

	Academic activities	Watch TV	Play video games	Social media, texting, on phone	Total Hours spent on Non-Active
Mean	2.52	3.67	3.07	4.27	**=13.53**
Mode	1	6	1	6	
Std. Deviation	1.718	1.717	1.946	1.776	

Gender Differences – Non-Active Activities





During the week, females spend slightly more time on academics and social media, and less time on video games; however, the amount is only significant for video games

Males played video games **3.76 hours** while females spent **2.4 hours** on weekends. Females spent more hours connecting social media than male students.

Transportation

Modes to Get to School

	Walk	Bike	Bus	Adult drives
Total	**3.2%**	**1.0%**	**45.4%**	**50.4%**
Female	2.2%	0.7%	42.8%	54.3%
Male	4.3%	1.3%	48.5%	45.9%

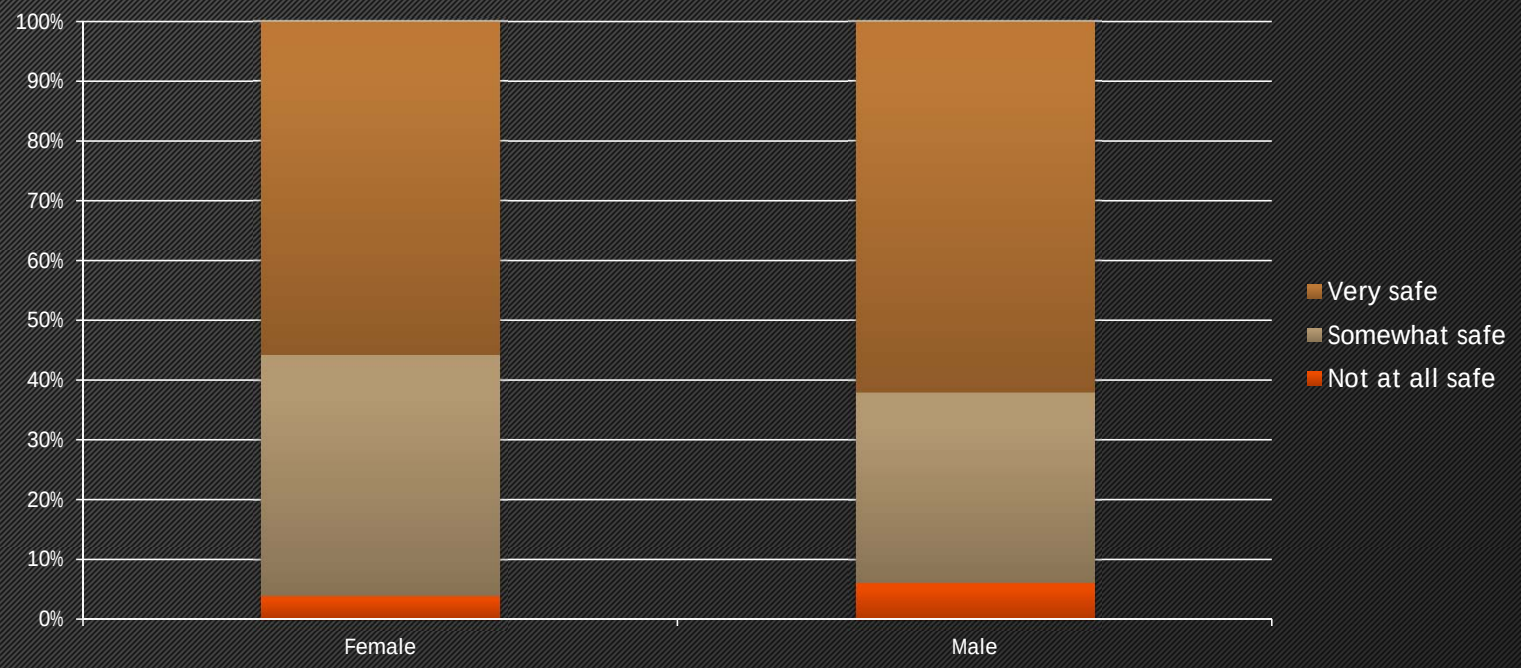
Modes to Get to Location for After School Activities

	Walk	Bike	Bus	Adult drives	Other
Total	**15.3%**	**13.0%**	**1.7%**	**63.0%**	**7.0%**
Girls	15.7%	6.3%	0.8%	73.2%	3.9%
Boys	14.8%	20.8%	2.8%	50.9%	10.6%

While bus is an option for many to school, unless an adult drives them, most walk or ride a bike to an afterschool activity.

