

NATIONAL 4-H
COUNCIL



Evidence-Informed Best Practices among Walmart Foundation-funded 4-H Healthy Habits Programs

Prepared by: Madeleine deBlois, Kara Tanoue, DeeDee
Avery, and Michele Walsh

THE UNIVERSITY OF ARIZONA, JULY 2018

Contents

- Executive Summary 5
 - Grant program and research overview 5
 - 4-H Healthy Habits is increasing its reach, including to youth of color 5
 - 4-H Healthy Habits youth participants report healthy behaviors around nutrition and physical activity 6
 - Teen leaders and positive youth development 7
 - Diversity 9
 - Partnership and collaborations 10
 - Cross-cutting challenges 10
 - Recommendations 11
 - Organization and operation of the 4-H Healthy Habits program 11
 - Engaging youth of color and hard-to-reach populations 11
 - Positive youth development 11
 - Nutrition and physical activity 12
- Introduction 14
 - Overview of 4-H Healthy Habits programming 14
 - A brief history 14
 - Goals of the 4-H Healthy Habits Program 15
 - Goals of this paper 15
 - Evaluation Design 15
 - Case study site selection 16
 - Data sources 18
- Promoting positive youth development among youth of color 18
- Impact of investment: Growth in the 4-H Healthy Habits program and nutrition outcomes 21
 - Growing reach among youth participants 21
 - Selected nutrition and physical outcomes for youth participants 23
 - Selected nutrition and physical activity outcomes for teen leaders 24
- Evaluation findings 28
 - Program structure and leadership 28
 - Evidence-based practices 28
 - State-level organization of 4-H Healthy Habits programs 28
 - Avenues for program delivery 29
 - Curriculum and adaptations 30
 - Evidence-based practices 30
 - Curricula used 30
 - Adaptations to curriculum 31
 - Adaptations for cultural relevance 31
 - Family and community engagement 32
 - Evidence-based practices 32
 - Direct family engagement 33
 - Extended family reach 33

Community engagement	34
The importance of family support to participation and learning	34
Partnerships and collaborations	35
Evidence-based practices	35
Partners	35
Champions.....	37
Teens as Teachers	38
Evidence-based practices	38
Teen Leader engagement.....	39
Teen Leader recruitment & retention	39
Applications	40
Teen Leader training.....	40
Incentives and compensation for teen leaders.....	41
Communication with teen leaders	41
Positive youth development outcomes for teen leaders.....	41
Diversity.....	45
Evidence-based practices	45
Articulated expectations for emphasis on racial and ethnic diversity.....	46
Diversity as a conscious goal	46
Diversity of Teen Leaders and youth participants	48
Participation among African American Youth	50
Participation among Latinx youth	51
Participation among Native American youth	52
Adult perceptions of inclusiveness	53
Teen perceptions of inclusiveness	54
Additional supports needed to continue outreach to youth of color	57
Key findings.....	60
Organization and operation of the Walmart Foundation 4-H Healthy Habits program	60
Engaging youth of color and hard-to-reach populations	60
Positive youth development	60
Nutrition and physical activity outcomes.....	61
Administration of the Walmart Foundation sub-grant program.....	61
Recommendations.....	63
Organization and operation of the 4-H Healthy Habits program.....	63
Engaging youth of color and hard-to-reach populations	63
Positive youth development	64
Nutrition and physical activity outcomes.....	64
Acknowledgements.....	65
Appendix A. Participant Demographics	67
LGUs	67
Teens	68
Adults	70

Appendix B. Description of Methods	71
Document review	71
Surveys	71
Interviews	72
Focus groups	72
Appendix C. Supplemental figures	73
Appendix D. Achievements and successes	73
Teen Leaders	73
Staff	74
Appendix E. Challenges and barriers to success	76
Rural challenges	76
Broad challenges	76
Appendix F. Suggested Readings	79
Positive Youth Development for Diverse Youth	79
Diversity in the Context of 4-H	80
Teens as Teachers, Youth-Adult Partnerships, and Mentoring	80
Nutrition and Physical Activity Outcomes	81
References	83

Executive Summary

Grant program and research overview

Youth of color are broadly underrepresented in many widespread programs, such as 4-H, Boy Scouts, and Girl Scouts.¹ Additionally, many frameworks that 4-H draws upon (the “Big Three”;^{1,2} the six C’s;² the eight essential elements of positive youth development settings;^{3,4} and Cooperative Extension’s *National Framework for Health and Wellness*) recognize the growing need for programs to take into account the cultural context of the youth they serve and to be culturally-responsive to an increasingly diverse youth population.³⁻⁵

In response to this need, beginning in 2009, National 4-H Council (Council) with support from the Walmart Foundation, has offered sub-grants to 4-H programs at land-grant universities (LGUs) to support increasing participation in 4-H Healthy Habits programs among underserved youth, namely Native American, Hispanic or Latino, and African American youth and their families. The 4-H Healthy Habits program consists of two youth engagement components.

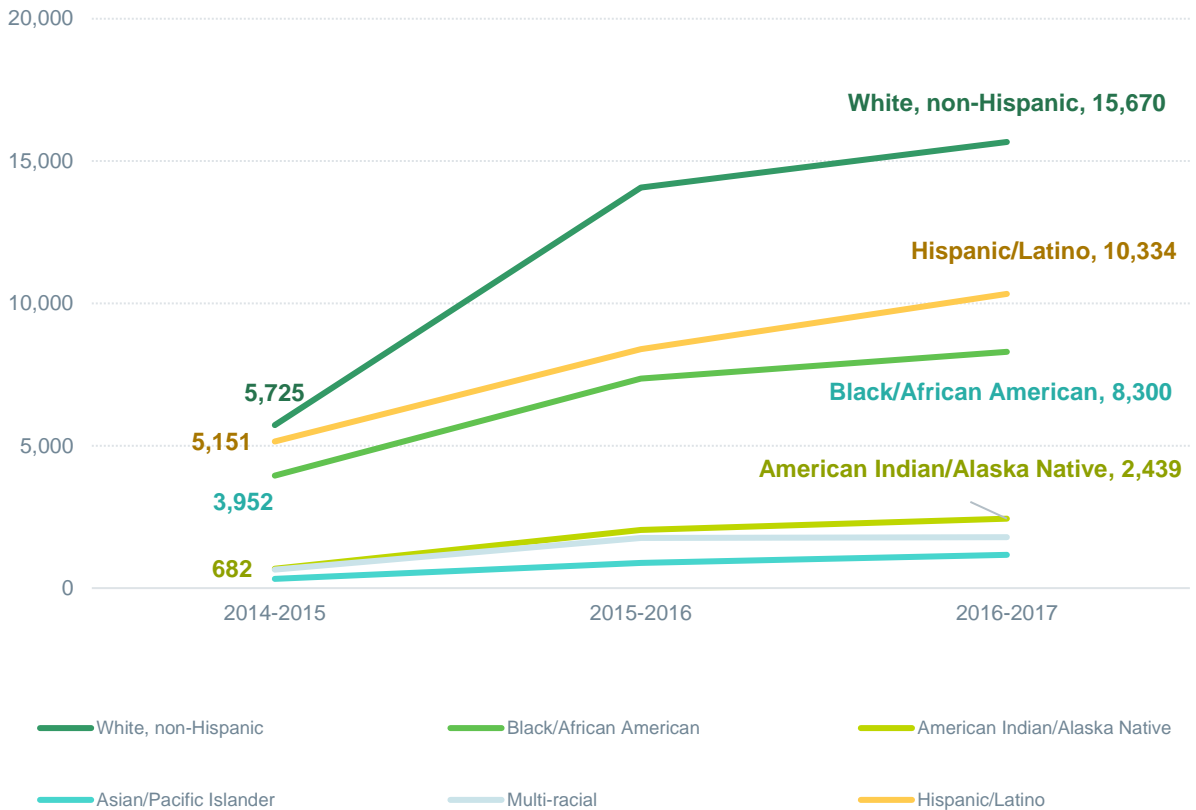
- The first component, referred to here as the 4-H Healthy Habits youth (4HHHY) programming, aims to reach large numbers of youth in grades 2 through 12 through a minimum of six hours of programming around physical activity and nutrition.
- The second component, 4-H Healthy Living Ambassador (4HHLA) program, focuses on positive youth development of older youth through activities focused around 4-H Healthy Living, including health, nutrition and fitness, social and emotional well-being, and leadership skills.

This paper presents the insights and experiences of staff and participants in 4-H Healthy Habits programs that have received funding through and the Walmart Foundation. We synthesize results from a six-month mixed-method evaluation study commissioned by Council examining outcomes of the 4-H Healthy Habits program, populations served by 4-H Healthy Habits programs, approaches to both 4HHHY and 4HHLA programming, challenges encountered in recruitment and program delivery, and strategies for overcoming those challenges. We sought to identify the promising practices LGUs are using to build robust, inclusive 4-H Healthy Habits programs that are educating youth and communities about nutrition and physical activity, and fostering positive youth development for teens, especially teens of color.

4-H Healthy Habits is increasing its reach, including to youth of color

Since 2012, with the inclusion of 1890 LGUs (historically black colleges and universities) in the program, specific outreach efforts have aimed to increase the participation of African American, Latinx, and Native American youth. A critical component of the 4-H Healthy Habits Program has been the completion of evaluation surveys by both 4HHHY and 4HHLA to assess what has been learned from their participation. In 2013, Walmart was the first 4-H Healthy Living donor to embrace the roll out of a national 4-H evaluation system called Common Measures. Youth must have completed at least 6 hours of programming to take the Common Measures surveys, aligning with the 4-H Healthy Habits required 6-hour programming minimum. A section of Common Measures focuses on demographic data such as race, ethnicity, and residence. Common Measures data from the past three years highlight growth among these populations. In the 2016-2017 program year, more than 10,000 Latinx youth, 8,000 African American youth, and nearly 2,500 Native American youth participated in Common Measures surveys. From the 2014-2015 program year to the 2016-2017 program year, the number of Native American youth participants more than tripled, the number of multi-racial participants nearly tripled, and the number of African American and Latinx youth doubled.

The numbers of Hispanic or Latino, Black or African American, and American Indian or Alaska Native youth captured through Common Measures data have more than doubled in the past three years.



Notes: These numbers reflect only the number of youth participants who completed the demographics section of the Common Measures surveys in each of these years. Not all youth participating in 4-H Healthy Habits programs complete Common Measures surveys.

Figure 1. Growth in participation in Common Measures surveys for youth participants by race/ethnicity

4-H Healthy Habits youth participants report healthy behaviors around nutrition and physical activity

The majority of both teen leaders and youth participants reported that participating in 4-H Healthy Habits programs helped them learn about healthy eating and increase their healthy eating habits. Over 90 percent of youth participants and leaders agreed or strongly agreed that they learned why eating a healthy diet was important, how to make healthy food choices, and that they drink more water. The majority of youth also reported engaging in health behaviors such as participating in regular physical activity and eating more fruits and vegetables, more whole grains, and less junk foods. When broken down by race/ethnicity, there were only small differences between participants of different races or ethnicities. This suggests that 4-H Healthy Habits youth participants, regardless of their race or ethnicity, are benefiting from the program in similar ways.

Despite these promising behaviors, there exists room for further improvement in several areas, particularly decreasing junk food consumption for both youth participants and teen leaders and decreasing screen time for teens.

Table 1. Selected Nutrition and Physical Activity Outcomes for Youth Participants from 2016-2017 Common Measures

	All	White, non-Hispanic	Black or African American	American Indian or Alaska Native	Hispanic or Latino
As a result of participating in a 4-H Healthy Habits program... ('Agree' or 'Strongly Agree' responses)					
I learned why it is important for me to eat a healthy diet	94%	95%	94%	93%	94%
I learned how to make healthy food choices	93%	94%	91%	92%	93%
I eat more fruits and vegetables	86%	86%	87%	86%	85%
I eat more whole grains	76%	78%	74%	78%	75%
I eat less junk foods	73%	76%	72%	71%	69%
I drink more water	91%	91%	90%	91%	92%
Because of participating in the 4-H Healthy Habits program... ('Agree' or 'Strongly Agree' responses)					
I encourage my family to eat meals together	79%	81%	79%	78%	78%
Tell us what you think... ('I agree' responses)					
Being active is fun	88%	87%	90%	87%	87%
Being active is good for me	92%	93%	90%	92%	91%
Physical activity will help me stay fit	91%	92%	91%	90%	90%
Tell us about you... ('Always' or 'Usually' responses)					
I do moderate physical activities like walking, helping around the house, raking leaves, or using the stairs	81%	83%	78%	80%	80%
I exercise 60 minutes every day	65%	69%	62%	67%	62%

Teen leaders and positive youth development

A key asset of 4-H Healthy Habits programs is that they not only disseminate information about healthy behaviors to communities, but they leverage the longstanding tradition of empowering teens to deliver the message. LGUs have devised an array of approaches to organizing the teens that meet their local needs and capacities, including using the format of 4-H clubs to organize their teen leaders, treating 4HHLA programming like an individual project for traditional 4-H members, and organizing teen leaders to engage with summer camps.

No matter the format, the teen leader component of 4-H Healthy Habits programming was prized by many LGUs. Teen leaders emphasized a sense of community within their program, access to opportunities for leadership, and the ability to make a positive impact in their communities as their favorite parts of 4-H Healthy Habits Ambassador programs. Other key findings from the study include:

- Teens highly valued some sort of unifying event that connected them with other 4-H Healthy Habits Ambassadors, whether that was the National Youth Summit for Healthy Living or a state-wide event. Such events not only gave them a chance to connect with other youth socially, but also gave them a sense of larger purpose and connected them to a community.
- Where teen leaders were deployed, the staff raved about their ability to connect with youth and engage with their community.
- Some programs were intentional in building teens' skills around teaching and presentations and explicitly building these competencies, whereas others focused more on teens learning 4-H Healthy Living content.
- Through their participation in the program, nearly all teen leaders reported that they experienced a successful youth-adult partnership. This was particularly important for Latinx and Native American teen leaders, who were

the least likely to report having experienced a successful youth-adult partnership before participating in the program.

- Programs used a creative array of incentives to motivate teens to participate. Multiple programs felt that it was an important part of honoring youths' time and commitment to pay them a small stipend for their activities as 4-H Healthy Living Ambassadors. Other incentives included a trip to the 4-H National Healthy Living Summit, an overnight hiking/camping trip, and a Fitbit.
- Using technology to keep in touch with teens, whether via Slack channels or video meetings, helps teen leaders stay connected, particularly in programs where teens were spread across a large area.
- Many teen leaders expressed that they had learned leadership and communication skills as well as learning important nutrition behaviors to apply in their own lives. These qualitative observations aligned with Common Measures data where teen leaders reported marked improvement in their own confidence and competence in their leadership abilities. African American teens showed the greatest improvement in these areas, and Latinx and Native American youth showed the most improvement in public speaking and discussion skills. The figures below highlight skill growth in these areas.

On average, teen leaders reported improvements with their leadership skills, with the highest average change scores occurring among Black or African American teens, followed by Hispanic or Latino teens.



Figure 2. Proportion of teens reporting “good” or “excellent” ability in an area before and after 4-H Healthy Habits participation

Diversity

Multiple studies have stressed the importance of creating programs that are relevant to youth from diverse backgrounds, that have flexible participation requirements, that address the economic needs of participants, and that

respect the ethnicity and culture of all youth involved in order to recruit and retain youth of color.^{4, 6–8} To this end, research suggests that multicultural approaches that recognize and celebrate the differences between youth from different backgrounds while emphasizing common ground are more effective for supporting diverse youth than ‘color-blind’ or universalist approaches that do not acknowledge differences and may lead to isolation or marginalization of youth of color.^{8–11} In this study of 4-H Healthy Habits programs, we found that:

- One hundred percent of staff and volunteers agreed that youth of color and both boys and girls were welcomed in their programs and that youth of color were encouraged to be teen leaders.
- Multiple LGUS found that partnering with agencies that already serve populations of color was an effective way to increase reach among youth of color.
- Programs that were most successful at engaging underserved and minority youth typically located their programming in areas with high proportions of minorities.
- Nearly all teen leaders surveyed felt that their programs were welcoming to all teens, regardless of gender, race, ethnicity, or language spoken. Multilingual teens and youth of color were especially confident that their programs were welcoming.
- Large proportions of respondents indicated that existing racial diversity among their staff and volunteers is an asset to their program.
- Minority-serving institutions appear to be particularly adept at reaching youth of color.

Partnership and collaborations

Forming partnerships with schools, organizations, and individuals in the community not only engages those partners, but also facilitates adolescent growth through the use of varying community partnerships.³ Partnerships and collaborations can be instrumental in promoting positive youth development through the provision of vital spaces, important tools, and key opportunities for youth to make an impact in their communities. While 4-H Healthy Habits programs rely on a diverse set of partnerships, these common themes emerged:

- 4-H Healthy Habits programs leverage a wide array of partnerships to enhance their reach. Among the partnerships that a majority of survey respondents deemed vital are (in order of ranked importance): K-12 schools, individual champions, other 4-H programs, after school programs, summer camps, other Extension programs, and participants’ families.
- Identifying and nurturing relationships with a key champion for the program within partner organizations is often a key to program success.
- Successful partnerships took advantage of systems-level or proximity-based conveniences. For example, one LGU took advantage of the fact that the local high school was in session Monday through Thursday while the lower school was in session Monday through Friday. The 4-H Healthy Living Ambassadors from the high school were thus able to spend the entire day on Friday at the lower school working with all elementary students. Other sites took advantage of lower and upper schools that were co-located or after school programs offered near the high school, minimizing the need for transportation.
- Successful programs were often attributed to one well-connected, well-liked (Cooperative Extension) CE staff person who knows the local residents well and had useful connections.

Cross-cutting challenges

In addition to the topic-specific findings detailed above, participants noted a number of cross-cutting challenges. Challenges related to time, transportation, and funding were the most often cited, and were seen to have an impact on the ability of 4-H Healthy Habits programs to reach youth, recruit and retain teen leaders, sustain themselves over time, and serve specific populations. Programs serving rural areas often felt these issues acutely. Several LGUs with substantial work in rural areas noted that, compared to more densely populated urban areas, reaching rural youth requires more time and monetary investment for a smaller number of overall participants. Internet access and food access were also raised as more pronounced issues in rural communities. We detail these challenges more fully in Appendix E. We have considered these, as well as the topic-specific challenges, in formulating our recommendations.

Recommendations

Our recommendations regarding 4-H Healthy Habits programming synthesize our review of the literature, document review, interviews, focus groups, surveys, and analysis of Common Measures data. We present an abridged set here; the full version begins on page 62.

ORGANIZATION AND OPERATION OF THE 4-H HEALTHY HABITS PROGRAM

- For programs that struggle to meet numbers of youth served, consider adopting a model of writing the proposal where all counties within a state are invited in advance to pledge a number of participants.
- Seek ways to leverage systems-level or proximity-based conveniences to minimize burdens around scheduling and transportation. This approach can be particularly advantageous in rural areas, given the heightened transportation challenges.
- Strive to have teen leaders deliver the 4HHHY programming rather than adults.
- Be innovative in approaches to engaging families, such as co-locating 4-H Healthy Habits events with well-attended school events (e.g., back to school night), cooking demonstrations or tasting events done to coincide with when parents typically come to pick up students.
- Consider establishing Communities of Practice or other systems (e.g., quarterly conference calls focused on specific topics) open to anyone working with 4-H Healthy Habits programs—educators, teens, and volunteers—to share ideas. LGUs are trying innovative approaches to common problems happening across the country, and a mechanism for discussing common challenges and novel solutions could support ongoing program improvement nationwide.

ENGAGING YOUTH OF COLOR AND HARD-TO-REACH POPULATIONS

- Locate 4-H Healthy Habits programming, including camps, school-based programs, and out-of-school-time programs, in areas with high proportions of people of color.
- Relatedly, in communities where people of color are indeed demographic minorities, seek and nurture partnerships with organizations who serve relatively high proportions of youth of color.
- There is a lot of potential value in using teen leaders (as representatives of a particular community) as key players in adapting materials and activities to be locally relevant, a process which could benefit both the teens and youth participants.
- A major contributor to having diverse teen leaders is recruiting diverse teen leaders, and many programs draw on existing 4-H clubs, limiting the pool of new youth who could serve their communities as Ambassadors. Avoid relying on (or requiring that teen leaders come from) existing 4-H programs as a primary source of teen leaders.
- Making community connections was often attributed to one well-connected, well-liked CE staff person who was passionate about health and youth development and knows the local residents and organizations well. When hiring staff or seeking volunteers, consider prioritizing candidates with these characteristics.
- Similarly, strive to have a diverse staff and volunteer base where youth of all types can see themselves reflected in 4-H leadership. This may require intentional outreach to recruit new volunteers or encourage a broader pool of job applicants.
- Advertise the 4-HHLA program in non-traditional places, such as teen community gathering places (rec centers, swimming pools, restaurants, etc.) and social media be creative about marketing tactics.
- Think strategically from the beginning about transportation challenges, particularly in rural areas. Consider providing transit fare for teens who do not have vehicle access or budgeting for transport of larger groups (e.g., fuel money if 4-H has access to vehicles, or rental of vans).
- Some youth who would make excellent teen leaders may also come from families experiencing extreme financial hardship where any cost presents a barrier to participation. Thus, programs focused on reaching low-income populations should minimize any costs associated with program participation. For costs that cannot be eliminated, waivers – even for the standard 4-H registration fee – should be available.

POSITIVE YOUTH DEVELOPMENT

- For many youth, especially from underserved communities, committed volunteerism may not be a viable choice. Paying teen leaders can support their professionalism, foster money management skills, and enable youth who need to work to support themselves or their family to serve their communities as 4-H Healthy Living Ambassadors. While it may be a substantial additional programmatic cost, it is a potentially important one in bringing more underserved youth into leadership positions in 4-H.

- Include explicit attention to the building of leadership and communication skills, not just the content to be delivered.
- Convening teen leaders gives them a sense of participating in something larger and was universally described as a positive experience for teens. Consider ways to connect and unify teens within the state, either via in-person trainings or summits, video conferencing or other technologies, or capstone events that the work toward across the year (e.g., overnight hiking trip or State Fair cooking competition).
- Any young person should know they have a place within 4-H Healthy Habits programs. Consider a formal statement of inclusiveness that makes it unambiguous that 4-H is a mentally, physically, and emotionally safe space for anyone, regardless of any attributes of their identity, and ensure that such statements are brought to the attention of all staff, volunteers, and participants.

NUTRITION AND PHYSICAL ACTIVITY

- The high percentages of both teen leaders and youth participants who reported positive outcomes around both healthy eating knowledge and behaviors suggests that current curricula used in 4-H Healthy Habits programs are having the desired effect and that use of these curricula should continue.
- Experiential learning teaches life-long habits and was a favorite feature of 4-H Healthy Habits programming among youth. Programs should aim to integrate activities where youth can learn and practice skills, such as cooking or physical activity (e.g., soccer camp, hiking programs), as often as possible.
- Further curriculum and lesson development may be needed to address the high amounts of screen time reported by teens, with emphasis on the importance of limiting screen time for both physical and mental health.





NATIONAL 4-H
COUNCIL

Introduction

Introduction

Overview of 4-H Healthy Habits programming

A BRIEF HISTORY

The National 4-H Healthy Living Program has existed since the 4-H Canning Clubs of the early 1900s. As the leader in major private support, the Walmart Foundation became the cornerstone donor to promote current expansion of the 4-H Healthy Living Program by multiple land-grant universities (LGUs) using teen leaders. Beginning in 2009, National 4-H Council (Council), using support from the Walmart Foundation, has offered sub-grants to 4-H programs at LGUs to support increasing participation in 4-H Healthy Living programs among underserved youth, namely, Native American, Hispanic, Latino, and African American youth and their families. The program, then named “Youth Voice: Youth Choice,” promoted teen leadership as one of its objectives alongside 4-H Healthy Living priorities and expected 7,500 youth to participate. However, the program reached over 400 percent of its initial expectation by engaging 31,500 youth participants.

