



NATIONAL 4-H HEALTHY LIVING: COMBINED DATA SUMMARY

*WALMART-FUNDED PROJECTS
UNITED HEALTHCARE-FUNDED PROJECTS*

*PRESENTED TO
NATIONAL 4-H COUNCIL*

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National 4-H Healthy Living: Combined Data Summary

Executive Summary

Overview – Through the generous support of United Healthcare and Walmart, National 4-H Council has engaged Cooperative Extension 4-H programs throughout the country in local efforts aimed to improve the nutrition knowledge, food choices, and physical activity of young people. Grantees are implementing programs to improve specific behaviors (e.g., eating vegetables for a snack and reducing consumption of high-fat foods) that lead to a healthy lifestyle.

The grantees are required to use the *4-H Common Measures* software and instruments for data collection. The data collection includes two instruments completed by youth participants, one for grades 4-7 and another for grades 8-12. Both instruments cover nutrition knowledge, physical activity, and food choices; the instrument for grades 8-12 also includes awareness of community, culture, and engagement and understanding.

Purpose – The purpose of this project was to analyze data files from participating states and create a national picture of the 4-H Healthy Living programs funded by United Healthcare and Walmart.

Methodology – Evaluation data was entered by state grantees in the *4-H Common Measures* software. National 4-H Council transmitted Statistical Package for the Social Sciences (IBM SPSS Statistics) files to the University of Tennessee for analysis. SPSS version 21.0 was used for the data analysis. The 4-7th grade instrument had 14 items, and the 8th-12th grade instrument had 20 items. Not all states used all questions, and some states used additional questions. Missing values were ignored through pairwise deletion; deleting only those missing values for a case rather than excluding the case from the entire data set. Only descriptive statistics were used, for example, mean and percentage.

Findings/Conclusion – The data files held 16,809 cases. The majority of students (64.9%) were in grades 4-7 with a mean of sixth grade. Among 4th – 7th graders, two-thirds (67.4%) were in their first year of 4-H participation. Among 8th – 12th grade respondents, four in ten (42.5%) had been in 4-H three or more years. The majority of the 4th – 7th grade participants (53%; n=5867) and the majority of the 8th – 12th grade participants (60.8%; n=2169) were female. The mean age of 4th – 7th grade participants was 10.43 years, and the mean age of 8th – 12th grade participants was 14.19 years. In regards to race, the majority of participants were non-white (American Indian or Alaskan Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander) for both the 4th – 7th graders (52.4%) and the 8th – 12th graders (53.8%). The majority of both 4th – 7th graders (71.5%) and 8th – 12th graders (84.3%) were not Hispanic or Latino.

The project produced many positive outcomes for young people. The youth responses to the project's outcome indicators indicate a progression from learning (knowledge and attitudes) to action (choices and behaviors). **Among the 13,050 participants in grades 4 – 7, the outcomes listed below were achieved.**

Nutrition Knowledge

- 85% learned how to make healthy food choices
- 85% learned the foods they should eat every day.

Nutrition Choices/Behaviors

- 79.8% drink more water.
- 76.9% eat more fruits and vegetables.

Physical Activity Attitudes

- 84.2% reported “being active is good for me.”
- 83.3% reported “physical activity will help me stay fit.”

Physical Activity Behaviors

- 82.4% reported “being active is fun.”
- 73.1% report they “always” or “usually” do moderate physical activities like walking, helping out around the house, raking leaves, or using the stairs.

Among the project's 3,759 participants in grades 8 – 12, the following outcomes were reported.

Nutrition Knowledge

- 85.3% learned why it is important for to eat a healthy diet.
- 84% learned how to make healthy food choices.

Nutrition Choices/Behaviors

- 78% drink more water.
- 77% eat more fruits and vegetables.

Civic Engagement Knowledge and Skills

- 90.4% respect people from other cultures.
- 89.9% treat everyone fairly and equally when in charge of a group.

Civic Engagement Intentions

- 50.3% are interested in a career that helps others.
- 50.2% are encouraged to volunteer more.

Participants in grades 8 – 12 were specifically asked about the amount of time they spend playing video games, looking at a computer, smartphone, or tablet (for something that is not for school) on a school day. The mean number was 2.62 (S.D.=1.659). However, more than one in five respondents (22.4%, n=690) spent five or more hours playing video games, looking at a computer, smartphone, or tablet (for something that is not for school) on an average school day.

Recommendations – The extent to which the outcomes were achieved indicate that the program was successfully implemented. Given the positive youth outcomes produced for nutrition, physical activity, and civic engagement, these programs should continue. The size and scope of this data file (16,809 individual records) suggests that the *4-H Common Measures* approach is a valuable evaluation and reporting solution for projects funded by National 4-H Council and for the Cooperative Extension System in general. A major recommendation is the need for uniformity; that is, the project’s standard evaluation instruments should be used without changes. Some states added additional questions, other states deleted questions. In addition, youth programs must consider how youth spend their time using technology. It is recommended that state and local 4-H professionals and volunteers discuss approaches to mediate this phenomenon and its potential influences on youth health.

Introduction

National 4-H Council, through the generous support of United Healthcare and Walmart, funded 23 grantees in the 4-H Healthy Living initiative. These grantees were requested to use the same *4-H Common Measures* instruments (Le Menestrel & Walahoski, 2013) for program evaluation purposes. One tool was provided for participants in grades 4-7 and a different tool for participants in grades 8-12.

The tool for grades 8-12 includes sections of the Citizenship Common Measures survey to assess leadership development by the teens engaged with program planning and delivery. The goal was 74,000 youth participating in United Healthcare and Walmart programming at the elementary and middle school levels and 1,500 teens engaged as leaders. For program evaluation purposes, the goal was at least 20% participation in the evaluation. Program dosage was set at four to six hours for youth participants to have their impact assessed. Evaluation data was entered by state grantees in the *4-H Common Measures* software.

Research Questions

The following questions guided this study:

1. What was the demographic composition and 4-H experience of participants?
2. How were 4th – 7th grade participants influenced by the program, if at all, in regards to their nutrition and physical activity?
3. How were 8th – 12th grade participants influenced by the program, if at all, in regards to their nutrition, physical activity, and civic engagement?

Methods

As previously stated, the project goal was 74,000 youth participating in United Healthcare and Walmart programming at the elementary and middle school levels and 1,500 teens engaged as leaders. For program evaluation purposes, the goal was at least 20% participation in the evaluation. Program dosage was set at four to six hours for youth participants to have their impact assessed. Evaluation data was entered by state grantees in the *4-H Common Measures* software. National 4-H Council transmitted Statistical Package for the Social Sciences (IBM SPSS Statistics) files to the University of Tennessee for analysis. SPSS version 21.0 was used for the data analysis.

The 4 – 7th grade instrument had 14 items (Appendix A), and the 8th-12th grade instrument had 20 items (Appendix B). Not all states used all questions, and some states used additional questions. Any additional questions were not considered in this analysis. It should be noted that the total number of respondents per question varies as not all respondents answered all questions. Percentages listed throughout this report describe the total number of respondents who answered the question rather than the total group of students participating in the survey.

Missing values were ignored through pairwise deletion; deleting only those missing values for a case rather than excluding the case from the entire data set. Only descriptive statistics were used, for example, mean, mode, and percentage; inferential statistics were not reported. The summary provided here uses text, tables, and graphs to address the research questions. In some cases, the strongly disagree and disagree responses were collapsed to show disagreement, and agree and strongly agree responses were collapsed to show agreement which is a common method for simplifying and describing responses (Donaldson, 2014).