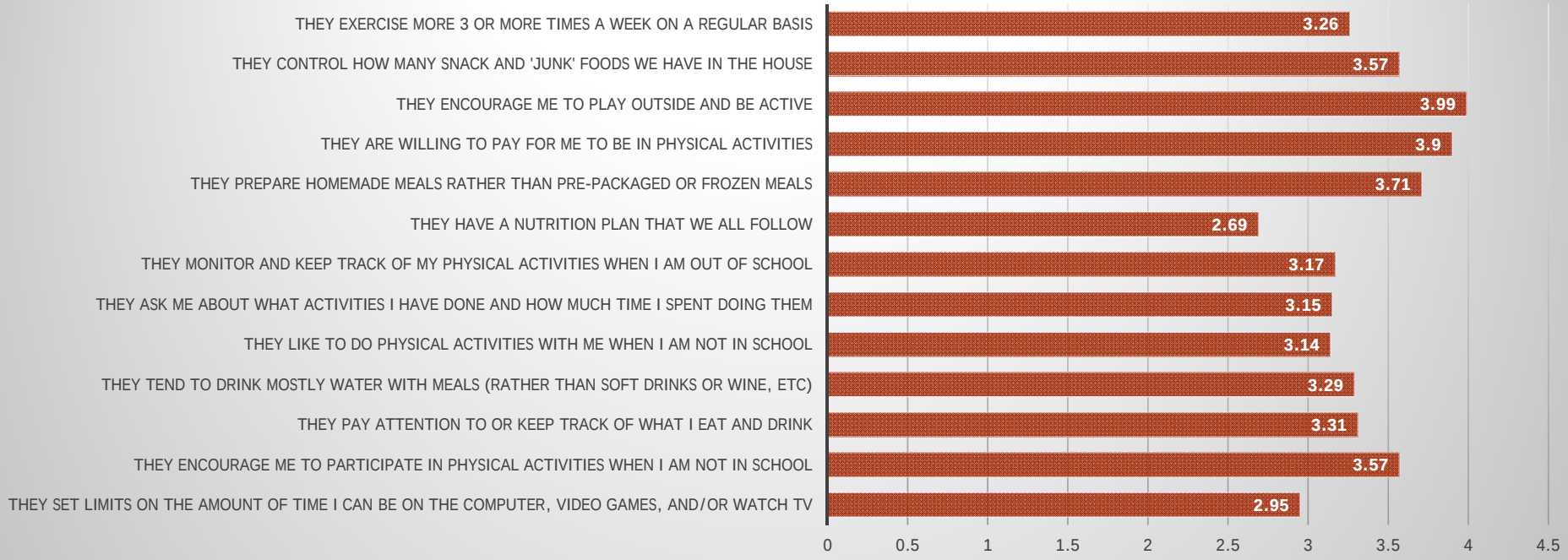
Descriptive statistics indicate that students who ride a bike or walk show slightly lower BMI scores than those students taking bus or vehicle, but the result was not statistically significant ($F=.291$, $df=500$, $p>.05$).