From 2009 onward, the program has regularly exceeded its targets for youth participants, reaching more than 119,565 youth in 2016. The number of LGUs receiving sub-grants has more than doubled from the original 15 LGUs to 32 LGUs in 2017. In 2017, the Walmart Foundation-funded program was rebranded to “4-H Healthy Habits,” replacing “Youth Voice: Youth Choice.” Total reach through 2016 was 841,867 youth, over 400,000 family members (data collection began 2013) and 14,374 teen ambassadors.

Support from the Walmart Foundation has also enabled the development of tools and curriculum for promoting healthy living. In 2011, the program refined its goals to target nutritional deficiencies and healthy food choices and launched a gaming app named the “Eat-And-Move-O-Matic” to engage youth in its educational objectives. Food security was added as a program goal in 2012, and Council piloted the “Shopping Matters” program in partnership with the University of Maryland. The Walmart Foundation also funded the development of the Youth Health Ambassador Toolkit.

The 4-H Healthy Living program was the first donor-funded program to embrace Common Measures, survey tools used nationwide to evaluate outcomes of 4-H programming. Common Measures was rolled out in the 2012-2013 program year and continues to be used to evaluate 4-H Healthy Living programming. Common Measures 1.0 focused on measuring knowledge gained.

Over the course of the program, key efforts have been made to reach youth of color through the 4-H Healthy Habits program.

African American Youth: In 2012, outreach to 1890 LGUs (historically black colleges and universities) to reach African-American youth began through deliberate inclusion of 1890 institutions as stand-alone or with 1862/1890 LGU collaboration sub-grant awards. This outreach has continued in each program year since.

Latino Youth: In 2014, the “Eat-And-Move-O-Matic” app was translated into Spanish, and outreach for Latino youth was added to the program, with the formation of Council’s Latino Advisory Committee. In 2015, cultural sensitivity and inclusion training was provided for grantees at NAE4-HA, and the *Choose Health for Food, Fun and Fitness (CHFFF)* curriculum, developed by Cornell University, was translated into Spanish.¹ The Latino Advisory Committee developed the Latino Best Practices Programming Guide.

Native American Youth: In 2016, outreach for Native American youth was added to the ongoing outreach for Latino and African American youth. The launch of these outreach efforts included face-to-face meetings with Native American Programming States to facilitate discussion of the best practices and barriers. In 2016 and 2017, the program also provided scholarships to the National Youth Summit for Healthy Living (NYSHL) to further build youth leadership capacity.

¹ Available at <https://fnec.cornell.edu/for-partners/curricula/chfff/spanish-chfff/>

GOALS OF THE 4-H HEALTHY HABITS PROGRAM

The 4-H Healthy Habits program consists of two components with regard to youth engagement. The first component, 4-H Healthy Habits youth (4HHHY) programming, aims to reach large numbers of youth in grades 2 through 12 through a minimum of six hours of programming around physical activity and nutrition. The second component focuses on positive youth development (PYD) of older youth through activities focused around 4-H Healthy Living, including health, nutrition and fitness, social and emotional well-being, and leadership skills. This program goes by different names in different LGUs, but we will refer to it here as the 4-H Healthy Living Ambassador (4HHLA) program. Each year, LGUs are expected to serve thousands of youth through 4HHHY (2,000-5,000, depending on grant level) and train teens (50-125, depending on grant level). The objectives of the overall 4-H Healthy Habits program include:¹²

- Improve dietary choices and increase physical fitness.
- Improve attitude toward and understanding of healthy foods.
- Increase family participation in eating at least one meal together daily.
- Improve knowledge of local resources available to underserved youth and their families that support and provide further information on 4-H Healthy Habits.

Additionally, through the 4HHLA component, engaged teens will:

- Increase leadership and work force readiness skill development.
- Explore interest in possible related careers.
- Increase personal knowledge and behavior changes as a result of training and program delivery.
- Serve as mentors and role models to peers, family members, and younger youth in nutrition and physical activity.

GOALS OF THIS PAPER

This paper presents the insights and experiences of staff, volunteers, and participants in 4-H Healthy Habits programs that have received funding through Council and the Walmart Foundation to increase participation among rural youth and youth of color, namely Native American, Latinx, and African American youth. Through literature review, document review, analyses of Common Measures data, and qualitative and quantitative data collection, we report on changes in populations engaged, identify best practices, highlight successes and new ideas from the field, and note challenges encountered. We examine program outcomes as collected by 4-H Healthy Habits programs through 4-H Common Measures instruments. The Common Measures results are broken down by race/ethnicity to better understand the difference in outcomes among white youth and youth of color. Synthesizing these data, we identify a set of recommendations for 4-H Healthy Habits programs. In identifying these recommendations, we relied not only on the literature of best practices outlined here, but also on the concept of “practice-based evidence.”¹³

Evaluation Design

This paper synthesizes results from a six-month mixed-method evaluation study examining populations served by 4-H Healthy Habits programs, approaches to both 4HHHY and 4HHLA programming, challenges encountered in recruitment and program delivery, and strategies for overcoming those challenges. We sought to identify the promising practices LGUs are using to build robust, inclusive 4-H Healthy Habits programs that are educating youth and communities about nutrition and physical activity and fostering positive youth development for teens.

All programs currently active at the time of the study (FY2017-18) were eligible to participate in some aspect of the evaluation. We also selected a subset of LGUs active in the Walmart Foundation-funded program within the past three years to participate with more in-depth data collection (as described below). This subset, selected because they represented a range of involvement of youth of color in the teen leader programming (i.e., diverse case selection), constituted our “case study sites.” We conducted interviews and focus groups with case study sites, gathering qualitative data to contextualize our findings. With the diverse case selection approach, the results, taken across all of the sites, are more likely to be representative of the 4-H Healthy Habits Programs as a whole.¹⁴ Our analyses of these, therefore, do not focus on particular sites, but rather look across all of those participating. Overall, 27 LGUs were invited to participate in primary data collection efforts, and 18 are represented in some way in this report.

CASE STUDY SITE SELECTION

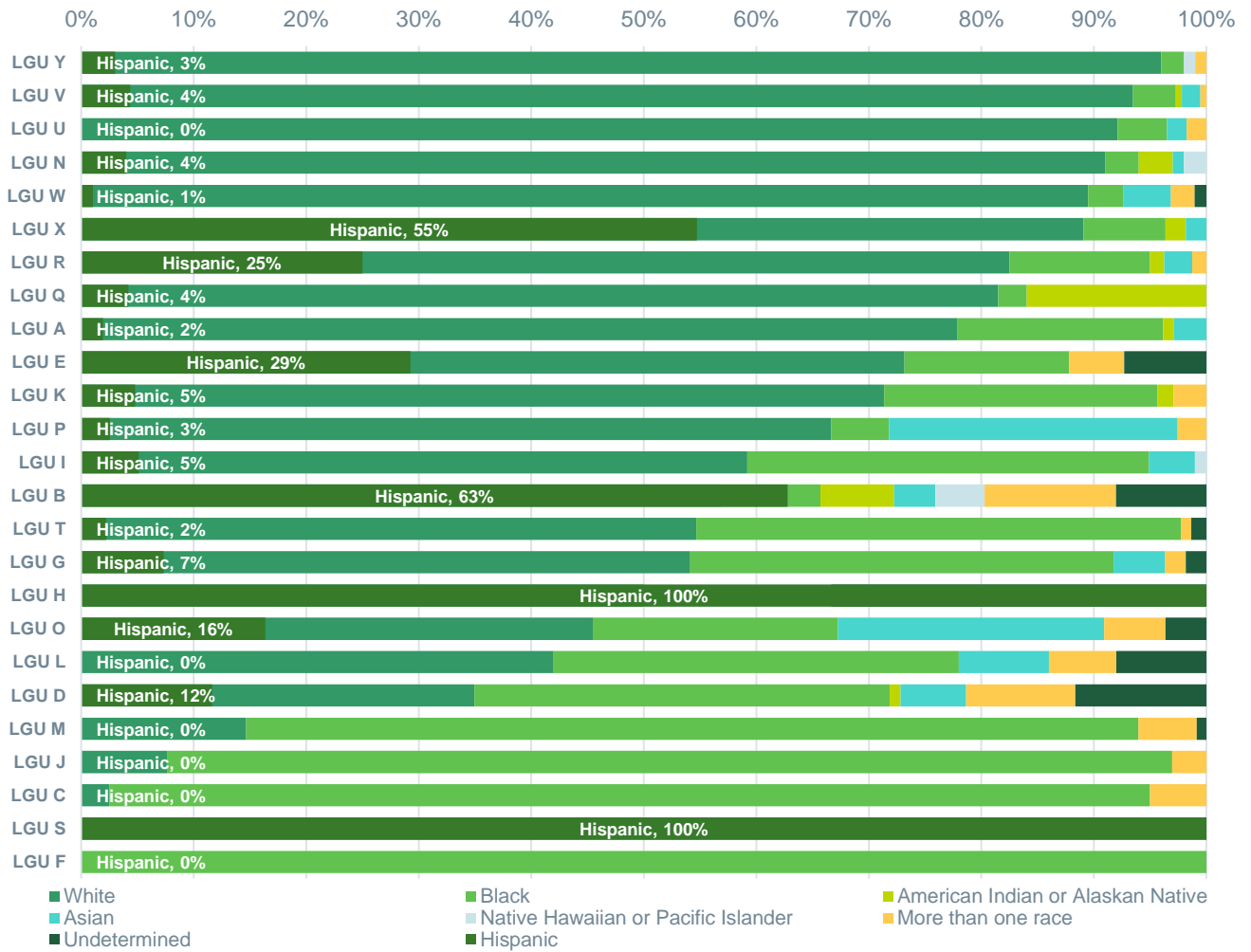
To identify programs for more intensive data collection (case study sites), we examined the current demographics of 4-H Healthy Habits programs across the country, using 2016-2017 program report data. We focused on the demographics of the teen leaders in the 4HHLA programs because these teens generally receive more intensive programming and are active agents of change in their communities.

Program demographics varied widely by LGU, with some programs involving almost entirely white teens in their teen leader programs, and others involving only youth of color (Figure 3 **Error! Reference source not found.**). Some of these trends are likely driven by the racial and ethnic composition of the LGUs and the communities in which they are located. Many of the LGUs with the highest proportions of teen leaders who were youth of color were 1890 LGUs and LGUs of associated territories, while some of the LGUs with the highest proportions of white teens reflect the demographics of their state. To keep the focus on overall learnings, and to assure confidentiality of responses, each LGU is represented by a randomly-assigned letter in the figures below.

For this study, we focused specifically on participation by African American, Native American, and Latinx teens in the teen leader component of 4-H Healthy Habits programs. In order to identify best practices in diversity and inclusion and understand more about challenges, we selected case study sites with varying levels of participation by youth of color in the teen leader programs. We sought to identify programs where the demographics of the teen leaders aligned with those of youth participants, as well as those where there was less congruence between participant and teen leader demographics.

We also examined shifts in the demographics of teen leaders of the past three years through analysis of data from the Common Measures surveys from the 2014-2015, 2015-2016, and 2016-2017 program years to identify programs where the share of teen leaders who were youth of color had increased or decreased.

LGU programs varied greatly in the diversity of their teen leaders.



Note: Race and ethnicity were reported separately in program report. In order to capture both, the percent of Hispanic teen leaders is overlaid on the race categories in this figure, oriented to overlay mostly on the White category, as Hispanic and white is the most frequent ethnicity-race combination in the U.S. However, it is important to recognize that participants could be both Hispanic and any other racial identity.

Figure 3. Teen Leaders by Race and Ethnicity by LGU, 2016-2017 Program Report Data

Through the process described above, we identified nine potential case study sites along with three back-ups. Two sites declined the invitation to participate in the case study. Two back-ups agreed to participate. In the nine participating case study sites, some LGUs elected to participate only in some portions of the data collection efforts. Staff interviews were conducted across all nine study LGUs. Three LGUs assisted in organizing teen focus groups, and five LGUs invited staff, volunteers, or teens to participate in survey data collection efforts.

DATA SOURCES

The evaluation utilized the following data sources:

- A. Sub-grantee reports: We reviewed program reports of past sub-grantees from the past three program years. Using these, we extracted themes to guide instrument development (surveys, interview guides, and focus group guides), and analyzed 2016-2017 report demographics to select LGUs as case studies for more intensive data collection efforts (as described above).
- B. Common Measures data: Common Measures demographic data from all grantees were used to describe program participation over time. Common Measures data for all participating 2016-2017 grantees were used to describe program outcomes.
- C. Evaluation surveys: Case study sites (5) and other participating LGUs (10) participated in teen, staff, and/or adult volunteer surveys.
- D. Interviews: All nine case study sites participated in staff interviews.
- E. Focus Groups: Three case study LGUs participated in youth focus groups.

More detail on these data sources and the content of the surveys and interviews is available in **Appendix B. Description of Methods.**

Quantitative results presented in this report are derived from the evaluation survey, Common Measures survey data, and data in the 2016-2017 grantee reports. Qualitative data were aggregated from the grantee reports, interviews, focus groups, and open-ended responses on the surveys. These data were thematically analyzed to assist in framing and data interpretation.¹⁵

It is important to note that because participation in the study was voluntary, the results presented here are not from a complete census of LGUs running 4-H Healthy Habits programs with Walmart Foundation sub-grants. These results reflect the experiences of a subset of 4-H Healthy Habits programs, which may be similar or substantially different from the programs that did not participate in data collection. However, given that common themes emerged from this diverse subset of LGUs, we expect that themes discussed here will resonate with programs nationwide.

Promoting positive youth development among youth of color

Much of modern 4-H programming, including 4-H Healthy Habits, is grounded in the PYD approach. PYD, as both an approach to youth programming and a process of development, views young people as *current resources to develop, not problems to manage* and thus focuses on building assets and skills in youth within a safe and supportive environment.² Multiple authors have worked to distill the most critical features of programs that promote PYD. The most influential of these distillations include the “Big Three” (positive, sustained youth-adult relationships, life-skill-building activities, and opportunities for youth to put skills into action as participants and leaders in their communities)^{1, 2}; the six Cs (Competence, Confidence, Character, Connection, Caring, and youth Contributions)²; and the eight essential elements of settings that support PYD (physical and psychological safety, developmentally-appropriate structure, supportive relationships, opportunities for belonging, positive social norms, support for mattering and efficacy, skill-building opportunities, and linkages of family, school, and community).^{3, 4}

All of these youth development frameworks, along with Cooperative Extension’s *National Framework for Health and Wellness*, are rooted in an understanding of youth as embedded within multiple ecological contexts, including the family, school, community, and broader social environments.^{1, 2, 6, 11, 16, 17} These frameworks also recognize the growing need for programs to take into account the cultural context of the youth they serve and to be culturally-responsive to an increasingly diverse youth population.³⁻⁵

As part of the calls for culturally-responsive youth programming, researchers have acknowledged the ways in which our knowledge of the impacts of PYD approaches on youth of color is limited.^{2, 11, 18, 19} As Roth and Brook-Gunn note in their review of evaluation efforts for youth development programs, youth of color are broadly underrepresented in many widespread programs, such as 4-H, Boy Scouts, and Girls Scouts.¹ Beyond underrepresentation in overall programming, the underrepresentation of youth of color in research about youth development programs limits what we can say about the outcomes for youth of color in these programs. Despite the overall positive findings for youth participating 4-H, as shown in the 4-H Study of Positive Youth Development,² due to the small number of non-European-American youth in the sample, we cannot necessarily extend these findings to youth of color.¹⁹ The consequences of this underrepresentation include a lack of empirical research into the essential components of youth development programs for promoting PYD among youth of color.

Despite the lack of empirical study, substantial work has been done through case studies, practice-informed research, and theoretical work to delineate some guidelines and practices for programs seeking to support youth of color and promote diversity and inclusion within their organizations.^{4, 6, 8, 20-22} This body of research largely draws on the existing frameworks of PYD enumerated above, but emphasizes the ways in which the core elements of effective programs may need to be adjusted to the specific cultural context of the youth that programs serve. For example, Simpkins et al. in their 2017 article, “Designing Culturally Responsive Organized After-School Activities,” frame their recommendations around the eight essential elements, focusing on the ways in which program structures and staff can specifically support ethnic and racial minority youth through aligning these elements to their cultural context.⁴



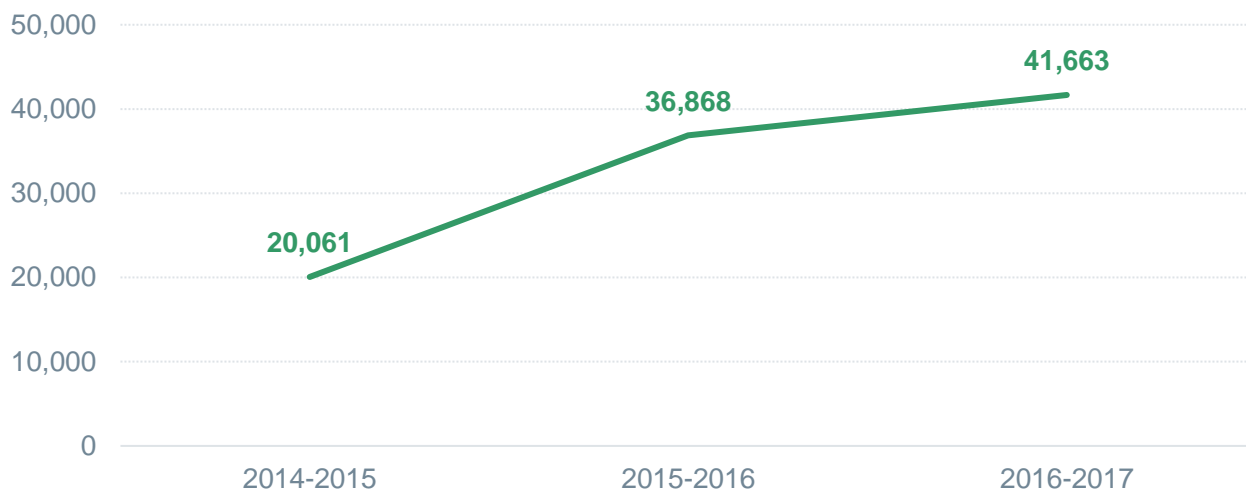
NATIONAL 4-H
COUNCIL

Impact of investment:
Growth in the 4-h healthy habits
program and nutrition outcomes

Impact of investment: Growth in the 4-H Healthy Habits program and nutrition outcomes Growing reach among youth participants

The reach of the 4-H Healthy Habits Program nationwide has greatly increased from the program's inception in 2009. While in 2009, 31,500 youth were reached, the goal for the 2017-2018 program year was 142,500 youth, a more than fourfold increase. Growth of the program can also be tracked through the growing number of youth completing Common Measures surveys, which more than doubled between the 2014-2015 and 2016-2017 program years.

The number of youth participants captured through Common Measures Surveys has more than doubled in the last three years.

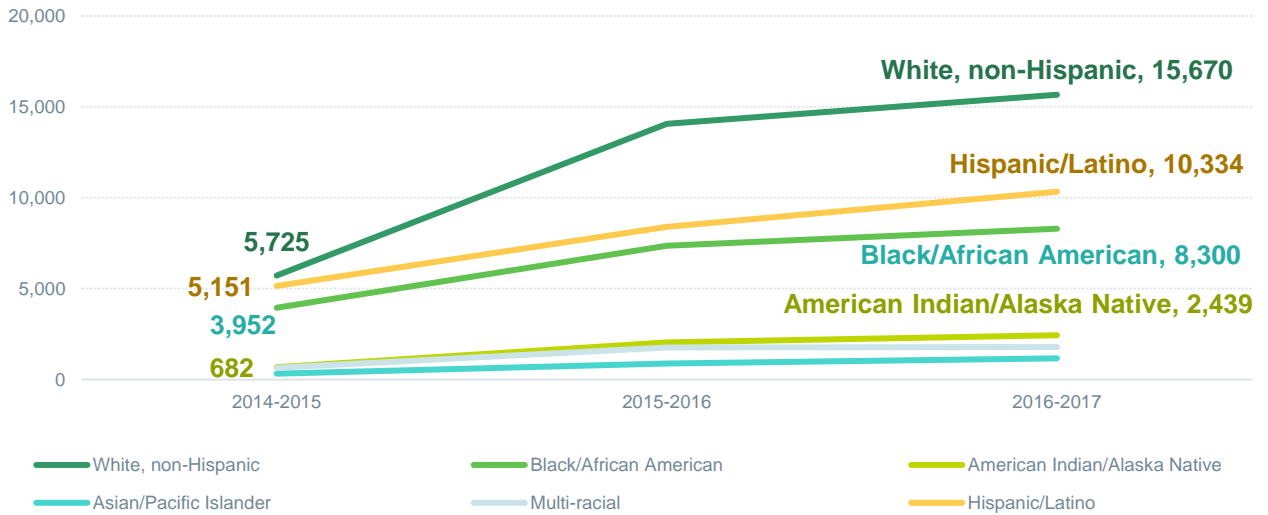


Notes: These numbers reflect only the number of youth participants and youth leaders who completed the demographics section of the Common Measures surveys in each of these years. Not all youth participating in 4-H Healthy Habits programs complete Common Measures surveys.

Figure 4. Participation in Common Measures Surveys, 2014-2015 program year to 2016-2017 program year

Since 2012, with the inclusion of 1890 LGUs in the program, specific outreach efforts have aimed to increase the participation of African American, Latinx, and Native American youth. The past three years of Common Measure survey data indeed show growth among these populations. In the 2016-2017 program year, more than 10,000 Latinx youth, 8,000 African American youth, and nearly 2,500 Native American youth participated in Common Measures surveys (Figure 5).

The numbers of Hispanic or Latino, Black or African American, and American Indian or Alaska Native youth captured through Common Measures data have more than doubled in the past three years.

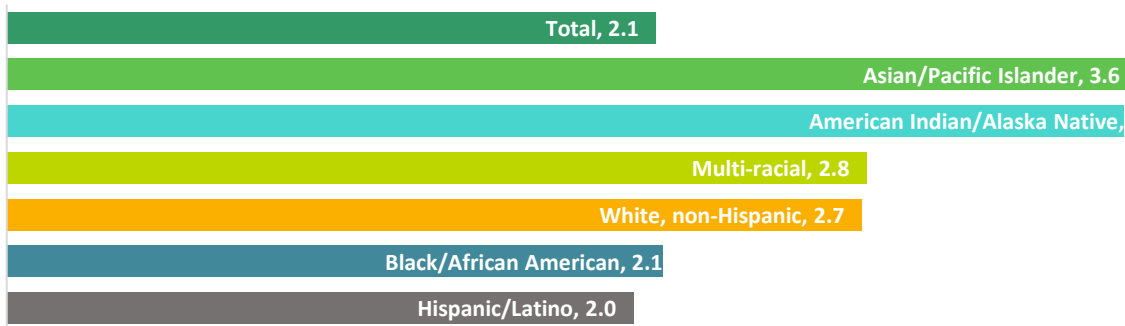


Notes: These numbers reflect only the number of youth participants who completed the demographics section of the Common Measures surveys in each of these years. Not all youth participating in 4-H Healthy Habits programs complete Common Measures surveys.