Results

Research Question One – What was the demographic composition and 4-H experience of participants nationally?

Of the 14,584 youth who answered the question about their grade in school, the majority (64.9%; n=9468) were in grades 4 – 7. One in four (21.5%; n=3136) were in 4th grade; the mean was 6th grade (S.D.=2.537). The smallest group of respondents by grade were 12th graders (2.6%; n=374). See Table 1 for program participants’ grades in school.

Table 1

Grades in School of Program Participants

Grade	N (14,584)	% (100%)	μ (S.D.)
4 th grade	3136	21.5	6.02(2.537)
5 th grade	2882	19.8	
6 th grade	2000	13.7	
7 th grade	1450	9.9	
8 th grade	989	6.8	
9 th grade	696	4.8	
10 th grade	787	5.4	
11 th grade	573	3.9	
12 th grade	374	2.6	
Other ^a	1697	11.6	

^a Includes all other answers provided.

Among 4th – 7th graders, two-thirds (67.4%; n=6567) were in their first year of 4-H participation. Two in ten (22.6%; n=2200) were in the second year of 4-H and one in ten were (10.1%; n=983) had been in 4-H three or more years. The mean was 1.43 years (S.D.=.899) of 4-H participation.

Among 8th – 12th grade respondents, the mean was 2.04 years of 4-H participation. Four in ten (42.5%; n=1503) had been in 4-H three or more years, followed by first year participants (38.4%; n=1360) and second year participants (19.1%; n=677). Regarding weekly hours spent in 4-H, the 4th – 7th graders ($\mu=1.78$; S.D.=.741) and 8th – 12th graders ($\mu=1.81$; S.D.=.736) were similar.

The highest percentage of 4th – 7th graders were involved in in-school 4-H programs (31.0%; n=4039) and after-school programs (20.4%; n=2668). In contrast, the highest percentage of 8th – 12th graders were involved in clubs (45.8%; n=1723) and camps (38.0%; n=1428). Interestingly, 19.2% of 8th – 12th graders (n=721) reported working on projects at home compared to 4.6% of 4th – 7th graders (n=596). See Table 2.

Table 2

4-H Experiences of Program Participants

4-H Experiences	4 th – 7 th grade participants			8 th – 12 th grade participants		
	N	%	μ (S.D.)	N	%	μ (S.D.)
Years Participating in 4-H	9750	100	1.43(.668)	3540	100	2.04(.899)
First Year	6567	67.4		1360	38.4	
Second Year	2200	22.6		677	19.1	
Three or More Years	983	10.1		1503	42.5	
Weekly Hours Spent in 4-H	9693	100	1.78(.741)	3840	100	1.81(.736)
Less than one hour	3950	40.8		1347	38.7	
Between one and three hours	3911	40.3		1462	42.0	
More than three hours	1832	18.9		671	19.3	
4-H Involvement ^a						
Clubs	2164	16.6		1723	45.8	
Camps	2163	16.6		1428	38.0	
After-school programs	2668	20.4		817	21.7	
In-school programs	4039	31.0		1080	28.7	
Local fairs/events	1182	9.1		1089	29.0	
Community service projects	642	4.9		1034	27.5	
Working on projects at home	596	4.6		721	19.2	
Other	1342	10.3		575	15.3	

^a4-H Involvement does not equal 100% as respondents were asked to indicate each method that applied to them.

The mean age of 4th – 7th grade participants was 10.43 years (S.D.=2.001), and the mean age of 8th – 12th grade participants was 14.19 years (S.D. 2.793). The majority of the 4th – 7th grade participants were female (53%; n=5867), and the majority of the 8th – 12th grade participants were female (60.8%; n=2169). The majority of participants were non-white (American Indian or Alaskan Native,

Asian, Black or African American, Native Hawaiian or Other Pacific Islander) for both the 4th – 7th graders (52.4%) and the 8th – 12th graders (53.8%). The majority of both 4th – 7th graders (71.5%; n=7661); and 8th – 12th graders (84.3%; n=2774) were not Hispanic or Latino. Table 3 shows the breakdown of respondents by age, ethnicity, and race.

Table 3

Age, Gender, Race, and Ethnicity of Program Participants

	4 th – 7 th grade participants			8 th – 12 th grade participants		
	N	%	μ (S.D.)	N	%	μ (S.D.)
Age	<u>11063</u>	<u>100</u>	10.43(2.001)	<u>3185</u>	<u>100</u>	14.19(2.793)
≤9	3752	33.9		349	11.0	
10	2414	21.8		50	1.6	
11	2252	20.4		52	1.6	
12	1602	14.5		65	2.0	
13	601	5.4		389	12.2	
14	170	1.5		596	18.7	
15	26	0.2		542	17.0	
16	9	0.1		578	18.1	
17	13	0.1		370	11.6	
18	7	0.1		157	4.9	
other	217	2.0		37	1.2	
Gender	<u>11073</u>	<u>100</u>		<u>3570</u>	<u>100</u>	
Female	5867	53.0		2169	60.8	
Male	5206	47.0		1401	39.2	
Ethnicity	<u>10717</u>	<u>100</u>		<u>3292</u>	<u>100</u>	
Hispanic or Latino	30556	28.5		518	15.7	
Not Hispanic or Latino	7661	71.5		2774	84.3	
Race	<u>9861</u>	<u>100</u>		<u>3690</u>	<u>100</u>	
American Indian or Alaskan Native	610	6.2		265	7.2	
Asian	237	2.4		100	2.7	
Black or African American	4152	42.1		1537	41.7	
Native Hawaiian or Other Pacific Islander	169	1.7		83	2.2	
White	4693	47.6		1705	46.2	

Note. Row percentages may not total 100.0 due to rounding.

Regarding residence of 4th – 7th graders, the highest percentage reported town or city with a population 10,000 – 50,000 (38.2%; n=4189) followed by rural/non-farm residence, population under 10,000 (37.4%; n=4097).

Similarly, among 8th – 12th graders, the highest percentage reported town or city with a population 10,000 – 50,000 (38.9%; n=1379) followed by rural/non-farm residence, population under 10,000 (29.1%; n=1033). Table 4 shows residence of program participants.

Table 4

Residence of Program Participants

Residence	4 th – 7 th grade participants		8 th – 12 th grade participants	
	N	%	N	%
	<u>10954</u>	<u>100</u>	<u>3545</u>	<u>100</u>
Farm	742	6.8	593	16.7
Rural (non-farm residence, pop. <10,000)	4097	37.4	1033	29.1
Town or City (pop. 10,000 – 50,000)	4189	38.2	1379	38.9
Suburb of a City (pop. > 50,000)	576	5.3	201	5.7
City (pop. >50,000)	1350	12.3	339	9.6

Note. Row percentages may not total 100.0 due to rounding.

The following states/territories provided 4th – 7th grade data for this project: Alabama, Arizona, Arkansas, Connecticut, Delaware, Florida, Georgia, Illinois, Kentucky, Louisiana, Maine, Maryland, Mississippi, Nebraska, New Jersey, New York, Pennsylvania, Puerto Rico, South Carolina, Tennessee, Texas, and Virgin Islands. The highest percentage of 4th – 7th grade participants were from Texas (15%; n=1958).

The following states/territories provided 8th – 12th grade data for this project: Alabama, Arizona, Arkansas, Delaware, Florida, Georgia, Illinois, Kentucky, Louisiana, Maine, Mississippi, New Jersey, New York, Oklahoma, Pennsylvania, Puerto Rico, South Carolina, Tennessee, Texas, Virgin Islands, Virginia, and West Virginia. The highest percentage of 8th – 12th grade participants were from Alabama (21.5%; n=809).