Perceptions of Safety

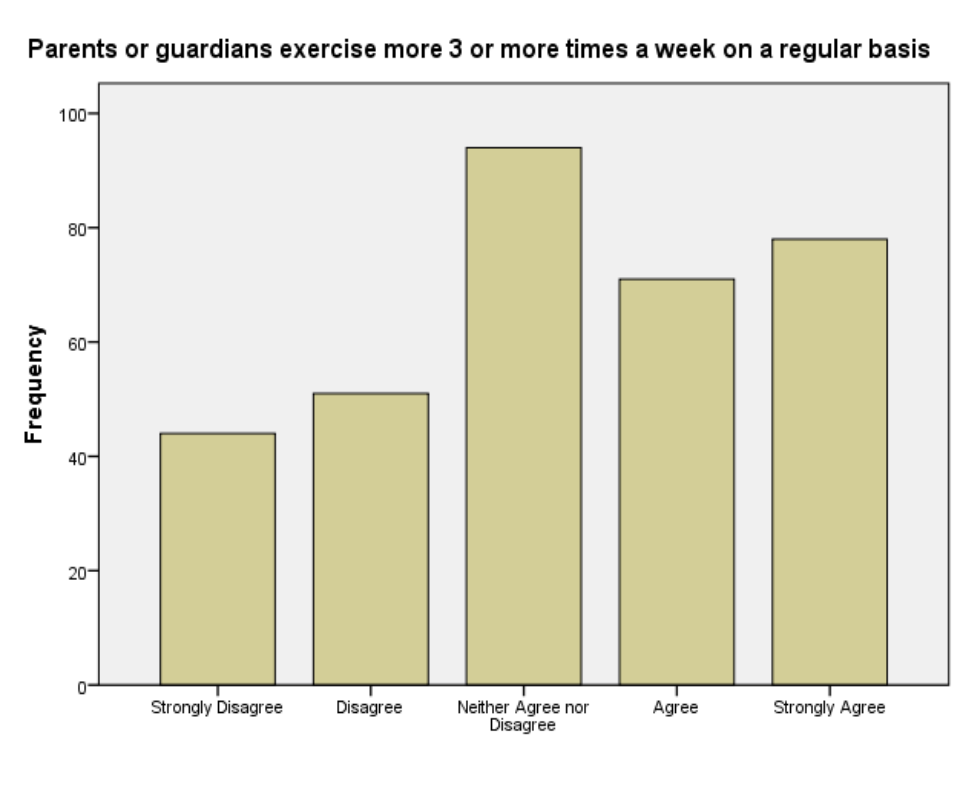


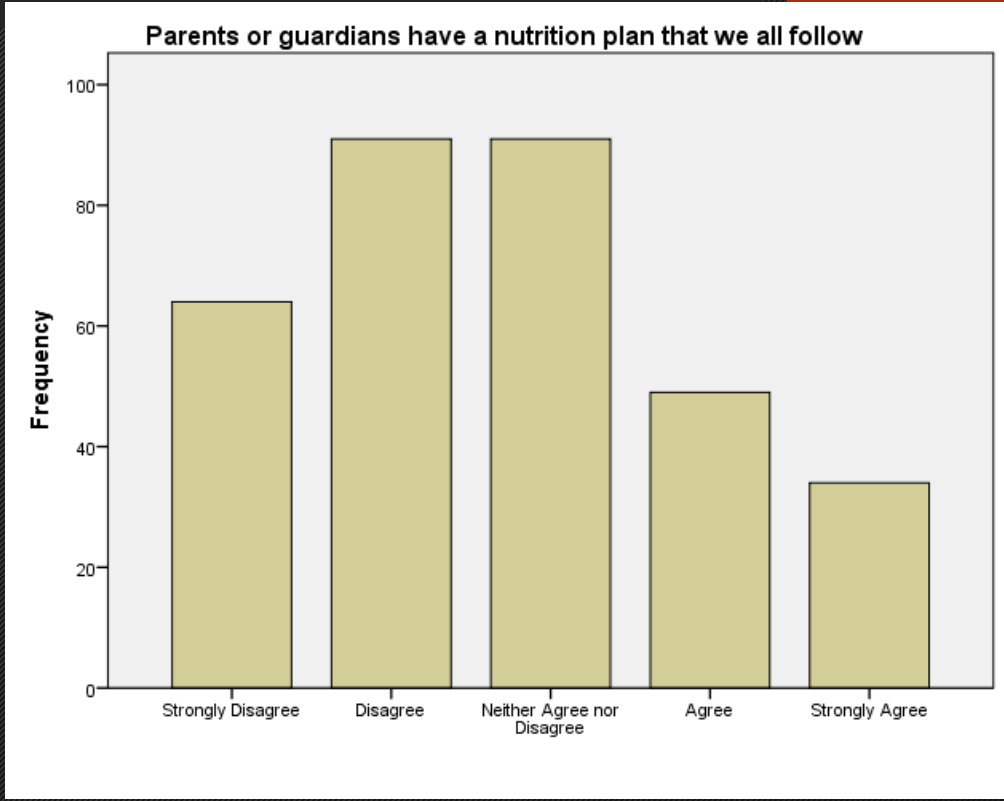
It appears that overall, students in Halifax feel very **(59%)** or at least somewhat **(36%)** safe getting to activities.

Parental Engagement & Modeling



Parental Engagement & Modeling





Key Conclusions

- Key Limitations are self-reported data and need for strong participation / protocols.
- BMI is near other averages, with 32% overweight or obese, but this is the first to look specifically at ages 10 to 14.
- Inclusion of other middle schools may result in data more representative of County overall.
- Nutritional habits may provide opportunity to address more healthy eating behaviors.
- Opportunities to address increasing walking, biking, and other alternative transportation options.
- Parental modeling may be addressed through parental education in addition to youth education and programs.

Moving Forward

- Comparative analysis with other communities.
- Opportunity to retest with additional schools in 2016?
- Other qualitative studies related to this one in Halifax County?
- Additional studies related to Sport for Development and other topics in the County?
- How does this fit in with other Halifax County plans/strategies?
- And??

Questions?

Thank you for your Time!

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