Figure 5. Growth in participation in Common Measures surveys for youth participants by race/ethnicity

Growth rates were greatest among Asian or Pacific Islander and Native American participant populations. From the 2014-2015 program year to the 2016-2017 program year, the number of Native American youth participants more than tripled, the number of multi-racial participants nearly tripled, and the number of African American and Latinx youth doubled (Figure 6). The particularly high growth rates among Native American youth suggest that outreach efforts to reach Native American youth participants have been particularly effective.

The numbers of Hispanic or Latino, Black or African American, and American Indian or Alaska Native youth have more than doubled in the past three years.



Notes: These rates only reflect youth who completed Common Measures surveys. "Asian/Pacific Islander" combines participants who identified as Asian with those who identify as Native Hawaiian or other Pacific Islander due to small numbers.

Figure 6. Growth rates for youth participants by race/ethnicity

However, despite this growth in absolute numbers, it is important to note that the overall demographics of youth participants by proportion, as captured in Common Measures, have not shown substantial change. While the percentage of youth participants who were Native American increased from five to seven percent, the percentage of

youth participants who were African American declined from 28 to 24 percent. The percentage of youth who were Latinx declined very slightly from 28 to 27 percent. By contrast, the percentage of youth who were non-Hispanic White grew from 41 to 46 percent.

Selected nutrition and physical outcomes for youth participants

Beyond documenting the growth of the program, Common Measures data also show the impact of the 4-H Healthy Habits programs in terms of the knowledge and behaviors of youth participants. Across all racial and ethnic backgrounds, youth participants reported that they engage in healthy habits and had positive attitudes about physical activity.

Table 2. Selected Nutrition and Physical Activity Outcomes for Youth Participants from 2016-2017 Common Measures

	All	White, non-Hispanic	Black or African American	American Indian or Alaska Native	Hispanic or Latino
As a result of participating in a 4-H Healthy Habits program... ('Agree' or 'Strongly Agree' responses)					
I learned why it is important for me to eat a healthy diet	94%	95%	94%	93%	94%
I learned how to make healthy food choices	93%	94%	91%	92%	93%
I eat more fruits and vegetables	86%	86%	87%	86%	85%
I eat more whole grains	76%	78%	74%	78%	75%
I eat less junk foods	73%	76%	72%	71%	69%
I drink more water	91%	91%	90%	91%	92%
Because of participating in the 4-H Healthy Habits program... ('Agree' or 'Strongly Agree' responses)					
I encourage my family to eat meals together	79%	81%	79%	78%	78%
Tell us what you think... ('I agree' responses)					
Being active is fun	88%	87%	90%	87%	87%
Being active is good for me	92%	93%	90%	92%	91%
Physical activity will help me stay fit	91%	92%	91%	90%	90%
Tell us about you... ('Always' or 'Usually' responses)					
I do moderate physical activities like walking, helping around the house, raking leaves, or using the stairs	81%	83%	78%	80%	80%
I exercise 60 minutes every day	65%	69%	62%	67%	62%

Note: Black or African American, American Indian or Alaska Native, and Hispanic or Latino are non-exclusive categories, thus participants who report more than one race or ethnicity may be counted in more than one category.

There were very small differences between participants of different races or ethnicities. In general, non-Hispanic White participants agreed or strongly agree with statements about healthy eating knowledge and behaviors at higher rates than African American, Native American, and Latinx participants, and similar differences were seen on physical activity attitudes and behaviors. The largest differences were seen in items about eating less junk foods and exercising 60 minutes every day. However, the small size of these differences suggests that 4-H Healthy Habits youth participants, regardless of their race or ethnicity, are benefiting from the program in similar ways.

These healthy eating and physical activity items are important due to their links to long-term outcomes in the published research literature.

- Children who develop healthy eating habits prior to sixth grade are likely to eat healthier diets when they reach adulthood.²³
- Eating multiple servings of fruits and vegetables each day protects against heart disease, strokes, and multiple forms of cancer, as well as reductions in the risk of developing type 2 diabetes and some forms of lung and kidney disease.^{24–26}
- Increased hydration, and particularly replacement of sugar-sweetened beverages with plain water, is linked to maintenance of a healthy weight in children and reduced risk of developing type 2 diabetes.^{27, 28}
- Adolescents who regularly eat meals with their families report healthier eating patterns and better mental well-being, and youth who eat three or more meals per week with their families are more likely to maintain a healthy weight.^{29–32}
- Regular physical activity is linked to better cardiovascular, metabolic, and musculoskeletal health in childhood, as well as more positive socio-emotional development for adolescents.^{33–38}

Selected nutrition and physical activity outcomes for teen leaders

Across all of the teen leaders engaged through 4HHLA programs, the vast majority reported positive health knowledge and behavior changes due to their participation in 4-H Healthy Habits programming. Nearly all teen leaders (more than 95 percent) who responded to the 2016-2017 Common Measures survey agreed or strongly agreed that they learned about a healthy diet, why it is important and how to make healthy food choices. More than 90 percent reported that they make healthy food choices whenever they can, eat more fruits and vegetables, and drink more water, and more than 80 percent reported eating more whole grains and drinking less soda. The lowest percentage (78 percent) reported eating less junk food, though this still represented more than three-quarters of all teen leaders.

Similar to the findings for PYD outcomes, African American teen leaders agreed or strongly agreed that they learned about healthy eating and changed their own eating habits at higher rates than any other group of teen leaders on all but one item. American Indian and Alaska Native teen leaders generally agreed or strongly agreed at the lowest rates. Overall, these outcome data suggest that 4HHLA programs promote healthy eating knowledge and behavior among both white youth and youth of color.

However, there are particular areas that could be improved. Across all racial and ethnic groups, lower percentages of teen leaders agreed or strongly agreed that they decreased unhealthy eating behaviors, such as junk food and soda consumption, compared to positive dietary changes, such as eating more fruits and vegetables, suggesting that further work may be needed to promote decreases in consumption of unhealthy foods. This need seems particularly strong among Native American youth. A much lower percentage of Latinx youth agreed or strongly agreed that they make healthy food choices whenever they can compare to other groups, suggesting a need for further investigation into potential barriers to making healthy food choices within this population and development of strategies to teach youth to overcome these barriers.

Table 3. Healthy eating knowledge and behaviors outcomes for teen leaders by race and ethnicity from the 2016-2017 Common Measures

	All	White, non-Hispanic	Black or African American	American Indian or Alaska Native	Hispanic or Latino
As a result of participating in a 4-H Healthy Habits program... ('Agree' or 'Strongly Agree' responses)					
I learned the foods that I should eat every day	96%	96%	99%	94%	97%
I learned what makes up a balanced diet	96%	94%	98%	93%	97%
I learned why it is important for me to eat a healthy diet	97%	96%	99%	92%	97%
I learned how to make healthy food choices	96%	95%	98%	91%	99%
I think about what foods my body needs during the day	92%	92%	94%	87%	89%
I make healthy food choices whenever I can	90%	89%	94%	85%	63%
I eat more fruits and vegetables	91%	90%	95%	85%	90%
I eat more whole grains	84%	81%	90%	85%	82%
I eat less junk foods	78%	77%	82%	69%	76%
I drink less soda	81%	78%	89%	74%	77%
I drink more water	95%	94%	97%	93%	95%

Notes: Black/African American, Hispanic/Latino, and American Indian/Alaska Native are non-exclusive categories, meaning that a participant who reports multiple races or ethnicities may be counted more than once.

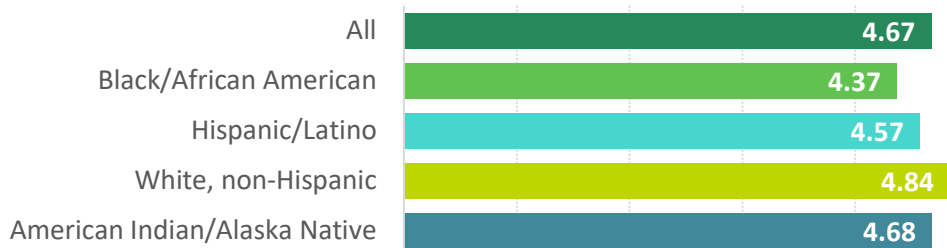
In the Common Measures survey, teen leaders were asked about their physical activity and screen time outside of school. Teens were asked to report how many days in the last week they were physically active for at least 60 minutes. On average, teens reported being active for 4.67 days of the past week, with non-Hispanic White teens reporting the highest average amount of active days and African American teens reporting the lowest average amount of active days, followed by Latinx teens.

Overall, three percent of teen leaders reported that there were *no* days in the last week that they were physically active for at least 60 minutes. The rates were 2 percent for non-Hispanic White teen leaders and 3 percent for Latinx teen leaders. Rates were slightly higher for Native American teen leaders (4 percent) and for African American teen leaders (6 percent). Although these percentages are low overall, these outcomes do suggest that additional efforts to encourage regular physical activity, especially in programs that serve African American teens, could be beneficial.

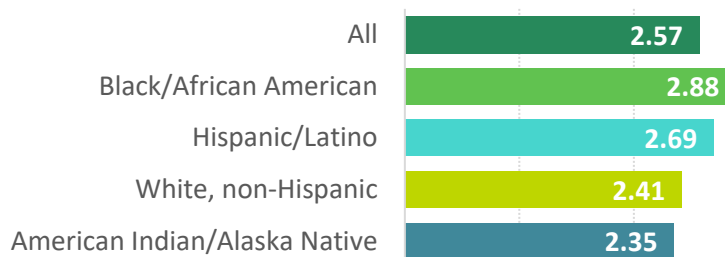
Similar trends were seen in average hours of screen time. On average, teen leaders reported spending about two and a half hours on an average school day interacting with a screen. African American teens reported spending higher amounts of screen time on average (2.88 hours), followed by Latinx teens (2.69). Native American youth reported the lowest amount of average screen time (2.35), and 13 percent of Native American youth reported that they spent no time watching television or using a computer outside of school, the highest percentage of any group. Nearly half (49 percent) of all teen leaders and nearly two thirds of African American teen leaders (63 percent) reported spending three or more hours interacting with screens on an average school day.

Screen time matters for adolescents, as multiple studies have shown that youth who have more than two hours of screen time per day tend to be less fit and have lower self-esteem and academic achievement.^{39, 40} They are also more likely to show symptoms of depression.⁴¹⁻⁴³ Reductions in screen time and increased physical activity are linked to better metabolic health and emotional well-being.^{40, 42} Given this research and the high amounts of screen time reported among teen leaders, particularly African American teens, greater attention should be paid to encouraging teens to reduce their screen time as a part of 4-H Healthy Habits programming.

Teen leaders, on average, reported that they were physically active for at least 60 minutes per day between 4 and 5 days per week

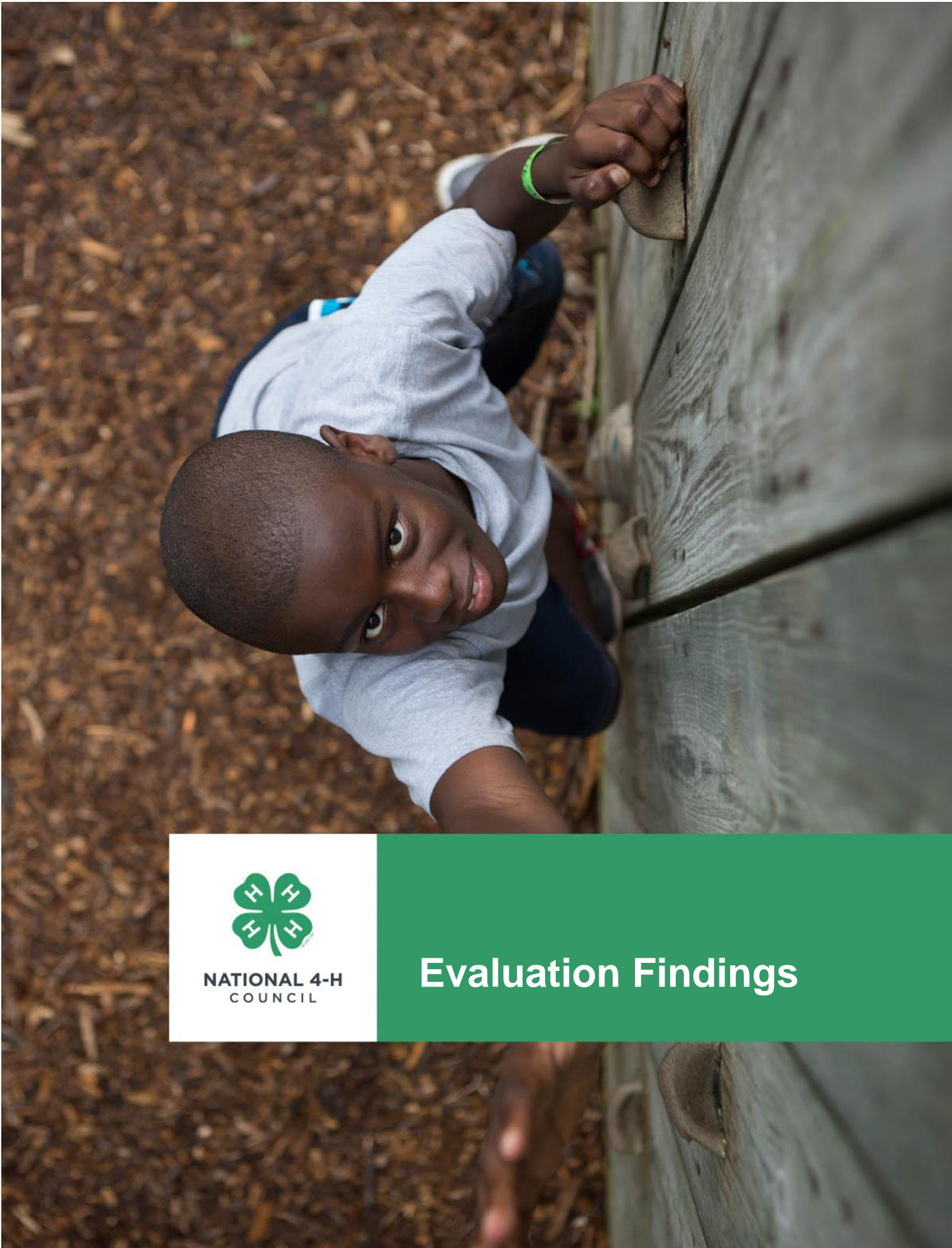


Teen leaders, on average, reported spending two and a half hours per day with screens (watching TV, playing video games, looking at a computer, smartphone, or tablet) for activities not related to school.



Note: Black/African American, Hispanic/Latino, and American Indian/Alaska Native are non-exclusive categories, meaning that a participant who reports multiple races or ethnicities may be counted more than once.

Figure 7. Average days per week with 60 minutes of physical activity and average screen time per day by race and ethnicity from the 2016-2017 Common Measures.



NATIONAL 4-H
COUNCIL

Evaluation Findings

Evaluation findings

Findings from our evaluation study are organized around six broad areas: program structure and leadership, curriculum and adaptations, family and community engagement, partnership and collaborations, teens as teachers, and diversity. As we report the results of this study, we seek to place our findings in the context of the literature, as well as the broader context of PYD, and draw on these evidence-informed guidelines as we make our recommendations for 4-H Healthy Habits Programs. In addition, we strive to recognize the evidence-building challenges inherent in studying locally-adapted programming, and the need to build practice-based evidence,⁴⁴ particularly for culture-centered practices.⁴⁵ Therefore, we have included “Ideas from the field,” i.e., practices that staff or youth reported as positive developments in their programming.

The scope of this study does not allow for a rigorous examination of the effectiveness of these approaches, but they are practitioner and participant-informed ideas that are important to document as emerging evidence in the area of culturally-informed programming. In this way, we hope that the findings of the study help contribute to improving 4-H Healthy Habits programming.

Each section below contains a summary of relevant literature (“Evidence based practices”), findings from our evaluation study, and summary boxes highlighting successes, challenges, and ideas from the field related to each topic area.

Important note: In the figures and data that follow, we focus on the proportion of respondents who *strongly* agreed with a statement. The survey gave the option to strongly disagree, disagree, agree, or strongly agree. Across nearly all questions and all populations (staff, volunteer, and teen), the vast majority of people agreed with the positive statements about 4-H Healthy Habits. In order to show more nuance, we display the proportion who *strongly* agreed, which was typically lower. The variability in this more enthusiastic endorsement is thus the primary focus, but where applicable, we have included the total proportion of those agreeing and strongly agreeing in text in the figure labels, bracketed in parentheses.

Program structure and leadership

EVIDENCE-BASED PRACTICES

4-H Healthy Habits programs serve many different communities, with widely diverse social, economic, and cultural contexts. As such, state and local programs must adapt to the ever-evolving needs and limitations of the population that they serve in order to maintain effectiveness.⁴⁶ Much of the literature in the field of implementation science stresses the importance of a fidelity-adaptation balance, where organizations ensure that their programs both adhere to the original design and evolve when necessary.⁴⁷ Public health research has long observed that changes almost always occur when implementing a program because of the different local contexts within which any local program must function.⁴⁸ Thus, the structure and leaderships of health promotion programs must allow each individual program to make necessary adaptations to the programming. Indeed, research has shown that allowing for adaptations improves program outcomes, as one size does not fit all when dealing with complex social systems.⁴⁹

STATE-LEVEL ORGANIZATION OF 4-H HEALTHY HABITS PROGRAMS

Program structure varied substantially both across and within states. In some states, all counties were served through Walmart Foundation-funded 4-H Healthy Habits programs; in others, only a handful of counties were served. Some states also used combined funding streams in which some counties used Walmart Foundation funding for a portion, but not all of their 4-H Healthy Living programs (i.e., there was an additional funding stream for similar activities). In states where multiple counties had Walmart Foundation-funded 4-H Healthy Habits programs, there were models of both uniform practices throughout the different counties, as well as widely varying, separately-directed programs in each county – or even sub-county – program.

A commonly used approach to deciding where to run 4-H Healthy Habits programming within a state was a mini-grants model. All LGUs who used this model felt that it was an effective approach to program planning. As a state director described it, “Whenever Council notifies of us of a potential or real funding opportunity, I shoot an email out to all the counties, all agents. I sometimes set up a Qualtrics [online survey] with how many kids they think they could

reach. This way, I get an idea of who is interested, what that looks like, before we actually apply. Then based on what we're awarded, we decide on which counties participate. This has made meeting the numbers really easy."

AVENUES FOR PROGRAM DELIVERY

LGUs commonly partnered with schools to provide programming to students during the school day, and several different successful mechanisms for these school partnerships were identified. Many LGUs coupled their 4-H Healthy Living Ambassador (4HHLA) program with their 4HHHY programs, using teens as teachers to deliver content to younger youth. Other approaches include using college students studying nutrition or health behavior, training teachers to implement the lessons, collaborating with programs like SNAP-Ed or EFNEP, and having 4-H Extension staff deliver programming directly.

Those who used teen leaders in their 4HHHY programming tended to have beneficial logistical situations (see the "Ideas from the Field" section below), were able to secure permission for teens to leave during the school day, or worked with nearby afterschool programs. Another popular approach was to run or work through existing camps, including summer camps and winter or spring break camps. For LGUs that used camps, success was had with multiple approaches. For example, one tactic was to use teens to facilitate a 4-H-run or a weeklong, three-hour afternoon camp filled with games and hands-on cooking experiences. Others inserted Extension staff into existing camps, much like the school year partnerships.

Successes

- State-level coordinators asked counties how many youth they could serve, then based their state goals for the grant on those numbers.
- States used a "mini grant" approach where the state operated in a de-centralized way, with each locality proposing and carrying out their own programming.
- Programs leveraged systems-level or proximity-based conveniences, such as upper and lower schools on adjacent campuses, to facilitate using teen leaders to deliver 4HHHY programming.

Challenges

- Teen Leader school schedules can make it difficult to engage them in delivering 4HHHY programming in elementary schools, especially when there are only a few teen leaders in an area.

Ideas from the field²

- Working weekly with a career-readiness class in a local high school. The high school was in session Monday through Thursday, but a local K-8 school was in session five days a week. On Fridays, the high school students took their lessons to the elementary school and delivered the content different classes throughout the day. As an additional benefit, training so many teen leaders at once helped mitigate scheduling issues.
- Using home-schooling youth to lead 4HHHY programming during the school day.
- Working with youth in before-school programs. "One program has Morning Walk and Talk and they use high school students as mentors. Kids can come early and they have healthy food and music and walk and talk."

² These are practice-based approaches that emerged from qualitative data collection that staff or participants identified as promising, based on their experiences.

- Running a soccer camp that both served youth and engaged teen leaders. According to those delivering the program, this approach successfully attracted youth who had not been previously engaged in 4-H, particularly Latinx youth.
- Creating a "tiny market," a small wooden structure on a trailer that was brought to different summer camp sites. Youth at the summer camps were able to learn about the produce, "shop" from the market, and then prepare the food. Teen leaders facilitated these activities.
- At the administrative level, having a leader who is passionate about the program and excellent at communicating with people in the field, helping them to track deadlines, acquire supplies, and identify new ways to engage youth.
- Having a lead county-level person who is a dedicated "outreach" person (i.e., they focus on reaching new audiences), rather than an already overloaded 4-H agent with traditional responsibilities.

Curriculum and adaptations

EVIDENCE-BASED PRACTICES

Programs developed—and tested—with one set of youth may not work with all youth.⁵⁰ The idea of program adaption to the culture of different communities has been linked with greater retention, ownership, and uptake of a program, among other benefits.^{51, 52, 7, 53} Researchers now assume that adaptation is part of any dissemination process,⁵⁴ and 4-H Healthy Habits programs are likely no different with regard to the curricula they use. Adaptation is beneficial when dealing with a diverse group of students, staff, and settings, as it ensures and promotes efficacy and improves outcomes for participants.⁴⁹ New thinking in the implementation field suggests that a focus on "best practices" may no longer be as useful as a focus on "best processes" for implementation. In other words, the effectiveness of a set of materials or fixed protocol may not be as useful in transferring knowledge across diverse communities as a set of processes for how to engage community members with the key constructs, and how to adapt the materials in different settings.⁵⁵ A focus on processes highlights the need to know the "active ingredients" in a particular curriculum that are most linked to successful outcomes.

Kreuter and colleagues outline several different dimensions to be considered for program adaptation:⁵⁶

- **Peripheral strategies** address the "packaging" of materials to tailor to or include members of the target audiences. Considerations can include specific wording or language, colors, images, fonts, and pictures.⁴
- **Evidential strategies** focus on making an issue particularly salient for a certain group through the presentation of facts about how that group is impacted by the topic at hand.
- **Linguistic strategies** make materials or activities available in the native or dominant language of the intended audience. Caution is to be taken that translated materials are not only linguistically appropriate, but also culturally appropriate.⁵⁷
- **Constituent-involving strategies** are less about the adaptation of a specific curriculum and more about a broad approach to working with a community that seeks to involve people from any given community in the implementation of a program. Such approaches can have added value for those involved in actively adapting the materials (e.g., teen leaders).⁵⁸
- **Sociocultural strategies** go beyond the superficial (though still meaningful) elements of adaptation (e.g., peripheral and linguistic adaptations) to ensure that a program reflects the fundamental systems and processes of a culture (i.e., the "deep structure").⁵⁹

CURRICULA USED

4-H Healthy Habits programs used a wide array of curricula in their 4HHHY programs. The curricula most frequently mentioned by staff included:

- Up for the Challenge from the University of Maryland
- Choose Health: Food, Fun, and Fitness (CHFFF) and its companion teen leadership piece Choose Health Action Teens (CHAT) from Cornell University
- Learn, Grow, Eat, & Go from the International Junior Master Gardener Program under Texas A&M AgriLife Extension

- Yoga for Kids from the University of Arkansas

Multiple LGUs also mentioned using *Youth Advocates for Health (YA 4-H!)* from Oregon State University with teen leaders. Additional curricula mentioned with less frequency included:

- 4-H Get Moving from Rutgers University
- Cooking with Care from the University of Georgia
- Kids in the Kitchen from University of Missouri
- Quest for Health from Clemson University
- On the Move to Better Health from North Dakota State University
- Health Rocks! from the University of Nebraska
- 4-H STEPS to a Healthy Teen from Michigan State University
- Teen Cuisine from Virginia Polytechnic Institute and Virginia State University
- Cooking Matters from Share our Strength/No Kid Hungry
- Junior Chef from the University of Illinois
- Vegetable Garden from Purdue University

ADAPTATIONS TO CURRICULUM

Many staff reported that they used these curricula as a starting place and adapted their own lessons from there. Since many of the programs serve the same children year after year, staff noted that they had to keep updating their lessons to keep participants engaged. At some LGUs, extension specialists in nutrition helped with updating the curriculum annually, while at other LGUs, finding new curriculum to engage participants presented a substantial challenge. LGUs who used the mini-grant model often made recommendations about curriculum to staff, but allowed their staff to choose their own materials. Conversely, other LGUs with a more statewide approach used a single curriculum across all programming.