The number of respondents in each of the participating states/territories is shown in Table 5.

Table 5

Participation by State

State	4 th – 7 th grade participants		8 th – 12 th grade participants	
	N(13050)	%	N(3759)	%
Alabama	1021	7.8	809	21.5
Arizona	25	0.2	15	0.4
Arkansas	1622	12.4	31	0.8
Connecticut	578	4.4	-	-
Delaware	299	2.3	127	3.4
Florida	18	0.1	27	0.7
Georgia	618	4.7	168	4.5
Illinois	844	6.5	65	1.7
Kentucky	300	2.3	95	2.5
Louisiana	839	6.4	411	10.9
Maine	103	0.8	50	1.3
Maryland	42	0.3	-	-
Mississippi	852	6.5	158	4.2
Nebraska	29	0.2	-	-
New Jersey	274	2.1	79	2.1
New York	131	1.0	91	2.4
Oklahoma	-	-	437	11.6
Pennsylvania	397	3.0	185	4.9
Puerto Rico	638	4.9	303	8.1
South Carolina	1345	10.3	234	6.2
Tennessee	198	1.5	51	1.4
Texas	1958	15.0	6	0.2
Virgin Islands	919	7.0	61	1.6
Virginia	-	-	42	1.1
West Virginia	-	-	314	8.4

Research Question Two – How were 4th – 7th grade participants influenced by the program, if at all, in regards to their nutrition and physical activity?

This section describes responses to the 4th – 7th grade instrument which focused on two constructs: healthy nutrition choices (i.e., eating fruit for a snack) and physical activity (i.e., exercising 60 minutes every day).

Nutrition (4th – 7th grade participants)

Participants were asked how hard it was to make a given nutrition choice because of the 4-H Healthy Living Program. Answer choices were “not hard at all,” “a little hard,” and “very hard”. The following percentages of participants surveyed indicated that as a result of the 4-H Healthy Living program, the following nutrition choices were “not hard at all” –

- 75% eat fruit for a snack.
- 59.5% drink less Kool-Aid
- 57.7% choose water instead of soda pop or Kool-Aid when thirsty.
- 56.7% eat a low-fat snack like pretzels instead of chips.
- 55.4% choose a small instead of a larger order of French fries.
- 55.3% drink less soda pop.

Regarding areas of improvement, one in five participants surveyed reported it was “very hard” to eat vegetables for a snack (19.7%); drink 1% or skim milk instead of 2% or whole milk (20.5%); and eat smaller servings of high fat foods like French fries, chips, snack cakes, cookies, or ice cream (19.8%). Table 6 shows responses for nine different nutrition choices.

Table 6

Nutrition Choices of 4th – 7th Grade Participants

How hard would it be for you to	<u>Not hard at all</u>		<u>A little hard</u>		<u>Very hard</u>	
	N	%	N	%	N	%
Eat fruit for a snack (N: 12646)	9488	75.0	1961	15.5	1197	9.5
Eat vegetables for a snack (N:12588)	5085	40.4	5027	39.9	2476	19.7
Choose water instead of soda pop or Kool-Aid when you are thirsty (N: 12672)	7311	57.7	3572	28.2	1789	14.1
Drink 1% or skim milk instead of 2% or whole milk (N: 12490)	5931	47.5	3996	32.0	2563	20.5
Choose a small instead of a large order of French fries (N: 12507)	6925	55.4	3552	38.4	2030	16.2
Eat smaller servings of high fat foods like French fries, chips, snack cakes, cookies, or ice cream (N: 12289)	5548	45.1	4310	35.1	2431	19.8
Eat a low-fat snack like pretzels instead of chips (N: 12492)	7089	56.7	3617	29.0	1786	14.3
Drink less soda pop (N: 12520)	6923	55.3	3670	29.3	1927	15.4
Drink less Kool-Aid (N: 12557)	7468	59.5	3241	25.8	1848	14.7

Note. Row percentages may not total 100.0 due to rounding.

Participants were asked to respond to four nutrition items that measured general learning that resulted from participation in the 4-H Healthy Living program. The scale was 1=strongly agree, 2=agree, 3=disagree, 4=strongly disagree, and a separate answer choice was provided to indicate “not applicable to my 4-H experience”. The following percentages of participants surveyed indicated “strongly agree” or agree” to these statements:

- 85% learned the foods they should eat every day.
- 85% learned how to make healthy food choices.
- 84.6% learned why it is important for to eat a healthy diet.
- 81.1% learned what makes up a balanced diet.

See Table 7 for the nutrition knowledge items, responses, percentages, means, and standard deviations.

Table 7

Nutrition Knowledge of 4th – 7th Grade Participants

Knowledge Items ^a	<u>Strongly Agree/Agree</u>		<u>Strongly Disagree/Disagree</u>		<u>Not Applicable to My 4-H Experience</u>		μ (S.D.)
	N	%	N	%	N	%	
I learned the foods I should eat every day (N:12539)	10652	85.0	926	7.4	961	7.7	1.63(.754)
I learned what makes up a balanced diet (N: 12529)	10156	81.1	1455	11.6	918	7.3	1.74(.809)
I learned why it is important for me to eat a healthy diet (N: 12511)	10580	84.6	961	7.7	970	7.8	1.58(.755)
I learned how to make healthy food choices (N: 12478)	10601	85.0	972	7.8	905	7.3	1.59(.763)

Note. Row percentages may not total 100.0 due to rounding.

^aCollapsed data; scale was 1=strongly agree, 2=agree, 3=disagree, and 4=strongly disagree.

Participants were asked to respond to six nutrition behaviors that measured general change that resulted from participation in the 4-H Healthy Living program. The scale was 1=strongly agree, 2=agree, 3=disagree, 4=strongly disagree, and a separate answer choice was provided to indicate “not applicable to my 4-H experience”. The following percentages of participants surveyed indicated “strongly agree” or “agree” to these statements:

- 76.9% eat more fruits and vegetables.
- 79.8% drink more water.
- 69.7% eat more whole grains.
- 66.7% eat less junk food.
- 64.3% encourage their family to eat meals together.

Table 8 shows the nutrition behaviors, responses, percentages, means, and standard deviations.

Table 8

Nutrition Behaviors of 4th – 7th Grade Participants

Behaviors ^a	<u>Strongly Agree/Agree</u>		<u>Strongly Disagree/Disagree</u>		<u>Not Applicable to My 4-H Experience</u>		μ (S.D.)
	N	%	N	%	N	%	
I eat more fruits and vegetables (N: 12585)	9682	76.9	2156	17.1	747	5.9	1.82(.877)
I eat more whole grains (N: 12460)	8680	69.7	3077	24.7	703	5.6	1.99(.918)
I eat less junk food (N: 12479)	8327	66.7	3389	27.2	763	6.1	2.07(.958)
I drink more water (N: 12464)	9944	79.8	1759	14.1	761	6.1	1.67(.864)
I encourage my family to eat meals together (N: 12209)	7854	64.3	2695	22.1	1660	13.6	1.91(1.006)

Note. Row percentages may not total 100.0 due to rounding.

^aCollapsed data; scale was 1=strongly agree, 2=agree, 3=disagree, and 4=strongly disagree.