Staff and volunteers noted that participants most enjoyed curricula and programming that involved a high degree of interactivity and cooking or food demonstrations.

ADAPTATIONS FOR CULTURAL RELEVANCE

As described in the opening sections of this paper, youth of color are involved in both 4HHHY and 4HHLA programming. Given the diversity of participants and teen leaders (see Figure 5), curricula and materials may be better received and more effective when adapted to be culturally appropriate to the intended audience.

Staff surveyed were asked whether their programs actively addressed racial and ethnic diversity and whether they considered the racial and ethnic composition of the schools and other organizations with which they partnered: the majority of respondents indicated that they did. Half of the staff stated that they adapted curricula for cultural relevance. Staff most frequently reported that these adaptations involved changing the kinds of foods prepared to be appropriate for the youth involved, including foods commonly used with refugee or ethnic minority communities. For those working in rural communities, a common theme involved only including foods that were readily available in those environments with limited food resources. Finally, a few staff noted that they had translated materials that they use into other languages.

Where adaptations had been made, they were remarked on by the youth. For instance, one teen noted that his program was the first that he had been involved in that introduced Hispanic heroes and musicians as part of the curriculum and that he "love[d] how the program includes my culture in programming."

Successes

- Programs used a variety of evidence-based curricula.
- Staff saw curricula that involved a high level of interactivity and/or food demonstrations as the most engaging for youth.
- Adapting recipes to focus on ingredients and recipes that were in keeping with the culture and accessibility of local populations helped ensure activities were relevant to youths' everyday lives.

Challenges

- Given that programs often served the same youth year after year, it can be a challenge to keep updating lessons (or find new ones) to keep participants engaged.
- Strict fidelity to an evidence-based curriculum can be impractical, given time constraints or a repeat audience. A balance needs to be found between adapting evidence-based curricula and assuring that adaptive implementation is tapping into the “active ingredients” of a curriculum.
- Despite reaching diverse audiences with programming, there does not appear to be a widespread practice or process for cultural adaptation of materials or activities.

Ideas from the field

- Using cooking competition programs (which staff noted were particularly exciting to youth) to expose youth to food safety, food preparation practices, and novel foods.
- Hooking audiences at events (e.g., county and local health fairs) by using activities that were intriguing to both youth participants and adults such as ‘blender bike’ and ‘rethink your drink.’

Family and community engagement

EVIDENCE-BASED PRACTICES

Within youth development programs, interacting with and involving the families of participants can meaningfully benefit both adolescents and their families.⁶ Communication with families allows programs to set positive norms, create a *culturally responsive* program structure, and further connect families to school and the community, and these connections better equip staff to address the needs of the participants and their families.^{3, 4} Opportunities for adolescents to engage with their community also promote feelings of self-worth due to their perceived contributions to their community.² Utilizing community resources (e.g., translators, community volunteers, unique classes) through meaningful partnerships is an effective way to overcome cultural barriers, as this builds trust between participants and community partners and promotes PYD because the program becomes informed by the community.^{22,56}

As Cooperative Extension's *National Framework for Health and Wellness*, as well as decades of obesity prevention research emphasize, consistent messaging about health across the multiple contexts in which youth are embedded, such as school, family, and the broader community, reinforces knowledge of healthy living strategies.⁶⁰ Drawing upon these conclusions, the Institute of Medicine's Committee on Progress in Preventing Childhood Obesity recommends that childhood obesity prevention should start at the family and community levels in order to maximize effectiveness.⁶¹ Thus, efforts to engage both parents and the broader community align with the goals of 4-H Healthy Habits programs.

DIRECT FAMILY ENGAGEMENT

Given the importance of the family context for health behaviors, 4-H Healthy Habits programs aspire to reach families of youth as well. LGUs used a variety of methods to reach families, but a common theme was that this is something that they would like to do more of, and more thoroughly. Widely-used family engagement approaches included newsletters going home with youth or inviting families to a final showcase. Multiple LGUs shared moving stories about parents reporting how exciting program participation has been for their child, particularly in the heavily hands-on, cooking-based programs.

EXTENDED FAMILY REACH

Teen leaders also took the messages and lessons they learned home to their own families. In talking about how he was taking home the lessons he had learned and was teaching, one teen leader relayed "My tío was about 350, 380 [pounds] -- I'd do the lessons at home with my little cousins -- one day he asked for a weight set. He dropped about 100 pounds, he really flipped his behaviors."

Table 4. Family Outcomes for Teens Leaders participating in 4-H Healthy Habits Program programs by race and ethnicity from the 2016-2017 Common Measures

	All	White, non-Hispanic	Black or African American	American Indian or Alaska Native	Hispanic or Latino
Because of participating in the 4-H Healthy Habits Program... ('Agree' or 'Strongly Agree' responses)					
I encourage my family to eat meals together	83%	82%	86%	80%	80%
My family has purchased healthier foods	87%	85%	90%	93%	86%
My family has prepared healthier foods	87%	85%	88%	85%	87%
My family has prepared meals together	84%	82%	91%	76%	84%
I learned skills for buying food on a budget	80%	74%	88%	76%	82%
I taught my family skills for shopping on a budget	66%	58%	80%	65%	67%
I learned cooking skills	87%	82%	95%	76%	89%
I used cooking skills to prepare food at home	87%	85%	92%	80%	84%
I wash my hands frequently	97%	96%	97%	91%	97%

Note: Black or African American, American Indian or Alaska Native, and Hispanic or Latino are non-exclusive categories; thus participants who report more than one race or ethnicity may be counted in more than one category.

The benefits for the families of teen leaders were further demonstrated in the 2016-2017 Common Measures data for teen leaders who participated in 4-H Healthy Habits programming. Overall, more than 80 percent of teen leaders agreed or strongly agreed with all of the statements about both their families' and their own skill development and changes in shopping and cooking behaviors (Table 4), with one exception. Only two-thirds of teen leaders agreed or strongly agreed that they had taught their family skills for buying food on a budget.

With regard to family-focused outcomes, there were notable differences between teen leaders from different racial and ethnic backgrounds (Table 4). African American teen leaders agreed or strongly agreed with nearly all of the skill development and learning behaviors at the highest rates of any group. Native American teen leaders agreed or strongly agreed that their families had purchased healthier foods (93 percent) at the highest rate, but reported that they themselves had learned cooking skills or that their families prepared meals together at the lowest rates. Latinx teens agreed or strongly agreed with most of the statements at higher rates than non-Hispanic white teens. These data do not allow us to determine the causes behind these patterns; further study with more detailed tracking linking participants to programs with particular elements would be necessary to determine the key elements driving these differences. However, these data do demonstrate that teen leaders of color perceive the 4-H Healthy Habits to be particularly beneficial and suggest that this programming should be continued in teen leader programs.

COMMUNITY ENGAGEMENT

In addition to family engagement, many teen leader activities involved community-based work, such as hosting events and staffing booths at larger events. Festivals, recreational events, cooking competitions, and community gardens provided avenues for extended outreach to community members including families whose children were involved in 4-H Healthy Habits and families of those who were not. These families and community members received the lightest "dose" of programming.

THE IMPORTANCE OF FAMILY SUPPORT TO PARTICIPATION AND LEARNING

Family support can be important for recruitment and retention in youth development programs, particularly among youth of color.⁶ Teens surveyed generally agreed that their families were happy that they were 4-H Healthy Living Ambassadors (68 percent strongly agreed; 99 percent at some level of agreement) and that their families had learned about 4-H Healthy Habits due to their participation in the program (40 percent strongly agreed; 93 percent at some level of agreement).

Compared to youth of color, a slightly larger proportion of white teens strongly agreed that their family was happy they were a 4-H Healthy Living Ambassador (65 percent vs 71 percent). The difference was larger when teens reported on whether their families had learned a lot about healthy living through the teen's participation in 4HHLA, where 58 percent of white teens strongly agreed that was the case, compared to 24 percent of non-white teens.

A higher percentage of multilingual teens strongly agreed that their family was happy they were a 4HHLA (77 percent) than their peers who spoke English only (62 percent). However, only about a third of teens in both groups³ strongly agreed that their families had learned a lot about 4-H Healthy Habits through their participation in the program. Again, the vast majority of teens (more than 85 percent) across both groups indicated at least basic agreement with both statements.

Taken together, these findings suggest that the 4-H Healthy Habits programming is helping to inform families of diverse backgrounds about healthy practices and that families of many backgrounds philosophically support their children's participation in these programs.

Successes

- Families were engaged in 4-H Healthy Habits activities in numerous ways, such via newsletters and invitations to showcases and other program events.
- Engagement of family, friends, and the larger community were accomplished through hosting or appearing at community-based events where a broader audience was accessible.
- 4-H Healthy Habits programming around shopping and food preparation was perceived as beneficial by teen leaders of color, particularly African American youth.
- Teen leaders in 4-H Healthy Habits brought information about cooking and healthy living to others, and made efforts to engage their families in healthier practices.

Challenges

- Most programs' family involvement strategies provide a low dose of information or involvement, which can make it harder to alter the family context for health behaviors.
- Few opportunities to actively engage family members (i.e., beyond attending an event) were noted.

³ This comparison was conducted among the 5 LGUs who had at least one multilingual teen participating in data collection.



Ideas from the field

- Using festivals, recreational events, cooking competitions, and community gardens to provide avenues for extended outreach to families and community members.
- Hosting family-centered events where youth and their families learn about 4-H Healthy Habits content regarding physical activity and healthy eating together.
- Hosting family “literacy and wellness” events that address multiple areas where family engagement is beneficial.
- Providing a meal to families to incentivize attendance and demonstrate nutritious foods.
- Planning 4-H Healthy Habits activities at existing school events, such as Back to School night.
- Having parents (and the teen and the 4-H leader) sign a contract committing to supporting their teen’s participation in 4HHLA to help clarify expectations for family support.

Partnerships and collaborations

EVIDENCE-BASED PRACTICES

Forming partnerships with schools, organizations, and individuals in the community not only engages those partners, but also facilitates adolescent growth through the use of varying community partnerships.³ Effective programs for youth provide opportunities for them to utilize new life skills in collaborative action within community partnerships, encouraging and promoting PYD, as they make a valued impact on the world.² Partner organizations can also help to address the unique needs of families by providing services that the program may not have readily available, such as translations for non-English speakers.⁴

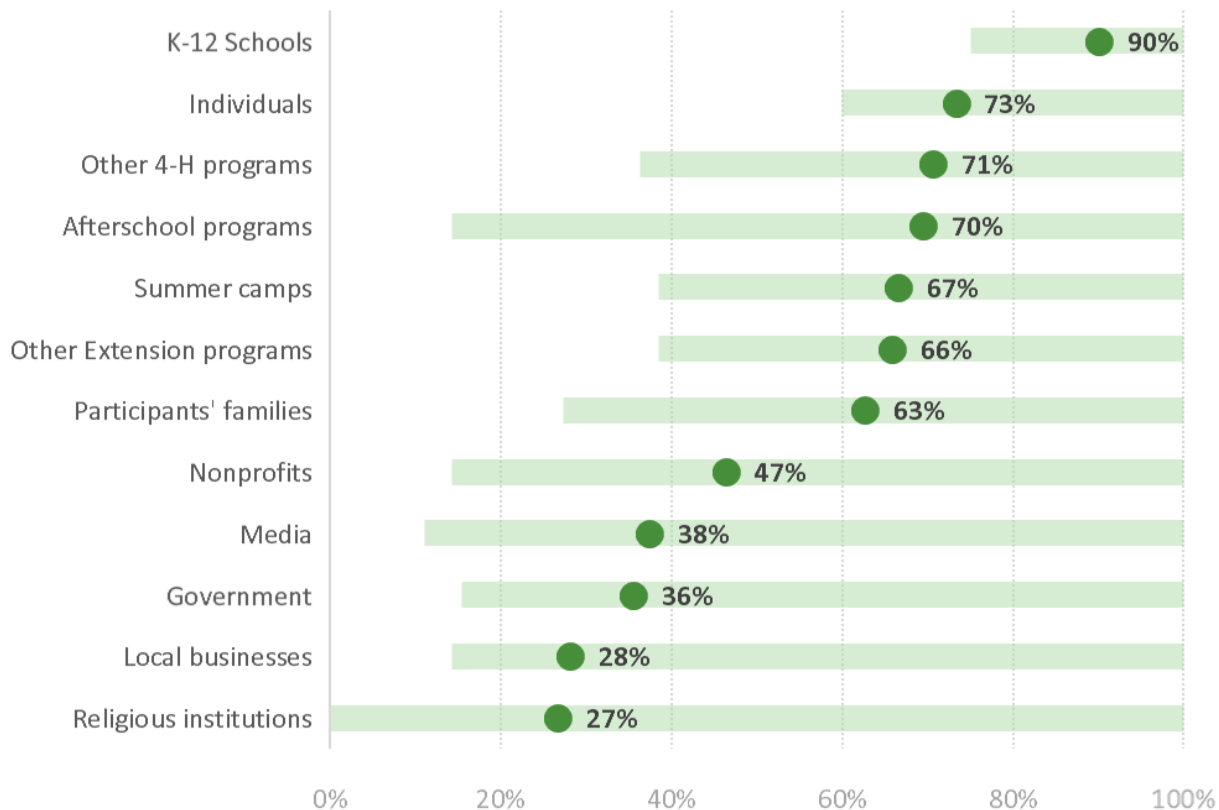
Particularly in the realm of health promotion and obesity prevention, partnerships with schools and afterschool programs can be essential, as schools and afterschool programs have been found to be the most effective settings for health interventions.^{60, 62} Nonprofit partnerships have been shown to be effective for Cooperative Extension programming, as these partnerships provide potential to generate income, expand programming, increase participation, and increase community visibility.⁶³ Partnerships and collaborations can be instrumental in promoting PYD through the provision of vital spaces, important tools, and key opportunities for youth to make an impact in their communities.

PARTNERS

4-H Healthy Habits programs frequently relied on community partnerships to carry out their programming, particularly to reach youth for 4HHHY programs. These partnerships varied depending on program structure, but for many programs, local schools were a vital partner for their work. When asked to rate how important/helpful a number of potential partnerships and collaborations were to their 4-H Healthy Habits programs, the vast majority of surveyed staff (90 percent) labeled partnerships with K-12 schools as very important, the highest percentage among all potential partners.

The perceived importance of school partnerships for 4-H Healthy Habits programming by staff aligns well with the published research literature that suggests that schools are the most effective setting for obesity prevention.⁶⁰ Many staff reported the willingness of local schools to allow them to offer programming during the school day was key to reaching the numbers of youth they did. A common theme among staff at case study LGUs is exemplified by the following quote: "Our success can be directly attributed to the programs being offered in parallel with school curriculum. Going into the schools and working with children ensures a greater participation, plus [it] removes barriers such as athletics, other club activities, transportation, and technology challenges."

Nearly all staff ranked partnerships with K-12 schools as very important. (N=56)



Notes: The light green bars represent the range of responses across 7 LGUs with more than 5 adult respondents. These bars are included to show the variability between LGU programs. This set of questions was only asked of staff.

Figure 8. Important partnerships

Beyond schools, afterschool program sites and summer camps were important partnerships for LGUs where 4-H Healthy Habits programs were located at these sites. Local Boys and Girls Clubs, YMCAs, and recreation departments were commonly mentioned partners. Again, staff emphasized the need for consistency and a focus on the benefits of the program for both the kids and the site location.

The importance of certain partners varied by LGU. For example, although religious institutions were ranked low on average across all respondents, 100 percent of staff in at least one LGU considered them very important while at another LGU, no staff considered them very important (Figure 8).

In both surveys and focus groups, staff noted that collaborations with other 4-H and Cooperative Extension entities (e.g. EFNEP, SNAP-Ed, 4-H alum, state specialists) can be helpful for training, mentorship, and leadership opportunities. However, not all LGUs had extensive collaboration across Extension. At several LGUs, staff noted that FCS and 4-H programs tended to "work in their own silos," which limited opportunities for collaboration.

Participants' families were sometimes mentioned as important partners. Most staff recognized the importance of parent support in helping to provide transportation and to help volunteer in activities outside of the school day. In some 4HHLA programs that functioned like traditional 4-H clubs, parent volunteers helped lead projects.

Several LGUs highlighted particular businesses, such as local grocery and Walmart stores that had supplied ingredients or other in-kind donations as well as hosted or sponsored events. Local medical organizations also helped provide volunteers and monetary support. Other LGUs worked with certain governmental or non-profit organizations such as housing authorities or refugee organizations to reach specific underserved and at-risk populations. Staff highlighted the need for a good working relationship with partners because they often serve as "gatekeepers" to the populations they serve. Churches were particularly important partners in many rural areas as they were central locations that were accessible to youth.

Some interviewees identified partnerships they would like to form but had not yet been able to solidify. For many staff, these were particular school districts that were not open to the programming or where staff turnover had made partnerships difficult to maintain.

Overall, staff were quick to recognize the contribution of many community partners and the importance of community support. As one staff member said, "It makes a huge difference if everyone is on the same page when it comes to the health and well-being that are involved."

CHAMPIONS

Staff also emphasized the importance of maintaining close relationships with both local schools and school districts through consistent communication and working with key "champions" who believe in the program. Speaking to this common theme, one staff member shared that "Collaboration with someone at the school who's a champion for the program and the kids has allowed the program to do well and to build from one class to all the health classes." Another LGU noted that many of their agents worked with school health coordinators to implement programming. Multiple staff emphasized that persistence can be key, recommending that programs remember that building partnerships takes time. School principals were commonly identified as key figures whose support was crucial.

The theme of the importance of key individuals who serve as "champions" for 4-H Healthy Habits programs was echoed in many of the interviews as well as responses to the surveys. One state program leader defined a "rock star champion" as someone for who puts a high value on health in his/her own life. "They've made or are making behavior changes and want to bring others along, [they are] passionate -about working with teens or adolescents...[and] passionate about ideas of well-being for themselves and others." Many staff highlighted specific "champions" who have had an outsized impact on the success of their programs. Overall, nearly three-quarters of staff surveyed rated partnerships with individuals as "very important."

Successes

- 4-H Healthy Habits programs leveraged a wide array of partnerships to enhance their reach. Among the partnerships that a majority of survey respondents deemed vital are (in order of ranked importance): K-12 schools, individual champions, other 4-H programs, afterschool programs, summer camps, other Extension programs, and participants' families.
- Identifying and nurturing relationships with specific, enthusiastic champions within partner organizations was a key to success for many programs.
- Successful partnerships were also often attributed to one well-connected, well-liked CE staff person who knows the local residents well and had useful connections.
- Programs made smart partnerships with places that offered systems-level or proximity-based conveniences (e.g., by taking advantage of co-located lower and upper schools or afterschool programs near to the high school, the need for transportation was minimized).
- Local control of programs means that programs leveraged partnerships that were available and useful to them to maximize reach and engagement.
- School partnerships provide a fairly consistent audience for programming.

Challenges

- Relationship building is a time intensive process, and for budget strapped programs, or those without “champions” in the community, building those relationships can be a real challenge.
- The sustainability of a program can be problematic when a connection rests on a single enthusiastic champion.
- Using relevant adult partners to disseminate the 4HHHY programming does not always work well in partnership with engaging teen leaders since they may not be as available during school hours.

Ideas from the field

- Connecting 4-H staff with professionals who can enrich programming, such as chefs and content experts.
- Pairing teen leaders with Extension nutrition educators (or EFNEP or SNAP-Ed educators outside of 4-H) and college students studying nutrition to teach material in the 4HHHY program can support implementation.
- Utilizing partnerships across 4-H, EFNEP, SNAP, and FCS to enhance training, outreach, and implementation of 4HHHY programming.
- Strategically partnering with organizations who serve audiences, especially typically hard-to-reach audiences (i.e., refugees, migrant farmworker families) that an LGU would like to engage.
- Thinking out-of-the-box to identify partner organizations, like a housing community.

Teens as Teachers

EVIDENCE-BASED PRACTICES

In a study of 14 programs, Lee and Murdock identified 10 key elements of teens as teachers programs: supportive adults, an active recruitment process, a strong curriculum for the teens to use in their teaching, initial training, ongoing training and support, attention to details and good communication, recognition and reward (including compensation), team building, ensuring success experiences, and feedback and evaluation

Within broader PYD goals and strategies, the teens as teachers model has been shown to be effective in cultivating a sense of responsibility, mentee satisfaction, improving academic performance, and facilitating teen leadership skills.⁶⁴⁻⁶⁷ It has also been demonstrated that teens connect well with children and that younger students feel more comfortable asking teenagers than adults for help.⁶⁸ While teenagers are effective teachers, it is essential that they have coaches, staff, and leaders to lean on for support and to focus on the organizational elements of the program.⁶⁸ The amount of training also appears to be important—10 to 30 hours of training before teenagers begin educating youth and ongoing training, such as weekly follow-ups with the teenagers, is common among teens as teachers programs.⁶⁶

From a recruitment standpoint, many youth hear about and are more likely to consider opportunities in which their friends may also participate.⁶⁹ A successful teens as teachers program promotes teen recruitment, as teens share their positive experiences with their friends and encourage them to join the program.⁷⁰ Continued engagement is more likely in settings where youth had supportive adult relationships.⁷¹ Notably, other factors for continued engagement differ by youths' identity. One study found that youth of color reported more barriers for continued engagement in programs considered as having high levels of youth voice.⁷¹ White youth had fewer barriers to continued engagement in these high voice programs, suggesting a need to consider the target audience and different factors that may be influencing their initial or continued participation.

An important component of the teens as teachers programs is youth-adult partnership through which teens are coached in developing their teaching skills (see Weybright et al. for a discussion).⁷² Teen leader mentors from similar ethnic backgrounds as the teen leaders enables youth to greater envision themselves in the mentors place and facilitates academic self-efficacy.^{64, 73} Additionally, teen leaders represent a good opportunity for youth participating

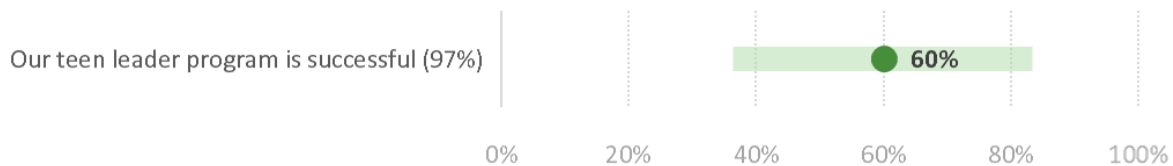
in 4HHY to see people who look like themselves in leadership roles, which lets the youth participants better envision themselves in a teen leader role in the future.

TEEN LEADER ENGAGEMENT

A key asset of 4-H Healthy Habits programs is that they not only disseminate information about healthy behaviors to communities, but they leverage the longstanding tradition of empowering teens to deliver the message. LGUs have devised an array of approaches to organizing the teens that meet their local needs and capacities, from using the format of 4-H clubs to organize their teen leaders or treating 4HHLA programming like an individual project for traditional 4-H members, to organizing teen leaders to engage with summer camps.

No matter the format, the teen leader component of 4-H Healthy Habits programming was prized by many LGUs, both in grantee reports and in our primary data collection. The ability of the teens to connect with others in their communities while also growing as individuals was enthusiastically praised by adults and valued by teens. Opportunities to grow in the program and to teach younger children were the two main reasons cited by teens as to why they wanted to continue as 4-H Healthy Living Ambassadors in the future. Additionally, peer modeling by teen leaders was seen as a key to participant engagement by many of the adults surveyed. The enthusiastic anecdotes in the grantee reports reflect our survey data, in which most staff and volunteers (60 percent) strongly agreed that their teen leader programs were successful; in at least one LGU, over 80 percent of respondents strongly agreed (Figure 9).

Most staff and volunteers strongly agreed that their teen leader programs were successful (N=68)



Notes: The light green bars represent the range of responses across 7 LGUs with more than 5 adult respondents. These bars are included to show the variability between LGU programs.

Figure 9. Recruitment and success in 4HHLA program

TEEN LEADER RECRUITMENT & RETENTION

Although the teens as teachers component received high praise from LGUs, it was not always an easy component to run. Only 19 percent of adult respondents strongly agreed that they had an easy time recruiting teen leaders, and 16 percent had a difficult time. Some LGUs struggled with recruiting enough teens: "We run short in the teen ambassador portion... We want kids who are really committed, so for us quality is more important than quantity." Across 4-H programs as a whole, time commitments, especially in the high school years, can pose a significant challenge for retaining youth in the program.^{53, 74}

Much like there are many paradigms of 4-H Healthy Habits programming, there are many approaches to recruiting teen leaders. Several case study LGUs relied heavily on existing 4-H programs, recruiting nearly exclusively from existing 4-H clubs or among current 4-H ambassadors. However, given that many traditional 4-H clubs are also trying to increase their diversity, one approach to expanding diversity within the program is to recruit teens from other sources.^{53, 75, 76} There were several case study LGUs that did this, leveraging partnerships with community organizations such as the YMCA, Boys & Girls Club, the local Parks & Recreation Department, and a career-readiness class at a local high school.

The majority of teen leaders first heard about 4-H Healthy Living Ambassadors through a 4-H leader (Figure 10). However, while nearly all white teens heard about the program through a 4-H leader or a friend or peer, this was not the case for non-white teens. Non-white teens more frequently heard about the program through teachers or afterschool or summer program staff. Similar trends held among multilingual teens compared to their peers who speak English only. This suggests that recruitment through schools and afterschool and summer program may be important for outreach to youth of color.

The majority of white teens reported hearing about the 4-H Healthy Living Ambassador programs through 4-H leaders, and more non-white teens heard about the program from afterschool or summer program staff, or teachers. (N=78)

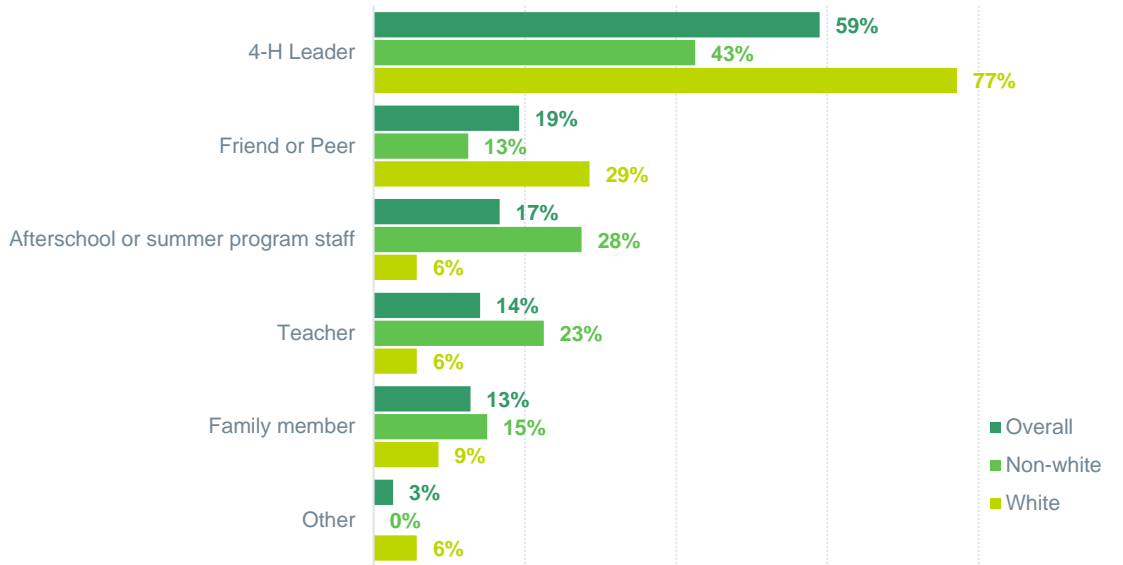


Figure 10. Where teens heard about 4-H Healthy Living Ambassador programs, comparing white and non-white teen leaders

Despite a relatively small proportion of teens reporting that they first heard about the program from friends or peers, nearly all teens reported that they encouraged friends or classmates to join their 4-H Healthy Living Ambassador program (Figure 40). Many 4HHLAs reported that they were motivated to convince their friends to join because of the positive experiences they themselves had ("It's fun"; "they will like it"), but also because they saw value in the program overall ("[it's a] good cause"; because as teens we can make a difference"). From the teens' standpoint, some of the appealing aspects of the program were the incentive of attending the national conference, major events like hiking in a national park, helping others, and "the idea of teenagers and adults working together as equals."

APPLICATIONS

In conjunction with recruitment, some case study LGUs had an application process for their teen leader program. These applications were typically described as very simple, designed primarily just to ensure that teens had some level of commitment to following through with the program. One staff member described her process as "Three questions -- What teaching experience do you have, what do you hope to get out of this, what can you commit to? It's really informal. I ask questions because that second step and follow through says a lot about communication. Everyone [who fills out the application] makes it through." Only one state described their process as something more rigorous, with a competitive application process. Notably, this was a state where the 4HHLA program was tightly aligned with 4-H programming generally, which has another ambassador system. While research on teens as teachers programs suggest that an application process can help ensure interest and commitment on the part of teen leaders and promote the development of professionalism, there is not substantial evidence that a more rigorous application process leads to differences in outcomes.^{66, 68, 70}

TEEN LEADER TRAINING

Training of teen leaders happened both at the local level and statewide level, depending on the LGU. Several states used a model of an intensive initial training, ranging from three hours, to a day, to a multi-day event. One case study LGU trained staff (n=10), volunteers (n=45), and teens (n=116) together in a two-day 4-H Healthy Habits training that covered four different 4-H Healthy Habits curricula. Another LGU completed an initial training via webinar, then required at least 10 hours of skill building face to face with an agent. Other LGUs used an approach of ongoing training, particularly when they were working in local, closely-advised groups.

Case study LGUs varied in their attention to presentation and leadership skills versus focusing primarily on the content to be disseminated. LGUs described experiences training teen leaders as essential and rewarding, but also intensive, "You need adult partners to work with them and scaffold their experience, you need a level of trust, to first share then transfer control of programs to teens can be asking a lot of adults—it's a big investment, but a big payoff." Also speaking about the intensive investments that trainings, particularly larger group training events, another LGU commented, "I wish we had more time, money, resources, transportation to bring the teens together for activities that are fun and challenging for them. That's what keeps them coming back. To keep them, you need to find new and exciting ways to keep them motivated." Many LGUs spoke about how compelling the unifying events were, and in the focus groups, youth repeatedly expressed how much they enjoyed these events.

INCENTIVES AND COMPENSATION FOR TEEN LEADERS

"Recognition and reward" is one of the 10 elements of successful teens as teachers programs.⁶⁶ For many case study LGUs, opportunities to attend certain big-ticket events, like the National Youth Summit for Healthy Living or a camping trip, were incentives.⁴ Smaller incentives were offered to all participants at some LGUs, like an official t-shirt or the chance to earn a Fitbit if they volunteer a certain number of times. Other LGUs took it a step further and paid each participating teen for their time. As one LGU described their approach, "We think it's important to pay teens a stipend – though counties may do this stipend differently. Some may do as cash. Some may pay one time. Some do gift cards. We pay more than nominal stipend – it approximates an hourly wage." At another LGU, "At the completion of the program all teens received a \$125.00 stipend and a community service credit letter for hours of service to the program." One staff member reflected on the utility of paying their teen leaders, "At the beginning for the teen – that is a carrot. That's really helpful too when I'm talking to teens from at-risk communities and tell them that they can make money, that's really a motivator."

COMMUNICATION WITH TEEN LEADERS

A crucial part of running an effective 4HHLA program is communicating with teen leaders in a timely and reliable way. LGUs developed multiple methods for connecting with teens, whether they were spread across the state or met fairly regularly. Across staff surveyed, in-person was the most frequently cited form of communication (35 percent), followed by email (19 percent), phone calls (19 percent), texting (13 percent), and Facebook (13 percent). At least one case study LGU uses a texting app called Remind to send group texts. Approaches to virtual meetings included Zoom and Google video chats and a Slack channel. Staff at case study LGUs who convened their teens regularly (at least once a month), whether through in-person meetings or virtually, reported that these regular meetings helped to build a sense of community among their teen leaders.

POSITIVE YOUTH DEVELOPMENT OUTCOMES FOR TEEN LEADERS

Nearly all of the teen leaders engaged through surveys and focus groups through our primary data collection viewed the program in a highly positive light. They highlighted the ways in which the program helped develop their public speaking skills, leadership skills, teaching skills, and their ability to set and achieve goals. Many teens recounted their growth in these areas through the program as they had opportunities to practice these skills in a supportive environment. Teens most frequently observed growth in these areas when they were part of a program that allowed them to be directly involved in the delivery of 4HHY programming to youth participants. Development in these areas is one of the key goals of PYD, as expressed through the Competence and Confidence goals in the 6 C's framework and need for skill-building opportunities in the 'Big Three' and eight essential elements framework of youth development.¹⁻³

These findings from our primary data collection mirror those captured in the 2016-2017 Common Measures. Teen leaders were asked to rate their ability on a variety of leadership skills, with the options of 'no ability,' 'some ability,' 'good ability,' and 'excellent ability,' both before and after the program in a retrospective pre-post format. Using these data, we calculated change scores for participants.⁵

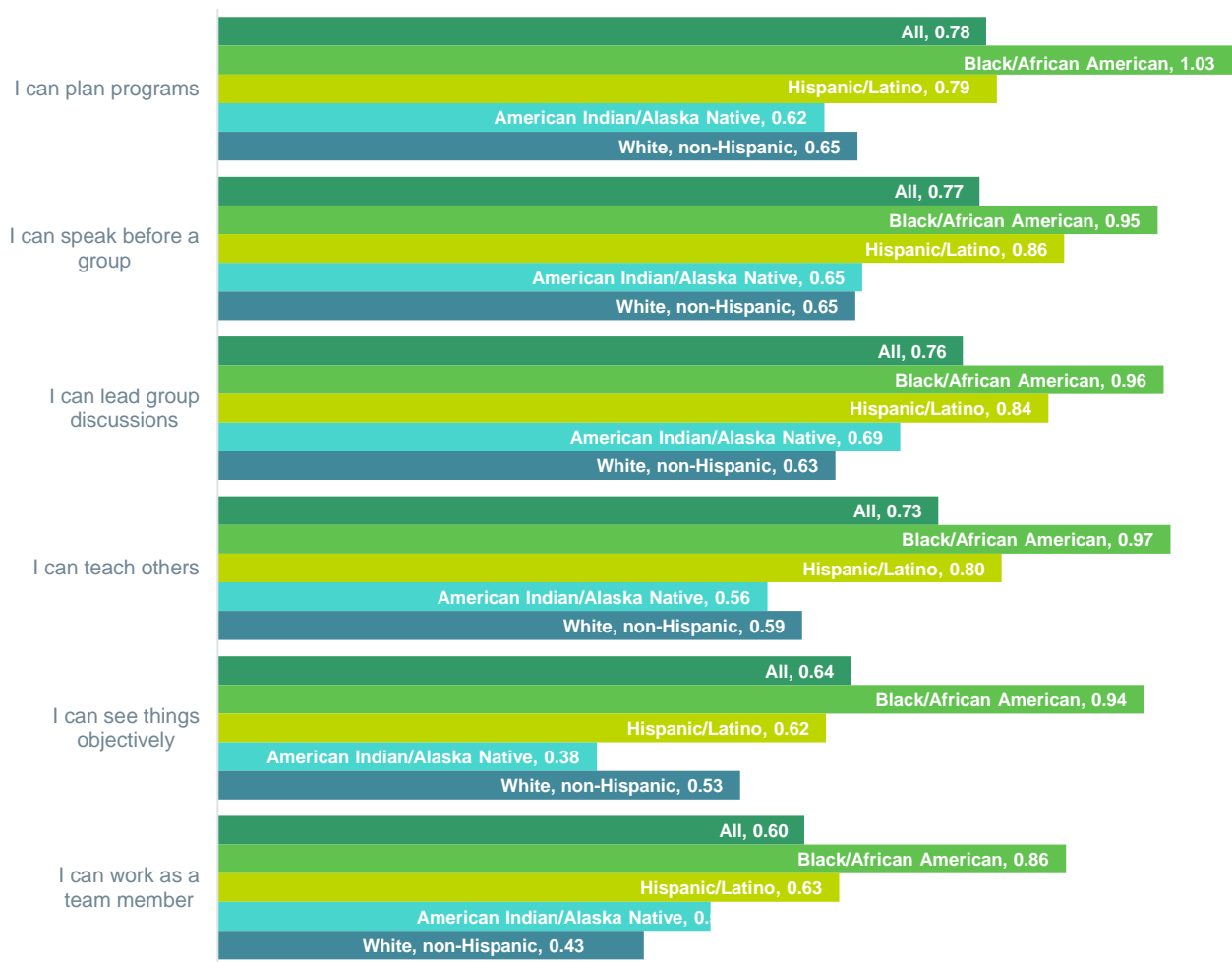
These scores show that on average, teen leaders reported improvements across all categories of leadership and communication skills (Figure 11). The highest average change scores occurred among African American teen

⁴ One LGU noted that all ambassadors are required to attend the Summit and that there is a \$350 fee to be an ambassador which covers their travel and some clothing.

⁵ Change scores capture the degree to which participants reported improvements (positive scores) or declines (negative scores) in these areas. A score of one represents the movement from one ability category to another (e.g., no ability to some ability or good ability to excellent ability).

leaders, followed by Latinx teens. Native American teens and non-Hispanic White teens had lower average change scores, but still showed improvement on average across all areas. Teens on average reported the greatest improvements in their ability to plan programs, speak in front of groups, lead group discussions, and teach others. Both Native American and Latinx teens reported the greatest improvements on average in their abilities to speak in front of groups and lead discussions.

On average, teen leaders reported improvements with their leadership skills, with the highest average change scores occurring among Black or African American teens, followed by Hispanic or Latino teens.



Notes: Change scores were calculated by subtracting the coded value of the pre-score from the coded value of the post-score. Change scores were only calculated for teen leaders who completed both the pre- and post- questions. Black/African American, Hispanic/Latino, and American Indian/Alaska Native are non-exclusive categories, meaning that a participant who reports multiple races or ethnicities may be counted more than once.

Figure 11. Change scores in leadership and communication skills among teen leaders by race and ethnicity from the 2016-2017 Common Measures among 4-H Healthy Habits programs

Table 5 shows the percentages of teen leaders who rated their abilities as 'good' or 'excellent' before and after the program. Non-Hispanic White teens rated their skills as good or excellent at a higher percentage than other groups at the beginning of the program, which contributes to the relatively small change scores seen above.

Table 5. Teen ratings of their leadership skills before and after the program by race and ethnicity from the 2016-2017 Common Measures

	All	Black or African American	Hispanic or Latino	American Indian or Alaska Native	White, non-Hispanic
Before the program... ('Good Ability' or 'Excellent Ability' responses)					
I can work as a team member	71%	60%	66%	60%	79%
I can teach others	61%	55%	53%	53%	67%
I can see things objectively	61%	54%	55%	64%	66%
I can speak before a group	51%	51%	43%	38%	54%
I can lead group discussion	48%	49%	35%	38%	54%
I can plan programs	50%	48%	41%	40%	55%
After the program... ('Good Ability' or 'Excellent Ability' responses)					
I can work as a team member	92%	91%	89%	83%	93%
I can teach others	88%	92%	82%	77%	88%
I can see things objectively	87%	90%	80%	85%	87%
I can speak before a group	82%	89%	73%	71%	82%
I can lead group discussion	81%	86%	74%	75%	81%
I can plan programs	80%	88%	69%	65%	81%

Notes: Black/African American, Hispanic/Latino, and American Indian/Alaska Native are non-exclusive categories, meaning that a participant who reports multiple races or ethnicities may be counted more than once.

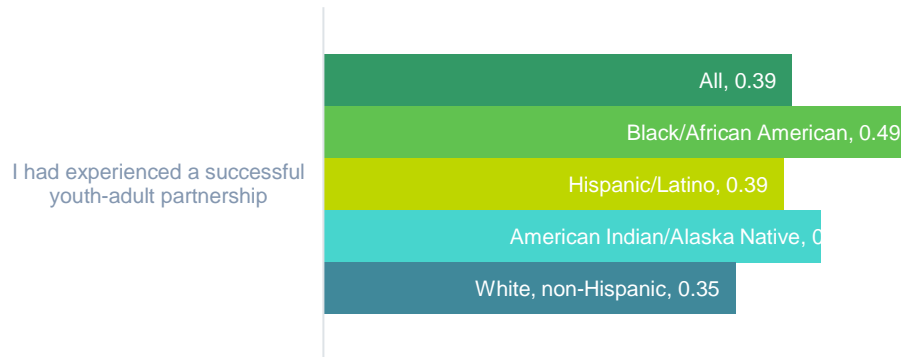
Another key element of PYD highlighted across all three major frameworks is the opportunity to form meaningful youth-adult partnerships.¹⁻³ Prior research suggests that teens as teachers programs can be highly successful in these areas,^{65, 72} and indeed many teens highlighted supportive adult relationships, particularly with Extension staff, as one of their favorite parts of the program in focus groups and surveys. This again was mirrored in data from the 2016-2017 Common Measures. While just over three-quarters (76 percent) of teen leaders reported experiencing a successful youth-adult partnership before the program, nearly all (94 percent) teen leaders reported that they had experienced one after the program.

Table 6. Teen experiences of successful youth adult partnerships by race and ethnicity from the 2016-2017 Common Measures

	All	Black or African American	Hispanic or Latino	American Indian or Alaska Native	White, non-Hispanic
I had experienced a successful youth-adult partnership ('Agree' or 'Strongly Agree' responses)					
Before the program	76%	84%	68%	55%	77%
After the program	94%	96%	91%	81%	95%

Notes: Black/African American, Hispanic/Latino, and American Indian/Alaska Native are non-exclusive categories, meaning that a participant who reports multiple races or ethnicities may be counted more than once.

Examining the average change scores for teen leaders in this area shows that African American teens once again showed the greatest change on average in this area. Native American teens showed the second largest change. At the beginning of the program, just over half of Native American teen leaders agreed or strongly agreed that they had experience a successful youth adult partnership before the program, compared to over 80 percent after the program.



Notes: Change scores were calculated by subtracting the coded value of the pre-score from the coded value of the post-score. Change scores were only calculated for teen leaders who completed both the pre- and post- questions. Black/African American, Hispanic/Latino, and American Indian/Alaska Native are non-exclusive categories, meaning that a participant who reports multiple races or ethnicities may be counted more than once.

Figure 12. Change scores in youth-adult partnership experience among teen leaders by race and ethnicity from the 2016-2017 Common Measures among 4-H Healthy Habits programs

Taken together, these results suggest that 4HHLA programs promote PYD through skill-building and the fostering of supportive youth-adult partnerships. Based both on published research and qualitative findings in focus groups, programs with a robust teens as teachers component that directly involved teens in the delivery of 4HHHY programming to younger children supported the development of confidence and competence in teen's own leadership abilities.

Successes

- Teen leaders showed marked improvement in their own confidence and competence in their leadership abilities. African American teens showed the greatest improvement in these areas, and Latinx and Native American youth showed the most improvement in public speaking and discussion skills.
- Nearly all teens reported experiencing a successful youth adult partnership by the end of the program.
- Engaging teens to national events allows them to see the big picture of 4-H Healthy Living programs nationwide and further develops their leadership skills.
- From the teens' standpoint, some of the appealing aspects of the program were the incentive of attending the national conference, major events like hiking in a national park, helping others, and "the idea of teenagers and adults working together as equals."
- Reaching out to teens who are not already engaged in 4-H programs was noted as helpful in places where 4-H teens are often overcommitted.

Challenges

- The many time commitments of teens can prevent them from participating in 4HHLA programs.
- Implementing an effective teens as teachers program requires intensive investment on the part of adult staff and volunteers.

Ideas from the field

- Having a broad range of activities helps keep teens interested. Some teens love gardening and farming activities and others do not, but the kids who do not enjoy gardening may love cooking.
- Being willing to actively reach out and communicate with the teens. Developing a rapport with teens and reaching out to them as individuals helps keep teens engaged.
- Using community connections and being intentional about reaching out to youth who are not already engaged in 4-H. "Our coordinator targeted kids for recruitment from her connections with families, etc. in the community. Most have never been from 4-H; we offer the opportunity to kids in 4-H clubs, but we're really looking for kids who have never been involved."
- Implementing a simple application as a screener to make sure that the prospective teen leader can handle basic communication and follow-through.
- Remembering to make room for fun. Staff reported that a mix of leadership development activities and "just for fun" activities helped recruit and retain teen leaders. Having a mix of farming, nutrition, and outdoor adventure opportunities helped one program retain a high number of kids both throughout the program year and between program years.
- Persistence helps! Even if a teen drops off the radar for a while, continue to reach out – they often come back.
- Providing opportunities for teens to connect with one another, as in a state-wide training. This helps give teens a sense of bigger purpose and community.
- Using technology to keep in touch with teens, whether via Slack channels or video meetings, helps teen leaders stay connected, particularly in programs where teens were spread across a large area.
- Having 'capstone activities,' such as a hiking trip in a national park at one LGU, can provide an incentive, an opportunity for teens to set and meet goals, and a team-building activity while promoting physical activity. Staff at this particular LGU felt this activity was an essential ingredient of their program.