Physical Activity (4th – 7th grade participants)

Participants were asked to respond to two items that measured physical activity changes that resulted from participation in the 4-H Healthy Living program. Response categories were always, usually, sometimes, and never. Regarding moderate physical activities like walking, helping out around the house, raking leaves, or using the stairs, the highest percentage indicated “always” (43.3%; n=5438), followed by “usually” (29.8%; n=3742), “sometimes” (19.9%; n=2495) and “never” (7.1%; n=886). For the item, “I exercise 60 minutes every day,” the highest percentage responded “always” (32.6%; n=4034) followed by “usually” (29.3%; n=3632), “sometimes” (26.7%; n=3307), and “never” (1.4%; n=1410); see Table 9.

Table 9

Physical Activity Behaviors of 4th – 7th Grade Participants

	<u>Always</u>		<u>Usually</u>		<u>Sometimes</u>		<u>Never</u>	
	N	%	N	%	N	%	N	%
I do moderate physical activities like walking, helping around the house, raking leaves, or using the stairs (N: 12561)	5438	43.3	3742	29.8	2495	19.9	886	7.1
I exercise 60 minutes every day (N: 12383)	4034	32.6	3632	29.3	3307	26.7	1410	1.4

Note. Row percentages may not total 100.0 due to rounding.

Participants were asked to respond to three physical activity items that measured general attitudes toward physical activity. The following percentages of participants surveyed indicated that they “agreed” to these statements:

- 84.2% reported “being active is good for me.”
- 83.3% reported “physical activity will help me stay fit.”
- 82.4% reported “being active is fun.”

Nearly 10% of respondents indicated “I do not agree” to each of the three physical activity items (see Table 10).

Table 10

Physical Activity Attitudes of 4th – 7th Grade Participants

Items	I agree		I’m not sure		I do not agree	
	N	%	N	%	N	%
Being active is fun (N: 12491)	10298	82.4	1004	8.0	1189	9.5
Being active is good for me (N: 12454)	10490	84.2	828	6.6	1136	9.1
Physical activity will help me stay fit (N: 12397)	10330	83.3	900	7.3	1167	9.4

Note. Row percentages may not total 100.0 due to rounding.

Research Question Three – How were 8th – 12th grade participants influenced by the program, if at all, in regards to their nutrition, physical activity, and civic engagement?

Nutrition (8th – 12th grade participants)

Participants were asked to respond to six nutrition items that measured general learning that resulted from participation in the 4-H Healthy Living program. The scale was 1=strongly agree, 2=agree, 3=disagree, 4=strongly disagree, and a separate answer choice was provided to indicate “not applicable to my 4-H experience”. The following percentages of participants surveyed indicated “strongly agree” or “agree” to these statements:

- 85.3% learned why it is important for to eat a healthy diet.
- 84% learned how to make healthy food choices.
- 82.9% learned the foods they should eat every day.
- 81.2% learned the importance of fruits and vegetables in their diet.
- 80.1% learned what makes up a balanced diet.
- 76.7% learned the importance of whole grains in their diet.
- 76.2% learned how many calories they need to eat each day.

See Table 11 for the nutrition knowledge items, responses, percentages, means, and standard deviations.

Table 11

Nutrition Knowledge of 8th – 12th Grade Participants

Knowledge Items ^a	Strongly Agree/Agree		Strongly Disagree/Disagree		Not Applicable to My 4-H Experience		μ (S.D.)
	N	%	N	%	N	%	
I learned the foods I should eat every day (N: 3600)	2986	82.9	352	9.8	262	7.3	1.74(.751)
I learned what makes up a balanced diet (N: 3593)	2877	80.1	427	11.9	289	8.0	1.81(.765)
I learned why it is important for me to eat a healthy diet (N: 3587)	3059	85.3	274	7.6	254	7.1	1.67(.715)
I learned how to make healthy food choices (N: 3495)	2937	84.0	315	9.0	243	7.0	1.73(.736)
I learned how many calories I need to eat each day (N: 3159)	2408	76.2	459	14.5	292	9.2	1.98(.820)
I learned the importance of fruits and vegetables in my diet (N: 3571)	2900	81.2	407	11.4	264	7.4	1.74(.753)
I learned the importance of whole grains in my diet (N: 3473)	2663	76.7	532	15.3	278	8.0	1.85(.800)

Note. Row percentages may not total 100.0 due to rounding.

^aCollapsed data; scale was 1=strongly agree, 2=agree, 3=disagree, and 4=strongly disagree.

Participants were asked to respond to seven food choices that measured general behaviors that resulted from participation in the 4-H Healthy Living program. The scale was 1=strongly agree, 2=agree, 3=disagree, 4=strongly disagree, and a separate answer choice was provided to indicate “not applicable to my 4-H experience”. The following percentages of participants surveyed indicated “strongly agree” or “agree” to these statements:

- 74.7% think about what their body needs during the day.
- 69.6% make food choices based on what they know their body needs.
- 74.8% make healthy food choices whenever they can.
- 64.1% encourage their family to eat meals together.

More than one in four participants disagreed or strongly disagreed that they make food choices based on what they know their body needs (24.5%) and they encourage their family to eat meals together (26.1%). More than four in ten (41%) reported they do not match their food intake to the number of calories they need each day. See Table 12 for the nutrition knowledge items, responses, percentages, means, and standard deviations.

Table 12

Food Choices of 8th – 12th Grade Participants

Food Choices ^a	<u>Strongly Agree/Agree</u>		<u>Strongly Disagree/Disagree</u>		<u>Not Applicable to My 4-H Experience</u>		μ (S.D.)
	N	%	N	%	N	%	
I think about what foods my body needs during the day (N: 3481)	2600	74.7	660	19.0	221	6.3	1.93(.814)
I make food choices based on what I know my body needs (N: 3566)	2483	69.6	873	24.5	210	5.9	2.05(.819)
I make healthy food choices whenever I can (N: 3564)	2667	74.8	640	18.0	257	7.2	1.91(.829)
I match my food intake to the number of calories I need to eat each day (N: 3535)	1821	51.5	1449	41.0	265	7.5	2.33(.920)
I encourage my family to eat meals together (N: 3500)	2244	64.1	914	26.1	342	9.8	2.06(.914)

Note. Row percentages may not total 100.0 due to rounding.

^aCollapsed data; scale was 1=strongly agree, 2=agree, 3=disagree, and 4=strongly disagree.

Participants were asked to respond to five nutrition behaviors that resulted from participation in the 4-H Healthy Living program. The scale was 1=strongly agree, 2=agree, 3=disagree, 4=strongly disagree, and a separate answer choice was provided to indicate “not applicable to my 4-H experience”. The following percentages of participants surveyed indicated “strongly agree” or agree” to these statements:

- 78% drink more water.
- 77% eat more fruits and vegetables.
- 65.4% eat more whole grains.
- 64% drink less soda.
- 57.5% eat less junk food.

Table 13 shows the collapsed data for the nutrition behaviors of 8th-12th grade respondents.

Table 13

Nutrition Behaviors of 8th – 12th Grade Participants

Behaviors ^a	<u>Strongly Agree/Agree</u>		<u>Strongly Disagree/Disagree</u>		<u>Not Applicable to My 4-H Experience</u>		μ (S.D.)
	N	%	N	%	N	%	
I eat more fruits and vegetables (N: 3593)	2766	77.0	614	17.1	213	5.9	1.88
I eat more whole grains (N: 3578)	2340	65.4	1009	28.2	229	6.4	2.10
I eat less junk foods (N: 3572)	2055	57.5	1300	36.4	217	6.1	2.27
I drink less soda (N: 3566)	2284	64.0	1066	29.9	216	6.1	2.12
I drink more water (N: 3535)	2756	78.0	563	15.9	216	6.1	1.78

Note. Row percentages may not total 100.0 due to rounding.