Diversity

EVIDENCE-BASED PRACTICES

Research suggests that "color-blind" approaches can be detrimental,⁹ and scholars have called for research that better supports an understanding of how PYD programs, including 4-H, benefit youth of color.¹⁹ Race/ethnicity can play a role in programs focused on PYD by impacting the "degree of individual-context fit and of youth perceptions of trustworthiness of settings and individuals."¹⁹

Furthermore, youth of color are broadly underrepresented in many youth development programs in the U.S., including 4-H programs.^{1, 53, 76} Researchers and practitioners who have studied this issue specifically in the context of 4-H suggest that this is in part due to perceptions that 4-H is for "white, rural youth,"⁷⁴ lack of information about 4-H in minority communities, lack of parent involvement, and lack of diverse staff to serve as role models for youth of color.^{22, 53, 75-78} Suggestions for how to overcome these barriers include more engagement with community leaders to build trust, reductions of costs associated with participating in 4-H programming, strategic scheduling of programming to align with parental work schedules, the provision of transportation or location of activities where public transit is available, and further outreach directly to teens through social media.⁷⁸

This research in the 4-H context parallels broader recommendations for youth development programs for youth of color. Multiple studies have stressed the importance of creating programs that are relevant to youth from diverse backgrounds, that have flexible participation requirements, that address the economic needs of participants, and that respect the ethnicity and culture of all youth involved in order to recruit and retain youth of color.^{4, 6-8} To this end, research suggests that multicultural approaches that recognize and celebrate the differences between youth from different backgrounds while emphasizing common ground are more effective for supporting diverse youth than 'color-blind' or universalist approaches that do not acknowledge differences and may lead to isolation or marginalization of youth of color.⁸⁻¹¹

ARTICULATED EXPECTATIONS FOR EMPHASIS ON RACIAL AND ETHNIC DIVERSITY

The annual requests for applications (RFA) from National 4-H Council sets the expectations for LGUs. In reviewing the last three RFAs⁶ we noted language changes related to serving racially diverse audiences.

- In the 2015, the RFA indicated that funds would be dedicated for seven minority-serving LGUs (i.e., 1890 LGUs or 1862/1890 or 1890/1890 collaborations). Native American, African American, and Latinx youth were specifically enumerated as populations of interest in the requirements portion of the RFA.⁷⁹ The year that followed (the 2015-2016 program year) saw the highest proportional representation of youth of color who responded to Common Measures surveys, with African American youth representing 33 percent of teen leaders, Latinx youth representing 21 percent of teen leaders, and Native American youth representing two percent of teen leaders.
- In the 2016 RFA, there were no longer dedicated funds for applicants from 1890 LGUs, or 1862/1890 and 1862/1994 collaborations, but it was noted that they may be given preference.¹² Additional funding in the form of "Native American add-on grants," i.e., and additional \$10,000 for every 250 Native youth reached was available to up to six LGUs. RFA requirements language again included, "Targeted populations include ethnic minorities such as African-American, Hispanic or Native American populations." In the 2016-2017 program year, the proportion of teens leaders who were African American declined from 33 to 26 percent, the proportion of Native American youth remained unchanged at two percent, and the proportion of Latinx youth increased slightly from 21 to 23 percent, according to responses to Common Measures surveys.⁷
- The 2017 RFA mentioned neither Native American add-on grants nor priority for minority-serving institutions.¹² Additionally, no specific target populations were listed in the requirements portion of the RFA.

Minority-serving institutions⁸ serve the greatest proportions of teen leaders of color relative to their size. According to 2016-2017 Common Measures data, while 1890 LGUs accounted for 20 percent of teen leaders overall, they represented 60 percent of all African American teen leaders. Similarly, LGUs that are Hispanic-serving institutions represented 14 percent of all teen leaders, but accounted for 47 percent of Latinx teen leaders. Involvement of minority-serving institutions plays a large part in the ability of the 4-H Healthy Habits program to involve youth of color in teen leader programs.

DIVERSITY AS A CONSCIOUS GOAL

Given the language in RFAs, as well as the emphasis on race and ethnicity in the white paper RFP, we set out to learn more about what LGUs were doing to bring 4-H Healthy Habits programming into communities of color. Among staff surveyed, two-thirds (68 percent) reported that they actively addressed racial or ethnic diversity in their program.

The predominant explanation for how they achieved this was by locating in diverse communities and being welcoming to all, which included a substantial proportion of youth of color by virtue of local demographics. In

⁶ These were the three RFAs that we were able to access; earlier ones were not available.

⁷ The absolute number of teen leaders responding to Common Measures surveys fell between the 2016-2017 program years from 1,811 to 1,437, with the largest absolute decreases occurring among African American youth (489 to 288).

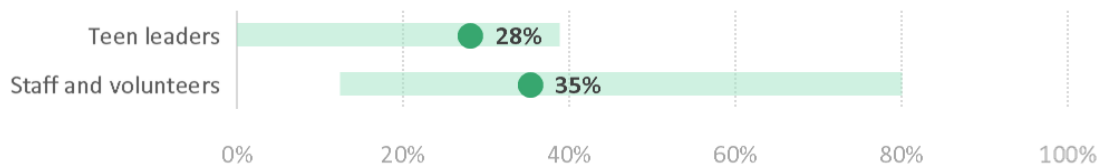
⁸ Minority-serving institutions (MSIs) are defined through the Higher Education Act as historically black colleges or universities (HBCUs), Hispanic-serving institutions (HSIs), tribal colleges or universities (TCUs), Alaska Native-serving institutions or Native Hawaiian-serving institutions, predominantly black institutions, Asian American and Native American Pacific Islander-serving institutions, and Native American-serving nontribal institutions. These institutions are defined based on the share of the enrolled undergraduate population that are minority students in specific racial and ethnic categories. Further information can be found on the U.S. Department of Education Office for Civil Rights website (<https://www2.ed.gov/about/offices/list/ocr/edlite-minorityinst.html>). A current list of HSIs was obtained from the Hispanic Association of Colleges and Universities (<https://www.hacu.net/>). A list of HBCUs and TCUs was obtained from the National Center for Education Statistics' College Navigator (<https://nces.ed.gov/COLLEGENAVIGATOR/>).

addition to community demographics, another theme that emerged was intentional partnering with organizations (e.g., churches, after school program, schools in specific neighborhoods) who served students of color. When asked about this directly, the majority (60 percent) of staff indicated that their program considers the racial or ethnic composition of partner organizations (Figure 39).

While an intentional focus on racial diversity was a theme for many, qualitative data also revealed that some programs expressly did not focus on intentionally reaching youth of color, taking a “color-blind” approach to their programming. This statement was characteristic of this group of programs: "In my position I am not looking at 'color' of any youth. My programming is aimed at YOUTH not 'of color.'" A number of staff felt that since the content of 4-H Healthy Habits curriculum was relevant to all youth, a particular focus on youth of color was not necessary.

Across most LGUs, both adults and teens felt that their programs had room for growth in terms of reaching youth from diverse backgrounds. Over two-thirds of staff (68 percent) and nearly two-thirds of teen leaders (62 percent) surveyed agreed on some level that their program could do more to include youth of color. About a third of both adults (35 percent) and teens (28 percent) strongly agreed with that statement (Figure 13).

Overall, a higher share of staff and volunteers strongly agreed that their programs could be doing more to include youth of color than teen leaders. (N= 65; N=71)



Note: The light green bars represent the range of responses across 7 LGUs with more than 5 adult respondents and 5 LGUs with more than 5 teen respondents. These bars are included to show the variability between LGU programs.

Figure 13. Adult and teen attitudes about whether their program could do more to include youth of color

Higher proportions of youth of color (Figure 14) and multilingual teens (Figure 15) strongly agreed that their programs could do more to reach youth of color when compared to their white or only English-speaking peers. Overall, about three-quarters of youth of color (72 percent) and multilingual teens (77 percent) agreed that their programs could be doing more, compared to 53 percent of white teens and 58 percent of teens who speak English only. These discrepancies suggest that there is continued need for improvement of programs in the area of diversity and inclusion.

Among teens surveyed, a higher percentage of non-white teens **strongly agreed** that their 4-H Healthy Habits program could be doing more to include youth of color. (N=68)

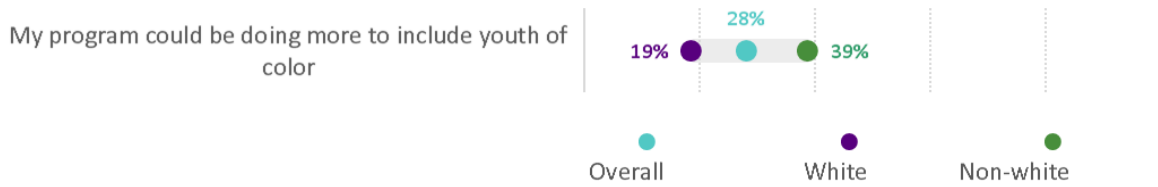
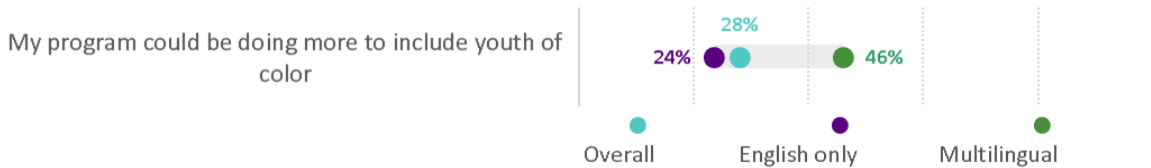


Figure 14. Teen attitudes about whether their program could do more to include youth of color, comparing non-white and white teen leaders

Similarly, a higher percentage of multilingual teens **strongly agreed** that their 4-H Healthy Habits program could be doing more to include youth of color. (N=68)



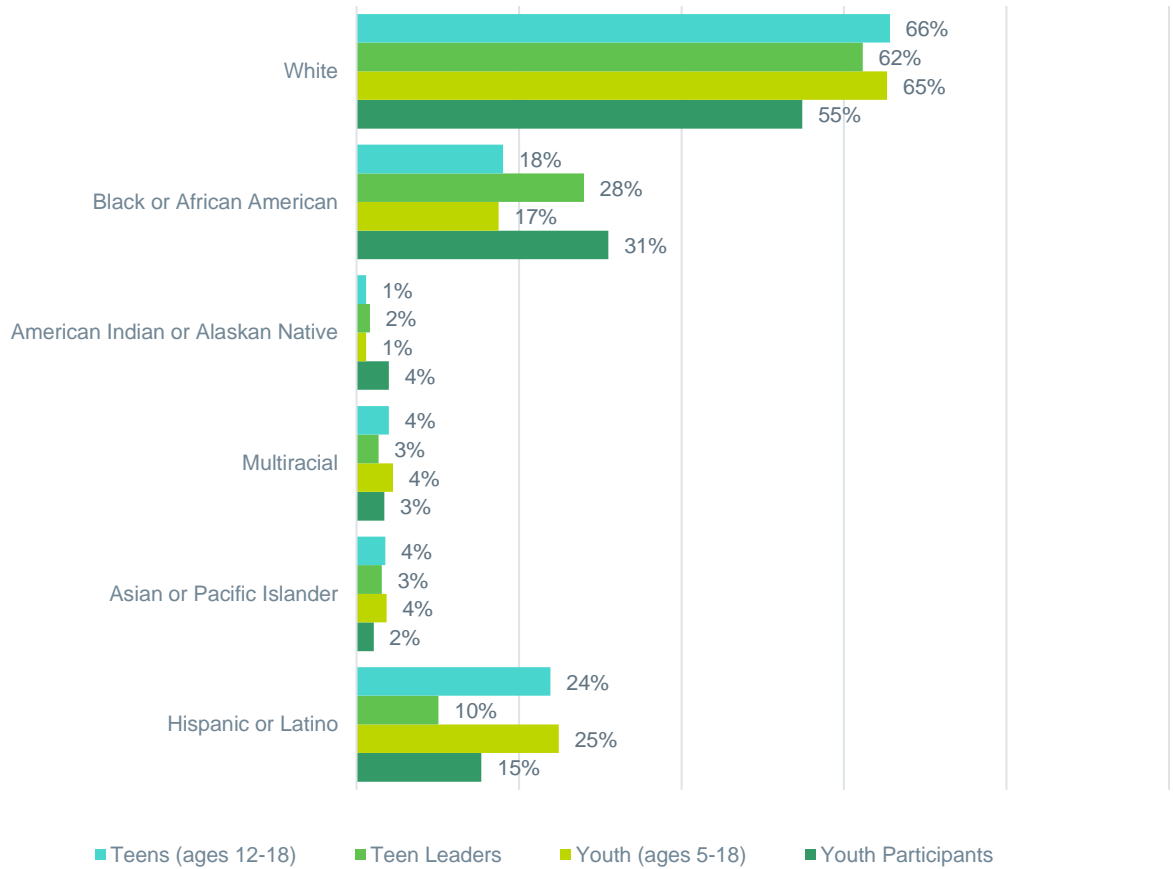
Note: LGUs with no multilingual teen respondents were excluded from this comparison. This was done to control for the possibility that programs with multilingual teens might have a substantially different format from other programs. There were 5 LGUs with at least one multilingual teen, and 6 LGUS without any multilingual respondents.

Figure 15. Teen attitudes about whether their 4-H Healthy Habits program could do more to include youth of color, comparing non-white and white teen leaders, comparing multilingual teen leaders to those who only speak English

DIVERSITY OF TEEN LEADERS AND YOUTH PARTICIPANTS

Using data from grantee reports, we found that across 4-H Healthy Habits programs nationwide, teen leaders were generally less diverse than 4HHHY participants involved in the programs (Figure 16). This is likely due to the structure of the program in many states. The 4HHHY program often partners with local schools, after-school, and summer programs to serve entire classes where the children enrolled tend to mirror the demographics of the local community. Conversely, teen leaders reflect a sub-population of students who must be recruited, trained, and able (in many cases) to volunteer their time and secure their own transportation. Also, in many places the 4HHLA program drew on existing 4-H clubs, which are historically largely white.^{53, 74, 76} Compared to the overall youth population of the states with funded 4-H Healthy Habits programs, both African-American and Native American are over-represented as participants and teen leaders. However, Latinx youth remain greatly underrepresented as both participants and as teen leaders compared to their prevalence in the population of the states with 4-H Healthy Habits programs.

Overall, youth participants were generally more diverse than the teen leaders.



Notes: Race and ethnicity were reported separately in program report, and these data were derived from two different questions. As such, it is possible for a participant or teen leader to be both Hispanic or Latino and any other racial or ethnic identity. Population comparisons are for the states with funded 4-H Healthy Habits programs in 2016-2017. These data were drawn from the 2010 Census Summary File 1, Tables PCT12A-O

Figure 16. Overall Racial and Ethnic Composition of Youth Participants and Teen Leaders compared to the overall youth population in states with 4-H Healthy Habits programs, 2016-2017 Program Report Data and 2010 Census Data

PARTICIPATION AMONG AFRICAN AMERICAN YOUTH

Across all LGUs participating in the Walmart Foundation 4-H Healthy Habits sub-grant program, African American youth were the best represented among youth of color in both 4HHHY and 4HHLA programming. Among all LGUs, about 31 percent of participants in 4HHHY were black, compared to 28 percent of teen leaders. A majority (54 percent) of 4HHHY participants at one LGU were black. In the 11 states that we considered for case studies, African American youth were better represented in the 4HHLA programming than in the 4HHHY programming at four LGUs (36 percent) (Figure 17).

Among selected case study sites, the total share of teen leaders who identified as Black or African American ranged from two to 43 percent.

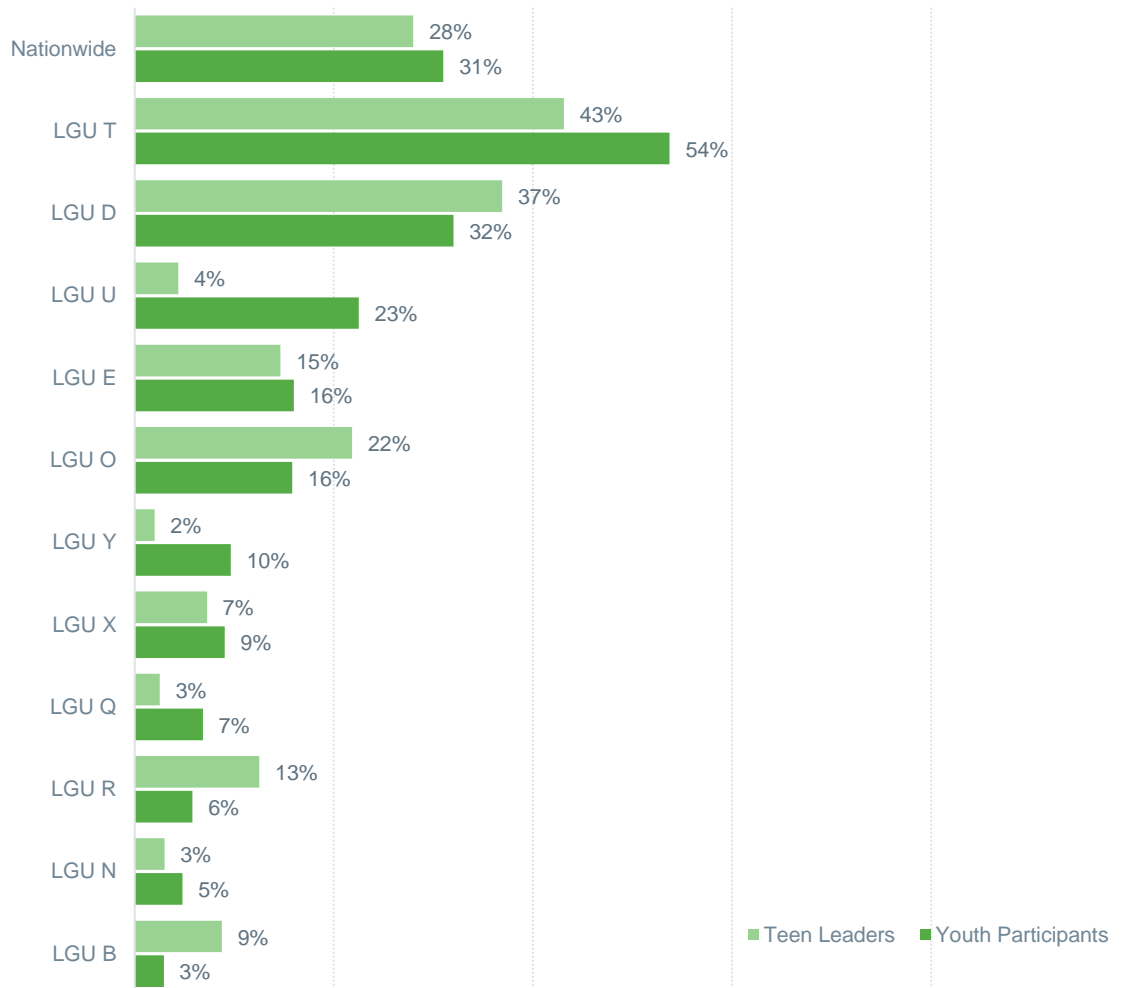
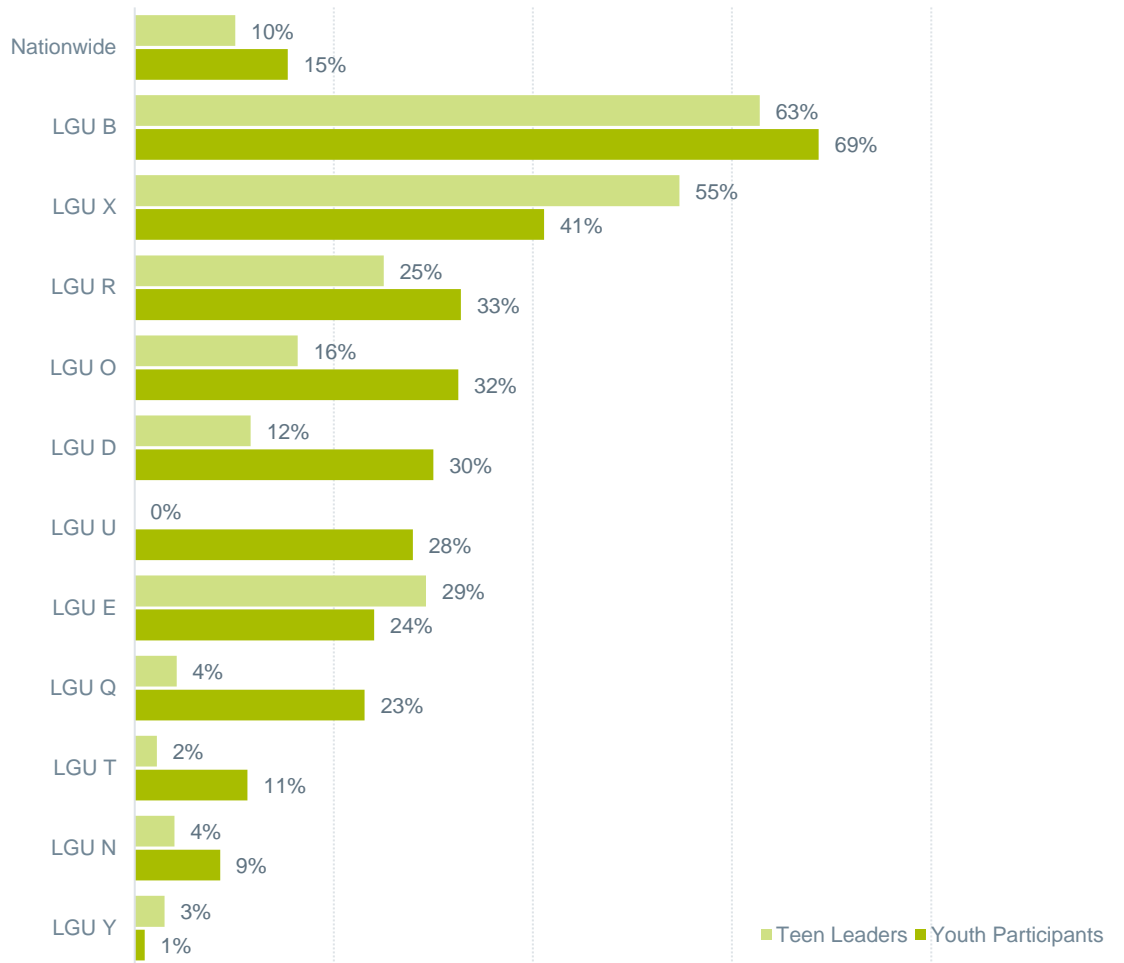


Figure 17. Share of Teen Leaders who were Black or African American at Selected Case Study Sites, 2016-2017 Program Report

PARTICIPATION AMONG LATINX YOUTH

Although Latinx youth were less well-represented across all participating LGUs than black youth, they were important constituents in the LGUs selected for the case studies. Across LGUs, relative participation for Latinx youth in 4HHLA and 4HHHY programs varied (Figure 18). At one LGU, Latinx youth made up nearly two-thirds of both teen leaders and 4HHHY youth. Over half (55 percent) of teen leaders at another LGU identified as Latinx, serving a 4HHHY youth population that was 41 percent Latinx. Among the youth served by a third LGU, over a quarter were Latinx, but that LGU lacked any Latinx representation among teen leaders.

Among selected case study sites, the total share of teen leaders who identified as Hispanic or Latino ranged from zero to 63 percent.



Notes:

Figure 18. Share of Teen Leaders who were Hispanic or Latino at Selected Case Study Sites, 2016-2017 Program Report Data

PARTICIPATION AMONG NATIVE AMERICAN YOUTH

The RFPs for these sub-grants have offered additional funding for programs to reach Native American youth. Across all participating LGUs, Native American youth represent four percent of 4HHHY participants and two percent of teen leaders (Figure 19). As highlighted in the **Growing reach among youth participants** section, due to this investment, Native American youth have been one of the fastest growing segments of the 4HHHY participant population, more than tripling in the last three program years. A handful of LGUs, however, are serving relatively large proportions of Native American youth. As with Latinx youth, the profiles of these LGUs are markedly different. LGU Q serves the highest proportion of Native American youth – 22 percent of 4HHHY youth are Native American. A still large, though smaller (16 percent), proportion of teen leaders are also of Native American descent. LGU N serves a similarly large proportion of 4HHHY youth (18 percent), however only three percent of the teen leaders are Native American. LGU B serves roughly equal proportions of Native American youth through both 4HHHY and 4HHLA programming (7 percent). Again, one case study LGU attributed their success in serving Native American youth to those being the "youth who are in the classroom, in 4-H, etc.," just by virtue of the local population.

Program adaptations that have been created around serving Native communities include developing a cooking school curriculum on a reservation and working with elders to shape the focus and plan for the program. With regards to working directly with tribal members, one LGU noted, "it was important for them to talk about their own culture and their own community," which included covering important issues in the community like type 2 diabetes.

Among selected case study sites, the total share of teen leaders who identified as American Indian or Alaska Native ranged from zero to 16 percent.

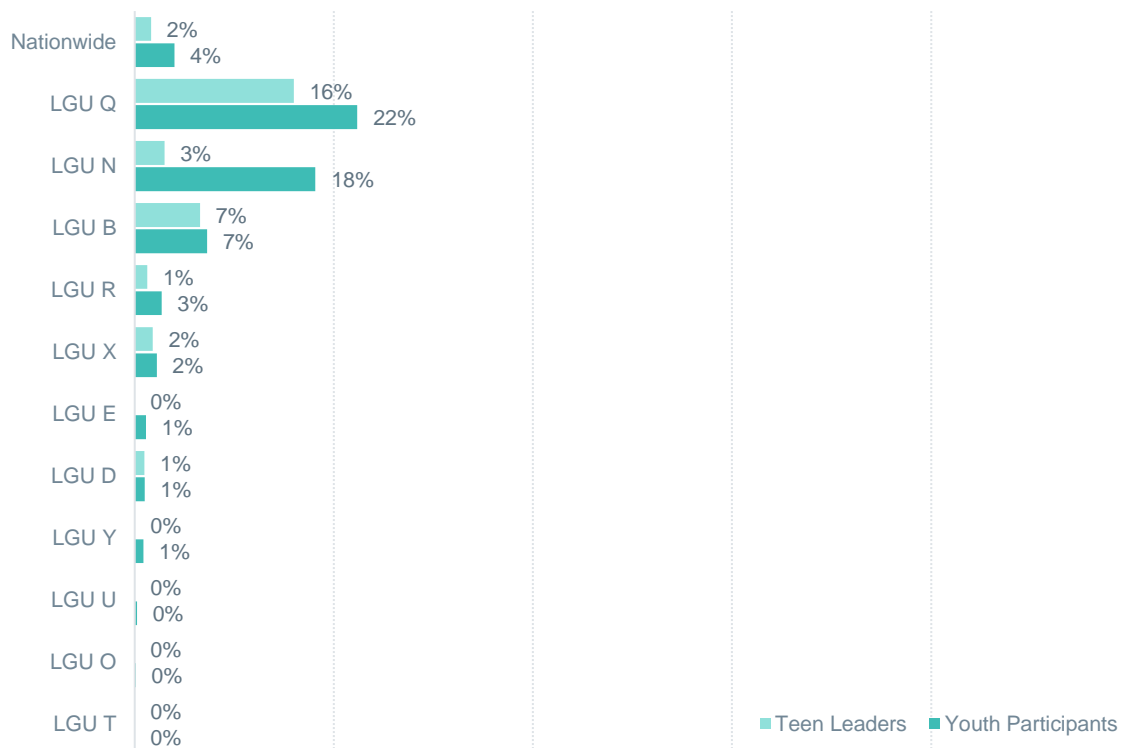
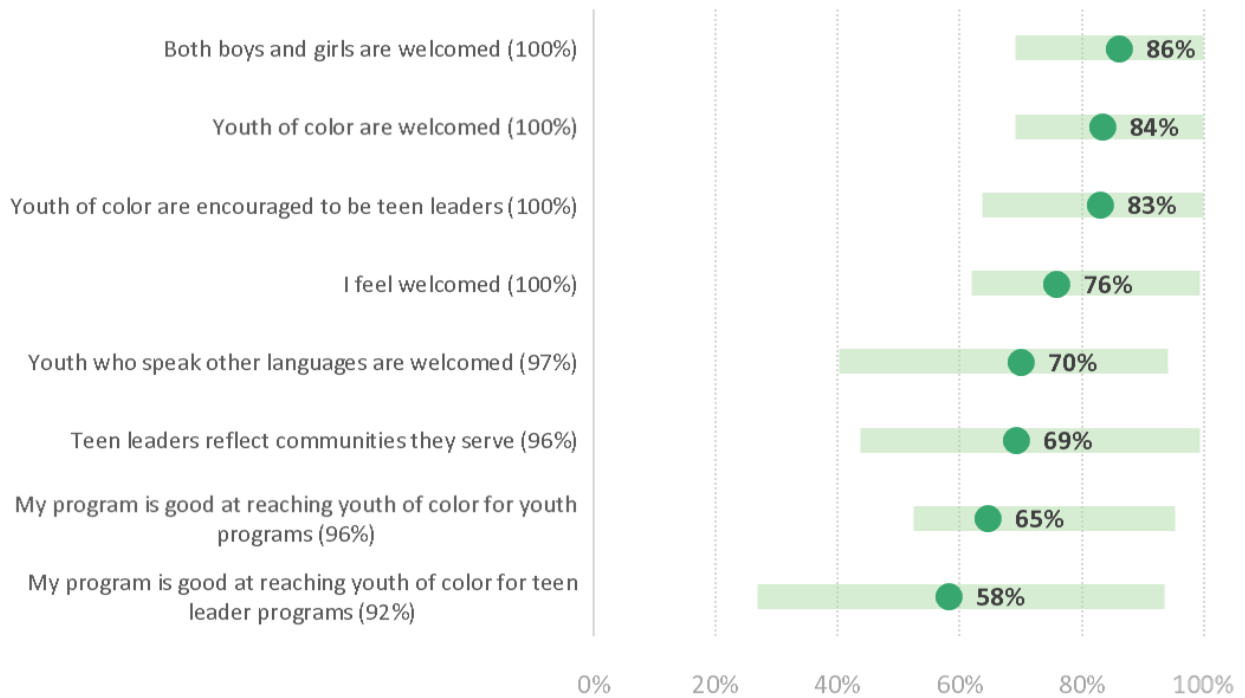


Figure 19. Share of Teen Leaders who were American Indian or Alaska Native at Selected Case Study Sites, 2016-2017 Program Report Data

ADULT PERCEPTIONS OF INCLUSIVENESS

Overall, 4-H Healthy Habits programs are widely perceived to be inclusive, welcoming environments for youth of different genders, racial/ethnic identities, and linguistic backgrounds (Figure 20). Staff and volunteers most strongly agreed that (a) both boys and girls and (b) youth of color were welcomed in their programs and that youth of color were encouraged to be teen leaders.

The majority of staff and volunteers surveyed **strongly agreed** with statements about the inclusiveness of their 4-H Healthy Habits programs. (N=73)



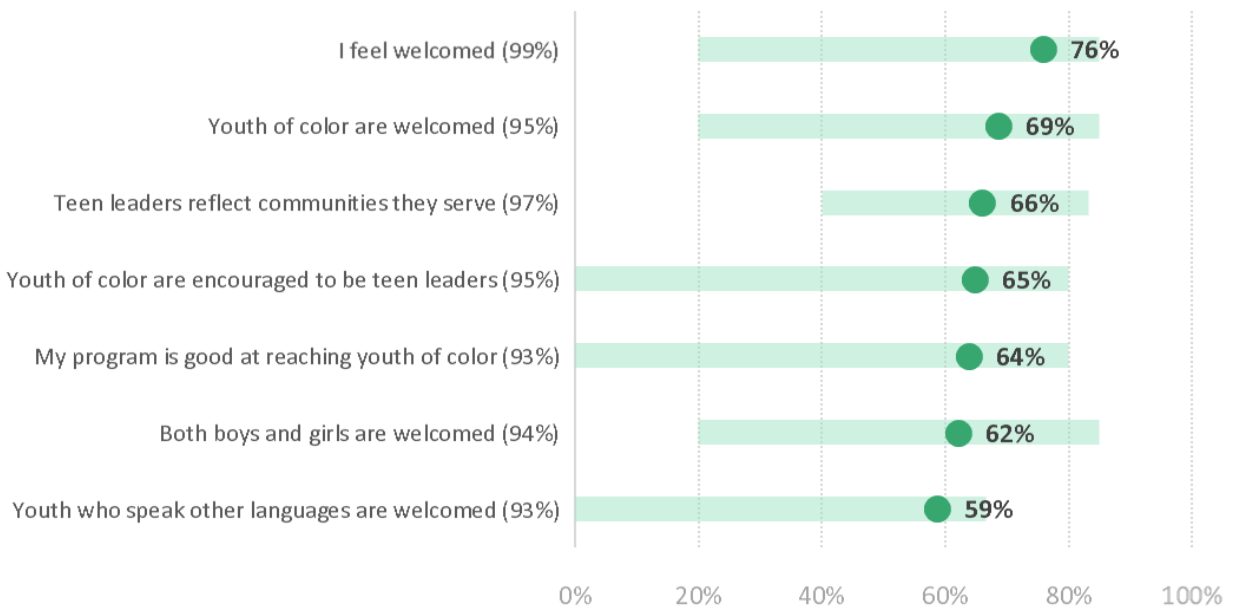
Note: The light green bars represent the range of responses across seven LGUs with more than five adult respondents. These bars are included to show the variability between LGU programs. The combined proportion of respondents who agreed and strongly agreed with the statement is indicated in parentheses following the statement.

Figure 20. Staff attitudes about the inclusiveness of their 4-H Healthy Habits Ambassador programs

TEEN PERCEPTIONS OF INCLUSIVENESS

As with staff and volunteers, teen respondents overwhelmingly (93-99 percent) found their 4-H Healthy Living Ambassador programs (Figure 21) to be welcoming.⁹ However, a lower percentage of teens *strongly* agreed with these statements when compared to adult participants. The highest share of teens strongly agreed that they personally felt welcome in their programs, that youth of color were welcomed, and that the teen leaders reflected the communities that they served. Teen respondents were the least likely to strongly agree that youth who speak other languages were welcome. This suggests that while some programs may be doing a better job than others of making teens from all backgrounds feel welcome, teen leaders in 4-H Healthy Living Ambassador program across the U.S. among Walmart Foundation sub-grantees generally feel that their programs are welcoming and open to all. This sentiment was echoed among teens participating in the focus groups. Across multiple focus groups, teens who had been to the National 4-H Healthy Living Summit in D.C. remarked on the cultural diversity they saw at the Summit.

Teens generally strongly agreed with statements about the inclusiveness of their programs, but there was wide variability between LGU programs. (N=77)



Note: The light green bars represent the range of responses across five LGUs with more than five teen respondents. These bars are included to show the variability between LGU programs. The combined proportion of respondents who agreed and strongly agreed with the statement is indicated in parentheses following the statement.

Figure 21. Teen attitudes about the inclusiveness of their 4-H Healthy Living Ambassador programs among Walmart Sub-grantees

⁹ We did not define welcoming in our survey question; participants were open to interpret it in a way that was meaningful to them.

We specifically compared responses among youth of color and multilingual teens to those of their white and English-speaking only peers to examine any differences between these groups in their perceptions of the inclusiveness and diversity of their programs. In general, higher proportions of youth of color strongly agreed with most statements about the inclusiveness of their program (Figure 22). The area of greatest difference concerned youth who speak other languages. Two-thirds (67 percent) of youth of color strongly agreed that youth who speak other languages are welcome compared to only 47 percent of white youth strongly agreeing with that statement; nearly 20 percent of white youth disagreed with that statement. This may suggest that responding youth of color are in local programs that are more welcoming to youth from a variety of backgrounds than responding white youth; or, alternatively, it may suggest that given their own experiences in the program, youth of color are more confident that teens from a wide array of backgrounds will be welcomed.

Among teens surveyed, a higher percentage of non-white teens strongly agreed with most statements about the inclusiveness of their programs than their white counterparts. (N=74)

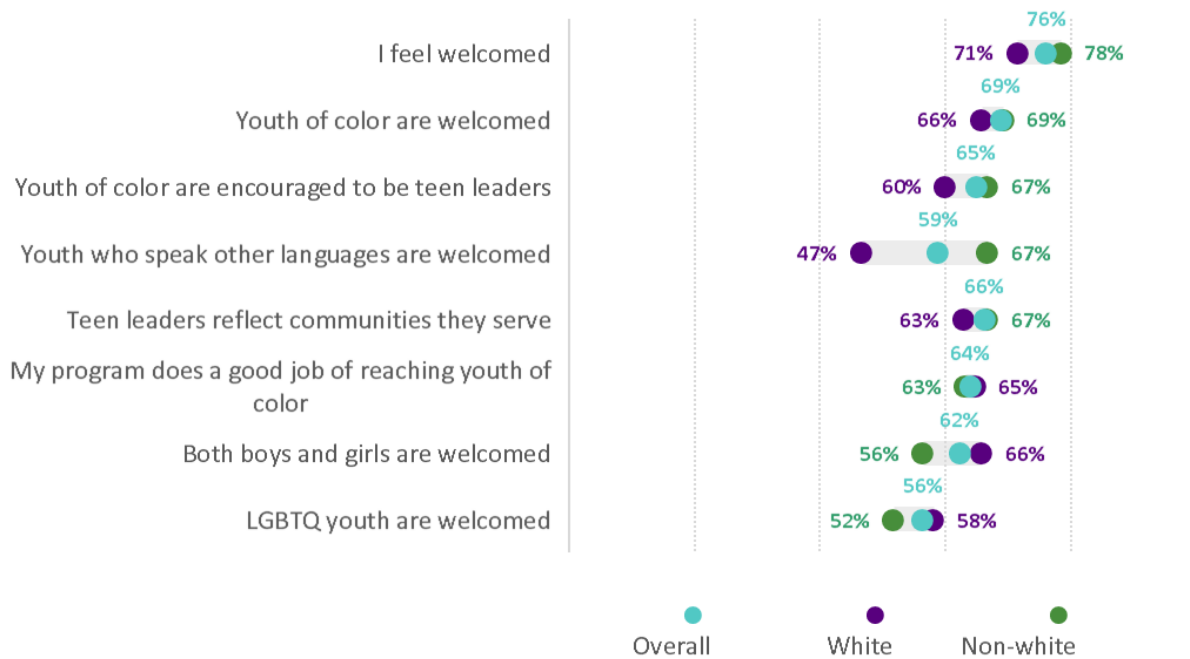
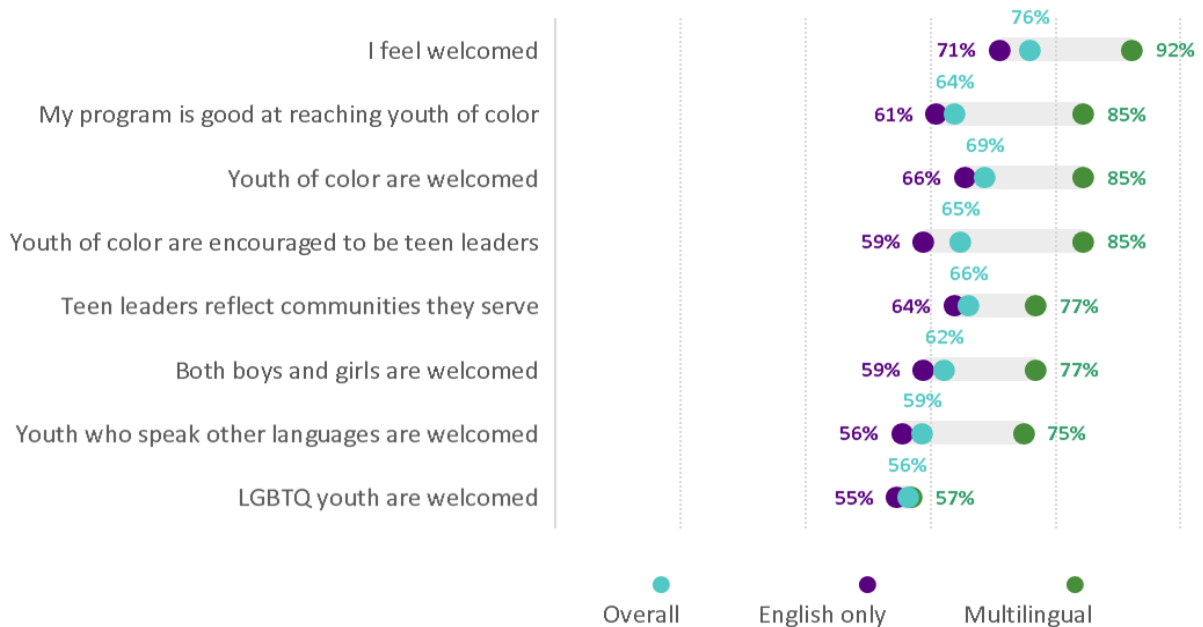


Figure 22. Teen attitudes about the inclusiveness of their 4-H Healthy Living Ambassador programs, comparing non-white and white teen leaders, among Walmart Sub-grantees

A similar but stronger trend was seen when comparing multilingual teens to their peers who speak only English. Across nearly all statements, the percent of multilingual teens who *strongly* agreed with statements about inclusivity was more than 10 percentage points higher than that of teens who spoke only English (Figure 23). This suggests that multilingual teens, where they participate in 4HHLA programs, feel more confident that their programs are open and inclusive to youth from a wide array of backgrounds. However, it is worth noting that only half of the LGUs with teens who participated in teen leader or teen participant surveys had any multilingual respondents.

Among teens surveyed, a higher percentage of multilingual teens strongly agreed with statements about the inclusiveness of their programs than teens who speak only English. (N=59)



Note: LGUs with no multilingual teen respondents were excluded from this comparison. This was done to control for the possibility that programs with multilingual teens might have substantially different environments from other programs. There were 5 LGUs with at least one multilingual teen, and 6 LGUs without any multilingual respondents

Figure 23. Teen attitudes about the inclusiveness of their 4-H Healthy Living Ambassador programs, comparing multilingual teen leaders to those who speak only English, among Walmart Foundation sub-grantees

ADDITIONAL SUPPORTS NEEDED TO CONTINUE OUTREACH TO YOUTH OF COLOR

Staff were asked about a series of different supports that can help serve diverse (e.g., culturally relevant curricula, racially diverse program leaders) and hard-to-reach audiences (e.g., transportation) (Figure 24). Staff were asked to consider each support and indicate whether it is a resource currently have and find helpful, currently have and do not find helpful, do not have but would like to have, and do not have and do not need.

The highest proportion of staff (61 percent) indicated that they lacked the ability to provide transportation but would like to have that ability. Staff most frequently indicated that they currently had racially diverse staff and volunteers; 49 percent and 48 percent of respondents already had these things, respectively, and found them helpful. In interviews, several LGUs highlighted the importance of having staff who could speak Spanish and materials that were translated into Spanish. For some LGUs, a lack of translated materials was a particular barrier to reaching youth in Hispanic and Latino communities. Relatedly, in surveys, multiple staff noted that there are language barriers for the participation of Spanish-speaking youth at national level conferences and events because all of the presentations and materials in English. One respondent remarked, "It would be helpful to have Spanish-speaking staff available at the national level to coordinate with Spanish-speaking local and regional staff." This is particularly important given that there are 4-H Healthy Habits programs at LGUs such as the University of Puerto Rico, where many youth and staff involved speak Spanish as a first language.

The highest percentages of staff and volunteers indicated that they would like to have an ability to provide transportation and materials and programming in languages other than English to better support youth of color. (N=69)

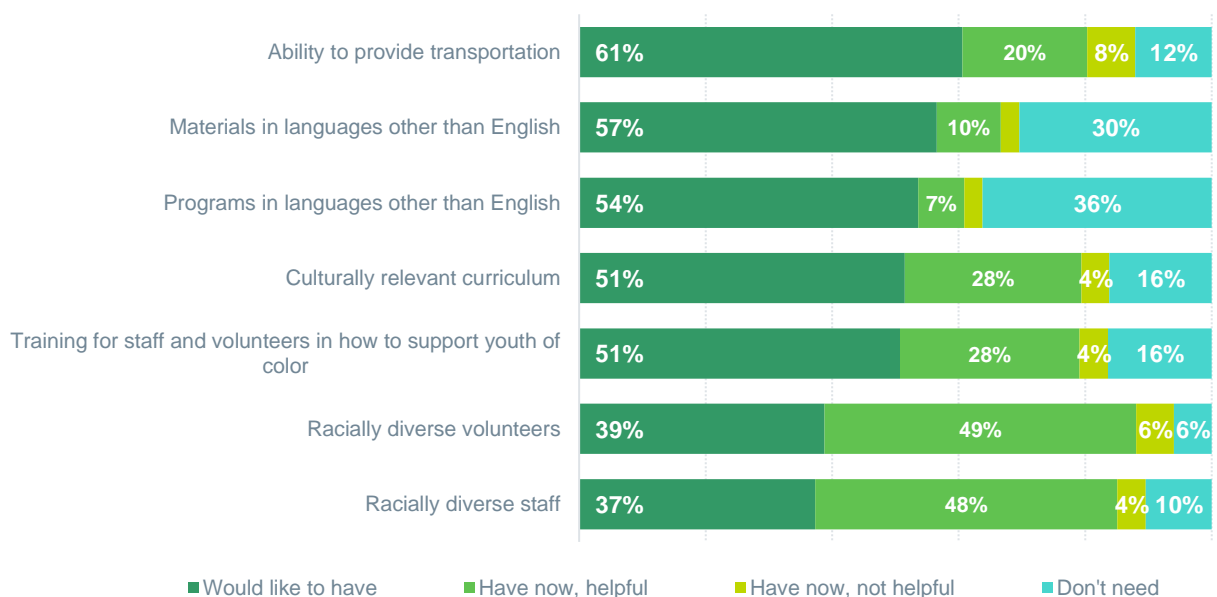


Figure 24. Supports desired by staff to better support youth of color

Many of the teen leaders reached through surveys and focus groups had suggestions for how to make their programs more inclusive. A number of these suggestions focused on marketing strategies of 4HHLA programs: visiting schools in various sites and communities, contacting youth cultural centers, holding more community service events, distributing fliers, providing emotional support for the youth of color, and advertising more broadly, including ensuring that it is stated that "everyone is welcome." Several teen leaders recognized that barriers such as cost might hinder some youth from participating in the program, though many states do offer waivers or fee assistance. One African American teen leader remarked, "One of the things that was a benefit was that the 4-H afterschool program was free when I was in it. Now as far as I'm aware there is a fee. I wish there wasn't that barrier there." Teens recognized the need to partner with organizations that serve diverse youth. One respondent remarked, "Our programs are enlisted

into schools that focus on agriculture and weave their way back to new curriculum with 4-H Healthy Habits. If this were taught in the schools that were more diverse, there could be a possibility of more enrollment [of youth of color]."

Successes

- 100 percent of staff and volunteers agreed that youth of color and both boys and girls were welcomed in their programs and that youth of color were encouraged to be teen leaders.
- Nearly all teen leaders surveyed felt that their programs were welcoming to all teens, regardless of gender, race, ethnicity, or language spoken.
- Multilingual teens and youth of color were especially confident that their programs were welcoming.
- Multiple LGUs found that partnering with agencies who already serve populations of color was an effective way to increase their reach among youth of color.
- Minority-serving institutions served large populations of minority youth through their 4HHLA and 4HHHY programming.
- Large proportions of respondents indicated that existing racial diversity among their staff and volunteers is an asset to their program.