^aCollapsed data; scale was 1=strongly agree, 2=agree, 3=disagree, and 4=strongly disagree.

8th – 12th grade participants were asked if their family ate “at least one meal a day together,” and 67.1% (n=2178) responded yes (Table 14).

Table 14

Family Meals of 8th – 12th Grade Participants

	<u>Yes</u>		<u>No</u>	
	N	%	N	%
My family eats at least one meal a day together (N: 3248)	2178	67.1	1070	32.9

Physical Activity (8th – 12th grade participants)

Nearly one in four participants (19.4%; n=679) are physically active, for a total of at least 60 minutes, seven days of the week. The mean was 3.91 days (S.D.=2.173). The mean number of hours spent watching television on a school day was 2.16 hours (S.D.=1.479). The mean number of hours spent playing video games, looking at a computer, smartphone, or tablet (for something that is not for school) on an average school day was 2.62 (S.D.=1.659). More than one in five respondents (22.4%; n=690) spent five or more hours playing video games, looking at a computer, smartphone, or tablet (for something that is not for school) on an average school day.

Table 15

Physical Activity Behaviors of 8th – 12th Grade Participants

Behaviors	8 th – 12 th grade participants		
	N	%	μ (S.D.)
Number of days in the past seven physically active for a total of at least 60 minutes per day	3503	100	3.91(2.173)
0 days	246	7.0	
1 day	320	9.1	
2 days	414	11.8	
3 days	571	16.3	
4 days	505	14.4	
5 days	555	15.8	
6 days	215	6.1	
7 days	679	19.4	
Number of hours spent watching television on an average school day	3086	100	2.16(1.479)
I do not watch TV on an average school day	424	12.3	
Less than one hour per day	863	25.1	
2 hours per day	907	26.4	
3 hours per day	601	17.5	
4 hours per day	265	7.7	
5 or more hours per day	375	10.9	
Number of hours spent playing video games, looking at a computer, smartphone, or tablet (for something that is not for school) on an average school day	3086	100	2.62(1.659)
I do not play video games or computer games or use a computer for something that is not school work	307	9.9	
Less than one hour per day	614	19.9	
2 hours per day	675	21.9	
3 hours per day	521	16.9	
4 hours per day	279	9.0	
5 or more hours per day	690	22.4	

Civic Engagement (8th – 12th grade participants)

To measure community awareness, seven items were used. The scale was 1=strongly agree, 2=agree, 3=disagree, and 4=strongly disagree. The means ranged from 1.74 (“I really care about my community”) to 2.09 (“I talk to my friends about issues affecting my community, state, or world.”) indicating agreement.

The following percentages of participants surveyed indicated “strongly agree” or “agree” to these statements:

- 86.8% really care about their community.
- 78.2% tries to figure out if they are just hearing one side of the story on a given issue.
- 78.1% listen to everyone’s views whether they agree or not.
- 77% are aware of the important needs in my community.
- 72.3% pay attention to news events that affect their community.
- 69.4% are interested in others’ opinions about public issues.
- 67.4% talk to their friends about issues affecting their community, state, or world.

Table 16 shows the responds for the community awareness indicators.

Table 16

Community Awareness of 8th – 12th Grade Participants

Items ^a	<u>Strongly Agree</u>		<u>Agree</u>		<u>Disagree</u>		<u>Strongly Disagree</u>		μ (S.D.)
	N	%	N	%	N	%	N	%	
I pay attention to news events that affect my community (N: 1249)	411	32.9	492	39.4	250	20.0	96	7.7	2.02(.915)
I am aware of the important needs in my community (N: 1249)	440	35.2	514	41.8	230	18.4	65	5.2	1.94(.861)
I really care about my community (N: 1245)	510	41.0	570	45.8	146	11.7	19	1.5	1.74(.721)
I talk to my friends about issues affecting my community, state, or world (N: 1242)	394	31.7	444	35.7	298	24.0	106	8.5	2.09(.944)
I'm interested in others' opinions about public issues (N: 1231)	387	31.4	468	38.0	265	21.5	111	9.0	2.08(.940)
I listen to everyone's views whether I agree or not (N: 1238)	454	36.7	512	41.4	204	16.5	68	5.5	1.91(.862)
When you hear about an issue, I try to figure out if they are just telling one side of the story (N: 1230)	466	37.9	496	40.3	196	15.9	72	5.9	1.90(.873)

^aScale was 1=strongly agree, 2=agree, 3=disagree, and 4=strongly disagree.

To measure cultural awareness, four items were used. The scale was 1=strongly agree, 2=agree, 3=disagree, and 4=strongly disagree. The means ranged from 1.57 (“I respect people from different cultures”) to 1.93 (“I explore cultural differences”) indicating strong agreement. The following percentages of participants surveyed indicated “strongly agree” or “agree” to these statements:

- 90.4% respect people from other cultures.
- 83.1% have learned about people who are different from themselves.
- 82.1% value learning about other cultures.
- 76.5% explore cultural differences.

Table 17 shows the responds for the cultural awareness indicators.

Table 17

Cultural Awareness of 8th – 12th Grade Participants

Items ^a	Strongly Agree		Agree		Disagree		Strongly Disagree		μ (S.D.)
	N	%	N	%	N	%	N	%	
I explore cultural differences (N: 1168)	461	39.5	432	37.0	187	16.0	88	7.5	1.92(.922)
I value learning about other cultures (N: 1203)	519	43.1	469	39.0	163	13.5	52	4.3	1.79(.835)
I respect people from different cultures (N: 1187)	636	53.6	437	36.8	81	6.8	33	2.8	1.59(.739)
I have learned about people who are different from me (N: 1214)	601	49.5	408	33.6	144	11.9	61	5.0	1.72(.860)

^aScale was 1=strongly agree, 2=agree, 3=disagree, and 4=strongly disagree.

An additional measure of civic engagement was general engagement and understanding. Six items were used to measure this construct. The scale was 1=strongly agree, 2=agree, 3=disagree, and 4=strongly disagree. The means ranged from 1.61 (“I treat everyone fairly and equally when I am in charge of a group”) to 1.99 (“I can apply knowledge in ways that solve ‘real-life’ problems through community service”) indicating strong agreement. The following percentages of participants surveyed indicated “strongly agree” or “agree” to these statements:

- 89.8% treat everyone fairly and equally when in charge of a group.
- 89.3% can apply knowledge in ways that solve “real-life” problems through community service.
- 88.7% can make a difference in their communities through community service.
- 87.8% are able to lead a group in making a decision.

- 87.5% can help make sure everyone gets an opportunity to say what they think.
- 86.7% have gained skills through community service that will help them in the future.

Table 18 shows the responds for the civic engagement and understanding construct.

Table 18

Engagement and Understanding of 8th – 12th Grade Participants

Items ^a	<u>Strongly Agree</u>		<u>Agree</u>		<u>Disagree</u>		<u>Strongly Disagree</u>		μ (S.D.)
	N	%	N	%	N	%	N	%	
I can make a difference in my community through community service (N: 1238)	601	48.5	498	40.2	118	9.5	21	1.7	1.64(.723)
I can apply knowledge in ways that solve “real-life” problems through community service (N: 1235)	532	43.1	571	46.2	115	9.3	17	1.4	1.69(.695)
I gained skills through serving my community that will help me in the future (N: 1238)	560	45.2	514	41.5	144	11.6	20	1.6	1.70(.736)
I treat everyone fairly and equally when I am in charge of a group (N: 1230)	610	49.6	495	40.2	105	8.5	20	1.6	1.62(.710)
I am able to lead a group in making a decision (N: 1229)	583	47.4	497	40.4	124	10.1	25	2.0	1.67(.739)
I help make sure everyone gets an opportunity to say what they think (N: 1228)	616	50.2	438	37.3	130	10.6	24	2.0	1.64(.748)

^aScale was 1=strongly agree, 2=agree, 3=disagree, and 4=strongly disagree.

The civic engagement intentions were measured using seven items. The responses were definitely, maybe, probably not, and definitely not. The following percentages represent the respondents who answered “definitely” to the following civic engagement intentions:

- 50.3% are interested in a career that helps others.
- 50.2% are encouraged to volunteer more.
- 45% will continue to better their community after high school.
- 43.5% plan to work on projects to better their community.
- 40.6% would enjoy hosting someone from another culture.
- 38.2% can contact someone they have never met before to get their help with a problem.
- 30.2% are interested in working in government – such as school board, Director of parks and rec, legislator, legislative aide, intern.

Table 19 shows the civic engagement intentions.

Table 19

Civic Engagement of 8th – 12th Grade Participants

Intentions	<u>Definitely</u>		<u>Maybe</u>		<u>Probably Not</u>		<u>Definitely Not</u>	
	N	%	N	%	N	%	N	%
I would enjoy hosting someone from another culture (N: 1241)	504	40.6	512	41.3	189	15.2	36	.798
I can contact someone I’ve never met before to get their help with a problem (N: 1239)	473	38.2	519	41.9	207	16.7	40	.810
I plan to work on projects to better my community (N: 1240)	540	43.5	470	37.9	197	15.9	33	.807
I am encouraged to volunteer more (N: 1224)	615	50.2	422	34.5	153	12.5	34	.797
After high school I will continually work to better my community (N: 1214)	546	45.0	457	37.6	178	14.7	33	.802
I am interested in a career that helps others (N: 1216)	612	50.3	422	34.7	157	12.9	25	.777
I am interested in working in government – such as school board, Director of parks and rec, legislator, legislative aide, intern. (N: 1220)	368	30.2	372	30.5	276	22.6	204	1.063

Summary

This section discusses conclusions and recommendations for future programming.

Conclusions

The data file held 16,809 cases which exceeded the project goal of 14,800 youth participating in the project evaluation. The majority of students (64.9%) were in grades 4-7 with a mean of sixth grade. Among 4th – 7th graders, two-thirds (67.4%) were in their first year of 4-H participation. Among 8th – 12th grade respondents, four in ten (42.5%) had been in 4-H three or more years. The majority of the 4th – 7th grade participants (53%; n=5867) and the majority of the 8th – 12th grade participants (60.8%; n=2169) were female. The mean age of 4th – 7th grade participants was 10.43 years, and the mean age of 8th – 12th grade participants was 14.19 years. In regards to race, the majority of participants were non-white (American Indian or Alaskan Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander) for both the 4th – 7th graders (52.4%) and the 8th – 12th graders (53.8%). The majority of both 4th – 7th graders (71.5%) and 8th – 12th graders (84.3%) were not Hispanic or Latino.

The project produced many positive outcomes for young. The youth responses to the project's outcome indicators indicate a progression from learning (knowledge and attitudes) to action (choices and behaviors). **Among the 13,050 participants in grades 4 – 7, the outcomes listed below were achieved.**

Nutrition Knowledge

- 85% learned how to make healthy food choices
- 85% learned the foods they should eat every day.
- 84.6% learned why it is important for to eat a healthy diet.
- 81.1% learned what makes up a balanced diet.

Nutrition Choices/Behaviors

- 79.8% drink more water.
- 76.9% eat more fruits and vegetables.
- 75% eat fruit for a snack.
- 69.7% eat more whole grains.
- 66.7% eat less junk food.
- 64.3% encourage their family to eat meals together.
- 59.5% drink less Kool-Aid
- 57.7% choose water instead of soda pop or Kool-Aid when thirsty.
- 56.7% eat a low-fat snack like pretzels instead of chips.
- 55.4% choose a small instead of a larger order of French fries.
- 55.3% drink less soda pop.

Physical Activity Attitudes

- 84.2% reported “being active is good for me.”
- 83.3% reported “physical activity will help me stay fit.”

Physical Activity Behaviors

- 73.1% report they “always” or “usually” do moderate physical activities like walking, helping out around the house, raking leaves, or using the stairs.
- 61.9% report they “always” or “usually” exercise every day.
- 82.4% reported “being active is fun.”

Among the project’s 3,759 participants in grades 8 – 12, the following outcomes were reported.

Nutrition Knowledge

- 85.3% learned why it is important for to eat a healthy diet.
- 84% learned how to make healthy food choices.
- 82.9% learned the foods they should eat every day.
- 81.2% learned the importance of fruits and vegetables in their diet.
- 80.1% learned what makes up a balanced diet.
- 76.7% learned the importance of whole grains in their diet.
- 76.2% learned how many calories they need to eat each day.

Nutrition Choices/Behaviors

- 78% drink more water.
- 77% eat more fruits and vegetables.
- 74.8% make healthy food choices whenever they can.
- 74.7% think about what their body needs during the day.
- 69.6% make food choices based on what they know their body needs.
- 65.4% eat more whole grains.
- 64.1% encourage their family to eat meals together.
- 64% drink less soda.
- 57.5% eat less junk food.

Civic Engagement Knowledge and Skills

- 90.4% respect people from other cultures.
- 89.9% treat everyone fairly and equally when in charge of a group.
- 89.3% can apply knowledge in ways that solve “real-life” problems through community service.
- 88.7% can make a difference in their communities through community service.
- 88.3% have gained skills through community service that will help them in the future.
- 87.8% are able to lead a group in making a decision.
- 87.5% can help make sure everyone gets an opportunity to say what they think.
- 86.8% really care about their community.
- 83.1% have learned about people who are different from themselves.
- 82.1% value learning about other cultures.
- 78.2% tries to figure out if they are just hearing one side of the story on a given issue.
- 77% are aware of the important needs in my community.
- 76.5% explore cultural differences.

- 72.3% pay attention to news events that affect their community.
- 69.4% are interested in others' opinions about public issues.
- 67.4% talk to their friends about issues affecting their community, state, or world.

Civic Engagement Intentions

- 50.3% are interested in a career that helps others.
- 50.2% are encouraged to volunteer more.
- 45% will continue to better their community after high school.
- 43.5% plan to work on projects to better their community.

Participants in grades 8 – 12 were specifically asked about the amount of time they spend watching TV, playing video games, looking at a computer, smartphone, or tablet (for something that is not for school) on a school day. In this study, the mean number of hours spent watching television on a school day was 2.16 hours (S.D.=1.479). The mean number of hours spent playing video games, looking at a computer, smartphone, or tablet (for something that is not for school) on an average school day was 2.62 (S.D.=1.659). A group of super-users was noted. More than one in five respondents (22.4%, n=690) spent five or more hours playing video games, looking at a computer, smartphone, or tablet (for something that is not for school) on an average school day.

Recommendations

Continue 4-H Healthy Living programming and 4-H Common Measures – The United Healthcare and Walmart-funded Healthy Living programs produced positive youth outcomes regarding nutrition, physical activity, and civic engagement, and these programs should continue. It is recommended that the *4-H Common Measures* tools continue to be used to measure the results of 4-H Healthy Living programs. The size and scope of this data file (16,809 individual records) suggests that the *4-H Common Measures* approach is a valuable evaluation and reporting solution for projects funded by National 4-H Council and for the Cooperative Extension System in general. The continued development of *4-H Common Measures* is imperative. It provides collective impact, and it is a high-quality tool for multi-site evaluation and reporting. Data collected for this report could be used for benchmarking program outcomes, setting outcome targets, and comparing program performance in subsequent years.

Explore the use of random sampling – The time and effort to collect 16,809 individual surveys is commendable. However, it is likely that similar results could be obtained from a stratified, random sample of participants. It is recommended that National 4-H Council explore techniques to conduct random samples, perhaps stratified by ages of youth and regions of the country served.

Pursue uniformity in evaluation instruments – The major recommendation is the need for uniformity; that is, the project's standard evaluation instruments should be used without changes. Some states added additional questions, other states deleted questions. This contributes to the varying response rates to different items throughout this report. When standard instruments are implemented without changes, a number of positive results are produced, including:

- The nationwide program impact that can be documented is greatly enhanced from using the same standard instrument.

- Using the same standard instrument across states/territories allows for benchmarking between and among state/territory programs.
- Using the same standard instrument across states/territories is cost-efficient. An inordinate amount of time is spent identifying and matching variables for different instruments. This time could have been spent in analyzing data, documenting results, and communicating impact. In sum, evaluation and reporting is at a much lower cost when standard instruments are used without any changes.

Explore the technology phenomenon – Youth programs must consider how youth spend their time using technology. More than one in five of the 8th – 12th graders reported spending five or more hours playing video games, looking at a computer, smartphone, or tablet (for something that is not for school) on an average school day. A large contributor to this number may be text messaging. Nonetheless, this is an alarming number. A study of the Kaiser Family Foundation found that teens were consuming media 7.5 hours a day, and sending on average 60 text messages a day (Ahuja, 2013). Some estimates are that teens switch media 27 times per hour – switching between TV, music, facebook, twitter, surfacing the web, playing video games (Ahuja, 2013). It is recommended that state and local 4-H professionals and volunteers discuss and document approaches to mediate this phenomenon and its potential influences on youth health.

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Appendices

Appendix A – 4th – 7th Grade Healthy Living Instrument



4-H Common Measures 4th – 7th Grade Healthy Living Items

Dear Participant:

You are being given this survey **because you are part of a 4-H program or project**, and we are surveying young people like you to learn about your experiences.

This survey is voluntary. If you do not want to fill out the survey, you do not need to. However, we hope you will take a few minutes to fill it out because your answers are important.

This survey is private. No one at your school, home, or 4-H program or project will see your answers. Please answer all of the questions as honestly as you can. If you are uncomfortable answering a question, you may leave it blank.

This is not a test. There are no right or wrong answers, and your answers will not affect your participation or place in the program in any way.

Thank you for your help!

Section I: Tell us about your 4-H Experience

Please select the responses that best describe you.

- 1. How many years have you been participating in 4-H?** (Mark one box)
 - This is my first year
 - This is my second year
 - Three or more years
- 2. Which one of the following best describes how many hours you typically spend in 4-H programs/projects each week?** (Mark one box)
 - Less than one hour
 - Between one and three hours
 - More than three hours
- 3. Which of the following best describes how you are involved in 4-H?** (Mark each box that applies to you.)
 - Clubs

- Camps
- After-school programs
- In-school programs
- Local fairs/events
- Community service projects
- Working on my projects at home
- Other

Section II: Healthy Choices

4. **Please indicate how hard it would be to complete the following actions.** (Select one response in each row by marking the appropriate box ☒.)

How hard would it be for you to...	Not hard at all	A little hard	Very hard
Eat fruit for a snack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eat vegetables for a snack	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Choose water instead of soda pop or Kool-Aid when you are thirsty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drink 1% or skim milk instead of 2% or whole milk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Choose a small instead of a large order of French fries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eat smaller servings of high fat foods like French fries, chips, snack cakes, cookies, or ice cream	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eat a low-fat snack like pretzels instead of chips	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drink less soda pop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drink less Kool-Aid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. **Please indicate to what extent you agree or disagree that your experience in this 4-H program or project has resulted in the following outcomes.** (Select one response in each row by marking the appropriate box ☒.)

As a result of participating in a 4-H Healthy Living Program...	<i>Strongly Agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly Disagree</i>	<i>Not Applicable to my 4-H Experience</i>
I learned the foods that I should eat every day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I learned what makes up a balanced diet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

As a result of participating in a 4-H Healthy Living Program...	<i>Strongly Agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly Disagree</i>	<i>Not Applicable to my 4-H Experience</i>
I learned why it is important for me to eat a healthy diet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I learned how to make healthy food choices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please indicate to what extent you agree or disagree that your experience in this 4-H program or project has resulted in the following outcomes. (Select one response in each row by marking the appropriate box ☒.)

As a result of participating in a 4-H Healthy Living Program I now take the following actions...	<i>Strongly Agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly Disagree</i>	<i>Not Applicable to my 4-H Experience</i>
I eat more fruits and vegetables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I eat more whole grains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I eat less junk foods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I drink more water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I encourage my family to eat meals together	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section III: Physical Activity

7. Please tell us how often you complete the following tasks. (Select one response in each row by marking the appropriate box ☒.)

Tell us about you...	<i>Always</i>	<i>Usually</i>	<i>Sometimes</i>	<i>Never</i>
I do moderate physical activities like walking, helping around the house, raking leaves, or using the stairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I exercise 60 minutes every day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Please indicate to what extent you agree or disagree that your experience in this 4-H program or project has resulted in the following outcomes. (Select one response in each row by marking the appropriate box ☒.)

Tell us what you think...	<i>I agree</i>	<i>I'm not sure</i>	<i>I do not agree</i>
Being active is fun	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being active is good for me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical activity will help me stay fit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section VI: Tell us about You

Please select the responses that best describes you.

9. How old are you?

_____ Age (in years)

10. What grade are you in?

_____ Grade

11. Which of the following best describes your gender? (Mark one box)

- Female
- Male

12. Which of the following best describe your race? (Mark each box that applies to you.)

- American Indian or Alaskan Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White

13. Which of the following best describe your ethnicity? (Mark one box)

- Hispanic or Latino
- Not Hispanic or Latino

14. Which of the following best describes the primary place where you live? (Mark one box)

- Farm
- Rural (non-farm residence, pop. < 10,000)
- Town or City (pop. 10,000 – 50,000)
- Suburb of a City (pop. > 50,000)
- City (pop. > 50,000)

THANK YOU!

Appendix B – 8th – 12th Grade Healthy Living Instrument

4-H Common Measures

8th – 12th Grade Healthy Living Items

Dear Participant:

You are being given this survey **because you are part of a 4-H program or project**, and we are surveying young people like you to learn about your experiences.

This survey is voluntary. If you do not want to fill out the survey, you do not need to. However, we hope you will take a few minutes to fill it out because your answers are important.

This survey is private. No one at your school, home, or 4-H program or project will see your answers. Please answer all of the questions as honestly as you can. If you are uncomfortable answering a question, you may leave it blank.

This is not a test. There are no right or wrong answers, and your answers will not affect your participation or place in the program in any way.

Thank you for your help!

Section I: Tell us about your 4-H Experience

Please select the responses that best describe you.

1. **How many years have you been participating in 4-H?** (Mark one box ☒.)
 - This is my first year
 - This is my second year
 - Three or more years

2. **Which one of the following best describes how many hours you typically spend in 4-H programs/projects each week?** (Mark one box ☒.)
 - Less than one hour
 - Between one and three hours
 - More than three hours

3. **Which of the following best describes how you are involved in 4-H?** (Mark each box ☒ that applies to you.)
 - Clubs
 - Camps
 - After-school programs
 - In-school programs
 - Local fairs/events
 - Community service projects
 - Working on my projects at home
 - Other

Section II: Nutrition Knowledge

4. Please indicate to what extent you agree or disagree that your experience in this 4-H program or project has resulted in the following outcomes. (Select one response in each row by marking the appropriate box ☒ .)

As a result of participating in a 4-H Healthy Living Program...	<i>Strongly Agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly Disagree</i>	<i>Not Applicable to my 4-H Experience</i>
I learned the foods that I should eat every day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I learned what makes up a balanced diet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I learned why it is important for me to eat a healthy diet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I learned how to make healthy food choices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I learned how many calories I need to eat each day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I learned the importance of fruits and vegetables in my diet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I learned the importance of whole grains in my diet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section III: Food Choices

5. Please indicate to what extent you agree or disagree that your experience in this 4-H program or project has resulted in the following outcomes. (Select one response in each row by marking the appropriate box ☒ .)

As a result of participating in a 4-H Healthy Living Program I now take the following actions...	<i>Strongly Agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly Disagree</i>	<i>Not Applicable to my 4-H Experience</i>
I think about what foods my body needs during the day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I make food choices based on what I know my body needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I make healthy food choices whenever I can	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I match my food intake to the number of calories I need to eat each day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I encourage my family to eat meals together	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please indicate to what extent you agree or disagree that your experience in this 4-H program or project has resulted in the following outcomes. (Select one response in each row by marking the appropriate box ☒ .)

As a result of participating in a 4-H Healthy Living Program I now take the following actions...	<i>Strongly Agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly Disagree</i>	<i>Not Applicable to my 4-H Experience</i>
I eat more fruits and vegetables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I eat more whole grains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I eat less junk foods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I drink less soda	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I drink more water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please select the responses that best describe you.

7. **My family eats at least one meal a day together.**
- Yes
- No

Section IV: Physical Activity

Please select the responses that best describes you.

8. **During the past 7 days, how many days were you physically active for a total of at least 60 minutes per day? (Add up all the time you spent in any kind of physical activity that increased your heart rate and made you breathe hard some of the time)** (Mark one box ☒.)
- 0 days
- 1 day
- 2 days
- 3 days
- 4 days
- 5 days
- 6 days
- 7 days

9. **On an average school day, how many hours do you spend watching television?** (Mark one box ☒.)
- I do not watch TV on an average school day
- Less than one hour per day
- 2 hours per day
- 3 hours per day
- 4 hours per day
- 5 or more hours per day

10. On an average school day, how many hours do you play video games, looking at a computer, smartphone, or tablet for something that is not for school? (Mark one box)

- I do not play video games or computer games or use a computer for something that is not school work
- Less than one hour per day
- 2 hours per day
- 3 hours per day
- 4 hours per day
- 5 or more hours per day

Section V: Awareness of Community

1. Please indicate to what extent you agree or disagree that your experience in this 4-H Healthy Living program that has resulted in the following outcomes. (Select one response in each row by marking the appropriate box)

In this 4-H Healthy Living program...	<i>Strongly Agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly Disagree</i>
I pay attention to news events that affect my community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am of aware of the important needs in my community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I really care about my community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I talk to my friends about issues affecting my community, state, or world	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I'm interested in others' opinions about public issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I listen to everyone's views whether I agree or not	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When hear about an issue, I try to figure out if they are just telling one side of the story	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section VI: Culture

2. Please indicate to what extent you agree or disagree that your experience in this 4-H Healthy Living program that has resulted in the following outcomes. (Select one response in each row by marking the appropriate box)

In this 4-H Healthy Living program...	<i>Strongly Agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly Disagree</i>
I explore cultural differences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I value learning about other cultures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I respect people from different cultures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have learned about people who are different from me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section VII: Engagement and Understanding

3. Please indicate to what extent you agree or disagree that your experience in this 4-H Healthy Living program that has resulted in the following outcomes. (Select one response in each row by marking the appropriate box ☒.)

In this 4-H Healthy Living program...	<i>Strongly Agree</i>	<i>Agree</i>	<i>Disagree</i>	<i>Strongly Disagree</i>
I can make a difference in my community through community service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can apply knowledge in ways that solve “real-life” problems though community service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I gained skills though serving my community that will help me in the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I treat everyone fairly and equally when I am in charge of a group	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am able to lead a group in making a decision.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I help make sure everyone gets an opportunity to say what they think	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section VIII: Engagement

4. Please indicate how likely you are to complete the following outcomes. (Select one response in each row by marking the appropriate box ☒.)

As a result of my experience in this 4-H H Healthy Living program...	<i>Definitely</i>	<i>Maybe</i>	<i>Probably Not</i>	<i>Definitely Not</i>
I would enjoy hosting someone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

from another culture				
I can contact someone I've never met before to get their help with a problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I plan to work on projects to better my community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am encouraged to volunteer more	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After high school I will continue to work to better my community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am interested in a career that helps others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am interested in working in government (such as school board, Director of parks and rec, legislator, legislative aide, intern)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section IX: Tell us about You

Please select the responses that best describes you.

11. How old are you?

_____ Age (in years)

Please select the responses that best describes you.

12. What grade are you in?

_____ Grade

13. Which of the following best describes your gender? (Mark one box)

- Female
- Male

14. Which of the following best describe your race? (Mark each box that applies to you.)

- American Indian or Alaskan Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- White

15. Which of the following best describe your ethnicity? (Mark one box)

- Hispanic or Latino

Not Hispanic or Latino

16. **Which of the following best describes the primary place where you live?** (Mark one box)

- Farm
- Rural (non-farm residence, pop. < 10,000)
- Town or City (pop. 10,000 – 50,000)
- Suburb of a City (pop. > 50,000)
- City (pop. > 50,000)

THANK YOU!

Appendix C – State Summary Information

State summary information was sent to Ms. JoAnne Leatherman on May 29, 2014. Due to large file sizes, these summaries were not included in this document. Summary information included frequencies, percentages, means, and standard deviations on all items for both the 4-7th grade and 8th-12th grade instruments.

Data Analysis Team

The data analysis team was composed of Dr. Joseph L. Donaldson, Extension Specialist, and Mr. Mitch Naylor, Student Staff Assistant, University of Tennessee Department of Extension Evaluation and Staff Development.

Dr. Donaldson is an accomplished program evaluator, teacher and researcher. Dr. Donaldson is an Extension Specialist for the University of Tennessee Extension. He is the primary author of the *Program Evaluation Network*, online software used by 700 Extension employees at the four universities. He teaches the UT College of Agricultural Sciences and Natural Resources graduate course in program planning and evaluation, an online course with 25 graduate students. He has developed numerous staff development courses for Extension employees on needs assessment, program planning, evaluation and accountability topics. His online Extension courses have had enrollments of 800 employees at one time. He has published his research in the *Qualitative Report* and the *Journal of Extension*, among others. Donaldson has served as principal investigator for numerous projects including the *National 4-H Healthy Living Professional and Volunteer Development Needs Assessment: A Delphi Approach* (Donaldson, et. al, 2013). He is an active member of the National Association of Extension 4-H Agents, and he received the organization's Air Force Recruiting Salute Award in 2012. As an Extension 4-H Agent, he provided healthy living programs for 2,000 youth enrolled in 80 4-H clubs in Giles County, Tennessee.

Mr. Naylor is a junior at the University of Tennessee, Knoxville, majoring in Business Analytics in the College of Business Administration. He is a native of Finger, Tennessee, and a graduate of Chester County High School.

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