Challenges

- It was not abundantly clear to all LGUs that the Walmart Foundation sub-grants were hoping to increase racial and ethnic diversity in 4-H Healthy Habits programs.
- Some of the marketing and outreach materials linked to existing curricula do not reflect the diversity of youth participating in 4-H Healthy Habits programming.
- Some programs struggled to translate materials into other languages, particularly Spanish.
- Reaching 'hard to reach' audiences can be expensive, as it requires more staff time and supports for youth, such as transportation assistance.
- The majority of teens and adults felt that their programs could be doing more to include youth of color.

Ideas from the field

- One LGU held specific retreats for youth from Native American, Latino, African and African American, and Asian American cultures (one retreat for each group) on their university campus. These youth also participated in 4-H camps and 4-H Healthy Habits projects as well as culturally-tailored activities.
- Prioritize working with in schools that serve high proportions of youth of color.
- In areas where language barriers might make seat-learning more difficult, "teens created hands-on activities in the garden such as weeding, watering, planting seeds, holding worms, and playing games."
- Suggestions directly from teens about what would help their group become more diverse included: hold meetings in a more accessible location; do more outreach through the school and through other events; include more social media outreach; and post flyers in areas frequented by teens outside of school (e.g., Starbucks).
- Providing transportation, either through directly transporting youth or providing public transit cards, helped reduce barriers to participation.
- A camp for children with special needs involving social-emotional and physical health was especially rewarding for staff.





NATIONAL 4-H
COUNCIL

Key Findings

Key findings

Organization and operation of the Walmart Foundation 4-H Healthy Habits program

4-H Healthy Habits programs encompass a wide array of programming structures, curricula, and partnerships.

- Both between and within states, there exists tremendous variability in how programs are designed and run.
- Multiple programs that reported relative ease meeting their numerical goals used an approach of asking counties how many youth they could serve, then basing their goals for the grant on those numbers.
- Similarly, many programs reported success using a “mini grant” approach where the state operated in a very de-centralized way, with each locality proposing and carrying out its own programming.
- Successful partnerships took advantage of systems-level or proximity-based conveniences. For example, one LGU took advantage of the fact that the local high school was in session Monday-Thursday while the lower school was in session Monday-Friday. The 4-H Healthy Living Ambassadors from the high school were thus able to spend the entire day on Friday at the lower school working with all elementary students. Other sites took advantage of lower and upper schools that were co-located or after school programs offered near to the high school, minimizing the need for transportation.
- Many programs spoke of some outreach and engagement of families, but generally these were fairly passive tactics, like sending home information or recipes. Families were often invited to the visit at end of a program session, especially in cooking-focused programs.
- Transportation (particularly in rural areas) and funding were the two most commonly cited barriers to program success.

Engaging youth of color and hard-to-reach populations

Though many 4-H Healthy Habits programs are racially and ethnically diverse, there is room for improvement in the area of diversity and inclusion.

- Sub-grantees seemed largely unaware of the Walmart Foundation funding stream’s goal of increasing racial and ethnic diversity. The RFPs in recent years have referred to reaching “underserved audiences,” which many programs interpreted as low-income youth, regardless of racial/ethnic background.
- Some programs did well at reaching youth of color through their 4HHY programming, but did not do as well including youth of color in their 4HHLA programming.
- Programs that were most successful at engaging underserved and minority youth typically achieved this by locating their programming in areas with high proportions of minorities. Little targeted recruitment was done to diversify participation within a given program.
- A major contributor to having diverse teen leaders is recruiting diverse teen leaders, and many programs draw on existing 4-H clubs, limiting the pool of new youth who could serve their communities as 4-H Healthy Living Ambassadors.
- The key to recruitment and successful programs in these areas was often attributed to one well-connected, well-liked CE staff person who knows the local residents well and had useful connections.

Positive youth development

Teen leaders emphasized a sense of community within their program, opportunities for leadership, and the ability to make a positive impact in their communities as their favorite parts of 4-H Healthy Habits Ambassador programs.

- Teens highly valued some sort of unifying event that connected them with other 4-H Healthy Habits Ambassadors, whether that was the National Youth Summit for Healthy Living or a state-wide event.
- Where teen leaders were available/used, the staff raved about their ability to connect with youth and engage with their community. However, some programs had no teen leaders.
- Some, but not all, programs were intentional in building teens skills around teaching and presentations and explicitly building these competencies, whereas others focused more on teens learning the content to deliver.
- Many teen leaders expressed that they had learned leadership and communication skills as well as important nutrition behaviors to apply in their own lives. These qualitative observations aligned with

Common Measures data that showed overall improvement over the course of the program in leadership and communication skills, particularly among African American youth.

- Through their participation in the program, nearly all teen leaders reported that they experienced a successful youth-adult partnership. This was particularly important for Latinx and Native American teen leaders, who were the least likely to have experienced a successful youth-adult partnership before participating in the program.
- Multiple programs felt that it was an important part of honoring youths' time and commitment to pay them for their activities as 4-H Healthy Habits Ambassadors.

Nutrition and physical activity outcomes

The majority of both teen leaders and youth participants reported that participating in 4-H Healthy Habits programs helped them learn about healthy eating and increase their healthy eating habits.

- Nearly all youth participants and teen leaders reported that they learned how to eat a healthy diet through participating in 4-H Healthy Habits programs, and high percentages of both participants and teen leaders reported that they eat more fruits and vegetables and drink more water due to their involvement with the program.
- There is room for further improvement in several areas, particularly decreasing junk food consumption for both youth participants and teen leaders and decreasing screen time for teens.

Administration of the Walmart Foundation sub-grant program

In our data collection, participants raised topics that extended beyond the control of the LGU and connected to the broader design of the sub-grants program. Recommendations in this area were provided directly to National 4-H Council.

- Programs expressed that the uncertainty of continuing funding from year-to-year was a challenge and that the program activities often were supported through funds from other sources; the Walmart Foundation funding was not sufficient alone to carry out the range of project activities that they offered.
- Multiple LGUs expressed the idea that serving a high number of youth and serving underserved youth are two goals at odds with one another at this funding level – they can do one or the other well, but not both.



NATIONAL 4-H
COUNCIL

Recommendations



Recommendations

The following recommendations address themes raised in both qualitative and quantitative data.

Organization and operation of the 4-H Healthy Habits program

- For programs that struggle to meet numbers of youth served for these sub-grants, consider adopting a model of writing the proposal where all counties are invited in advance to pledge a number of participants.
- Seek ways to leverage systems-level or proximity-based conveniences to minimize burdens around scheduling and transportation.
- Strive to have teen leaders deliver the 4HHY programming rather than other adults.
- Be innovative in approaches to engaging families. Tactics successfully used in the field include co-locating 4-H Healthy Habits events with well-attended school events (e.g., back to school night), cooking demonstrations or tasting events done to coincide with when parents typically come to pick up students, and taking a two-generation approach and serving a meal to families while engaging everyone in 4-H Healthy Habits programming.
- Consider establishing Communities of Practice or other systems (e.g., quarterly conference calls focused on specific topics) open to anyone working with 4-H Healthy Habits programs to share ideas.^{75, 77} LGUs are trying innovative approaches to common problems happening across the country, and a mechanism for discussing common challenges and novel solutions could support ongoing program improvement nationwide. Teen leaders could have their own Communities of Practice where they have an ongoing connection to other teen leaders nationwide.

Engaging youth of color and hard-to-reach populations

- Locate 4-H Healthy Habits programming, including camps, school-based programs, and out-of-school-time programs, in areas with high proportions of people of color.
- Relatedly, in communities where people of color are indeed demographic minorities, seek and nurture partnerships with organizations that serve relatively high proportions of youth of color.
- The literature around program adaptation suggests that there is a lot of potential value in using teen leaders (as representatives of a particular community) as key players in adapting materials and activities to be locally relevant, a process which could benefit both the teens and youth participants.
- A major contributor to having diverse teen leaders is recruiting diverse teen leaders, and many programs draw on existing 4-H clubs, limiting the pool of new youth who could serve their communities as Ambassadors. Avoid relying on (or requiring that teen leaders come from) existing 4-H programs as a primary source of teen leaders.
- Instead, leverage community connections to identify other sources of youth and specific promising individuals who could provide important outreach into their communities when given the opportunity to participate as 4-H Healthy Living Ambassadors.
- Making those community connections was often attributed to one well-connected, well-liked CE staff person who was passionate about health and youth development and knows the local residents and organizations well. When hiring staff or seeking volunteers, consider prioritizing candidates with these characteristics.
- Similarly, strive to have a diverse staff and volunteer base where youth of all types can see themselves reflected in 4-H leadership.^{22, 53, 74, 76, 77} This may require intentional outreach to recruit new volunteers or encourage a broader pool of job applicants.
- Advertise the 4-HHLA program in non-traditional places; be creative about marketing tactics.
- Think strategically from the beginning about transportation challenges. Consider providing transit fare for teens who do not have vehicle access or budgeting for transport of larger groups (e.g., fuel money if 4-H has access to vehicles, or rental of vans).
- Translated materials should be readily accessible and well-publicized. Although *Choose Health: Food, Fun, and Fitness* (CHFFF) from Cornell University was translated into Spanish in 2015 with the support of the Walmart Foundation, a Spanish version does not appear as an option for download in the online database of

Healthy Living & Foods Curriculum on the SHOP 4-H website.¹⁰ (However, by agreement, the Spanish translation is available for free download on Cornell's website and this site is linked in the product description for CHFFF on the SHOP 4-H website.) We suggest exploring a platform for sharing translated materials, even basic forms such as 4-H enrollment forms, as well as other materials. The University of Puerto Rico primarily works with Spanish-speakers and may be able to share materials that would be of use to other LGUs.

- Some youth who would make excellent teen leaders may also come from families experiencing extreme financial hardship where any cost presents a barrier to participation. Thus, programs focused on reaching low-income populations should minimize any costs associated with program participation. For costs that cannot be eliminated, waivers – even for the \$20 4-H registration fee – should be available.

Positive youth development

These recommendations coincide with aspects of multiple frameworks of positive youth development, including the 8 Elements of Positive Youth Development Settings,³ the 'Big Three,'¹ the 10 elements of successful teens as teachers programs,⁶⁶ and the 6 Cs.²

- For many youth, especially from underserved communities, committed volunteerism may not be a viable choice. Paying teen leaders can support their professionalism, foster money management skills, and enable youth who need to work to support themselves or their family to serve their communities as 4-H Healthy Living Ambassadors.^{7, 22, 53} While it may be a substantial additional programmatic cost, it is a potentially important one in bringing more underserved youth into leadership positions in 4-H.
- Include explicit attention to the building of leadership skills, not just the delivery of content. Ensure that teens are being coached in competencies ranging from timely communication to how to structure a presentation, speak publicly, and engage audiences.
- Convening teen leaders gives them a sense of participating in something larger and was universally described as a positive experience for teens. Seek outside funding to send additional teen leaders to the National Summit. Consider ways to connect and unify teens within the state, either via in-person trainings or summits, video conferencing or other technologies, or capstone events that they work toward across the year (e.g., overnight hiking trip or State Fair cooking competition).
- Any young person should know they have a place within 4-H Healthy Habits programs. Consider a formal statement of inclusiveness that makes it unambiguous that 4-H is a mentally, physically, and emotionally safe space for anyone, regardless of any attributes of their identity, and ensure that such statements are brought to the attention of all staff, volunteers, and participants.

Nutrition and physical activity outcomes

- The high percentages of both teen leaders and youth participants who reported positive outcomes around both healthy eating knowledge and behaviors suggests that current curricula used in 4-H Healthy Habits programs are having the desired effect and that use of these curricula should continue.
- Experiential learning teaches life-long habits and was a favorite feature of 4-H Healthy Habits programming among youth. Programs should aim to integrate activities where youth can learn and practice skills, such as cooking or physical activity (e.g., soccer camp, hiking programs), as often as possible.
- Further curriculum and lesson development may be needed to address the high amounts of screen time reported by teens, with emphasis on the importance of limiting screen time for both physical and mental health.

¹⁰ National 4-H Council. Healthy Living & Foods Curriculum. Available online at: https://shop4-h.org/collections/healthy-living-foods-curriculum?_ga=2.231113757.388629363.1530231960-425353972.1525888723#/?Collections=Healthy+Living+%26+Foods+Curriculum&search_return=all

Acknowledgements

Thank you to the following LGUs who participated in this project, generously taking time to recruit participants, speak with us, and/or complete online surveys.

Alcorn State University
Clemson University
Cornell University
Fort Valley State University
Louisiana State University
North Dakota State University
Oklahoma State University
Rutgers University
Southern University and A&M College
University of Arizona
University of Delaware
University of Florida
University of Georgia
University of Illinois
University of Puerto Rico
University of Tennessee
Virginia Polytechnic Institute and State University (Virginia Tech)
Washington State University



NATIONAL 4-H
COUNCIL

Appendices



Appendix A. Participant Demographics

LGUs

Among LGUs who participated in the survey, 81 percent reported operating at multiple sites (Figure 25).

Most of the staff surveyed reported that their programs operate at multiple sites. (N=52)



Notes: Given that respondents included both state- and county-level staff, it is possible that some of those responding that they only operated at a single site reflected a county-level response in a state that may be providing programming in other counties as well.

Figure 25. Proportion of staff surveyed who reported their 4-H Healthy Habits program operates at multiple sites vs. a single-site

The majority of surveyed programs operated during both the school year and summer (Figure 26), even if the programming provided during those seasons was different.

Just over half of all staff and volunteers surveyed reported that their programs operate throughout the entire year. (N=52)



Figure 26. Program calendar

Over half of the staff and volunteers surveyed reported that their program operates in rural areas, with another 21 percent reporting that their programs operate in a mix of rural, suburban, and urban areas (Figure 27). The majority of teen survey respondents lived in rural areas or small towns.

Just over half of all staff and volunteers surveyed reported that their programs operate in rural areas. (N=77)



Figure 27. Program rurality

Teens

A total of 227 teens participated in data collection efforts: 74 4-H Healthy Living Ambassadors participated in focus groups conducted in three states, 78 4-H Healthy Living Ambassadors in 11 states took an online teen leader survey, and 75 4-H Healthy Habits program participants in one state took a participant survey (Figure 28). Of these teens, most spoke English only (Figure 30). African American and Latinx teens were well-represented in the data, but few American Indian teens were reached in the data collection efforts (Figure 31).

About equal amounts of teens participated in focus groups, participant surveys, and teen leader surveys. (N=227)



Figure 28. Teen Mode of Participation in Data Collection

Most teens surveyed reported that they lived in small towns or rural areas. (N=77)



Figure 29. Rurality of teen leaders surveyed

The majority of teens who participated in data collection efforts spoke English only. (N=223)

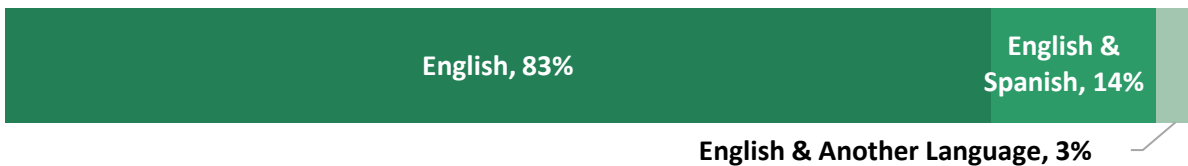


Figure 30. Teen language use

Most teens were white, black or African American, or Hispanic or Latino. (N=223)



Figure 31. Teen Race and Ethnicity

Most teens participating in data collection efforts had been involved in 4-H Healthy Living Ambassador programs for fewer than three years (Figure 32). About a quarter of the teens had been involved in 4-H for more than five years. However, 65 percent had a matching duration in 4-H and 4-H Healthy Living Ambassadors, suggesting that they may have become involved in 4-H through 4-H Healthy Living Ambassador programs.

Most of the teens surveyed had participated in 4-H Healthy Habits Ambassadors programs for fewer than 3 years. (N=191)

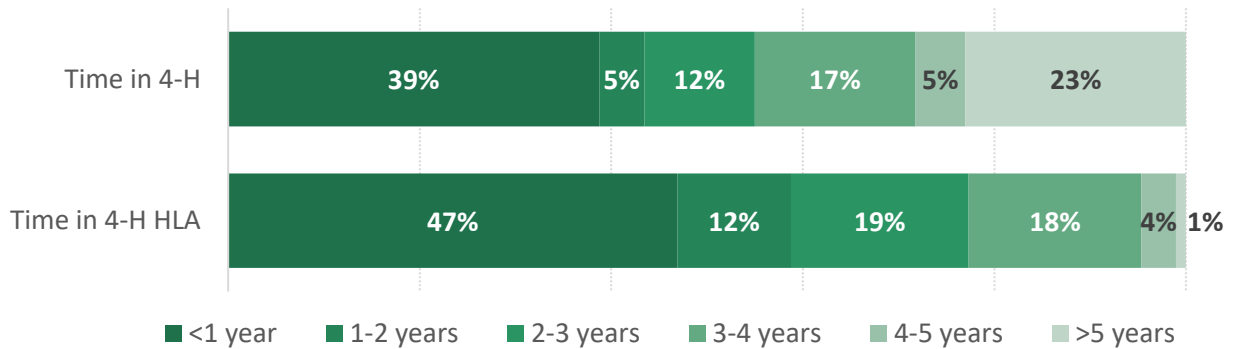


Figure 32. 4-H and 4-H Healthy Living Ambassador Tenure

There was wide variation in the amount of time a typical teen spends on 4HHLA activities across the different LGUs. About 21 percent of teens report spending more than 40 hours annually, whereas a similar percentage (19 percent) report spending 10 or fewer hours (Figure 33). This range of hours reflected the differing approaches to working with teen leaders, and thus different expectations about time commitments, that were discussed in interviews and focus groups and noted in grantee reports.

The majority of the teens reported spending between 11 and 40 hours in their 4-H Healthy Living Ambassadors program. (N=77)



Figure 33. Time commitment by teens in 4HHLA program

Many teens may have first encountered the 4-H Healthy Living Ambassadors program through contact with the 4-H Healthy Habits program as participants. About two-thirds of teen leaders surveyed reported that they had participated in a 4-H Healthy Habits program at least once before becoming a 4-H Healthy Living Ambassador (Figure 34).

Over half of the teens had participated in 4-H Healthy Habits programs multiple times before becoming a 4-H Healthy Living Ambassador. (N=74)



Figure 34. Prior participation in 4-H Healthy Habits programs

Adults

A total of 105 adults participated in data collection efforts: 17 staff in nine states participated in semi-structured interviews, six staff and volunteers in three states participated in focus groups designed for teen leaders, and 82 staff and volunteers in 10 states took a staff or volunteer survey. Most of the adult participants spoke only English, and the majority of participants identified as white or Caucasian. Most of the participants were 4-H or other Cooperative Extension Staff, but parents and volunteers also participated.

Most adults were reached through surveys, with a smaller proportion reached through more in-depth interviews or participation in focus groups. (N=105)



Figure 35. Adult Mode of Participation in Data Collection

Most adults who participated in surveys, interviews, and focus groups spoke English only. (N=92)



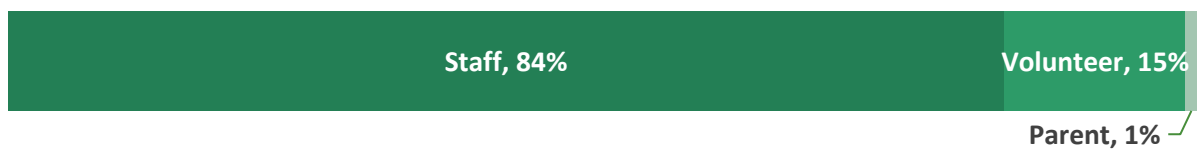
Figure 36. Adult Language Use

Most participating adults were white. (N=90)



Figure 37. Adult Race and Ethnicity

Most adults who participated in data collection efforts were 4-H or other Cooperative Extension staff. (N=105)



Note: Many of the volunteers were also parents of 4-H participants.

Figure 38. Adult Affiliation with 4-H

Overall, 332 individuals from 17 universities participated in data collection efforts for this project.

Appendix B. Description of Methods

Document review

In conjunction with analyzing the current and past demographics of 4HHHY and 4HHLA programs, we reviewed three years of program reports to assist in identifying sites with innovative approaches toward involving youth of color as well as other topics covered in this white paper. This document review continued following site selection to inform the development of instruments for data collection through surveys, interviews, and focus groups.

Surveys

Five survey instruments were developed to collect data from four population groups involved in 4HHHY and 4HHLA programs. These five instruments shared some questions in common to allow comparison across groups, while other questions were targeted toward specific groups. The questions in common focused on individual demographic characteristics, involvement with 4-H and 4-H Healthy Habits programs, and perceptions of the inclusiveness of 4HHHY and 4HHLA programs.

Two teen surveys were developed, one for teen leaders and one for teen participants. The teen leader survey added a module about recruitment and experiences as a 4HHLA to the core participant survey.

Two surveys were developed for staff, one for case-study sites and one for non-case-study sites. The staff surveys included modules about program operation, important partnerships, and supports needed to assist in outreach to youth of color. The non-case-study site staff survey added an additional module about program structure and operation to add further context to these responses since there would be no interviews or focus groups conducted at these sites.

Finally, a survey was developed for adult volunteers involved in 4HHY and 4HHLA programs. This survey largely mirrored the staff survey but omitted many of the specific questions about program structure and partnerships. Overall, 27 LGUs were invited to participate in data collection efforts, including distribution of surveys, and 22 of these LGUs were sent survey materials for distribution to their staff, volunteers, and teen leaders or participants. Fourteen LGUs had at least one staff, volunteer, or teen leader complete a survey, and nine had more than five respondents.

Interviews

A semi-structured interview guide was developed to collect data from key informants at case study LGUs. Topics covered included:

- program structure and delivery approaches (both 4HHY and 4HHLA)
- family engagement
- key program activities
- curriculum used
- adaptations to curriculum
- youth-adult partnerships
- important existing partnerships and collaborations
- desired partnerships
- serving and engaging youth of color
- approaches to serving diverse youth
- supports needed to better engage youth of color
- engaging rural youth
- successes, challenges, lessons learned, and questions they would hope the white paper could help answer

Additionally, the interview did a deeper dive into the 4HHLA program, asking about recruitment strategies, retention, training, and time commitment for teen leaders, particularly teen leaders of color, in keeping with the RFP. The guide was modified to include a few additional topics that arose during early interviews, namely compensation/incentives for teen leaders, application processes, and methods of communicating with teen leaders. Interviews were designed to take about 45 minutes to one hour for the first interview at an LGU and less for subsequent interviews. At the nine LGUs who agreed to participate at least at some level in the case-study, 18 total interviews were conducted.

Focus groups

While we had hoped to speak with youth at all the case-study LGUs, many contacts said that it was too busy a time of year (mid-to-late spring) to feasibly gather youth or that there were other logistical barriers. Those LGUs were then sent a link to the teen leader survey to disseminate to any youth who they thought would be willing to take the survey on their own time. Four focus groups were organized across three LGUs. These focus groups sought to provide space for youth voices on issues surrounding diversity and inclusion in 4HHLA and 4HHY programs. Two focus groups were conducted virtually through an online meeting platform, while two occurred in person at the teen leaders' regular meeting site. The focus groups ranged in size from six to 30 teen leaders. Three of the four groups took place during regular 4HHLA meeting times. Youth of color were involved in all four of the focus groups; however, groups ranged in composition from a few youth of color to entirely youth of color depending on the demographics of the local 4HHLA program and the availability of teen leaders to participate at the particular meeting time. Participants in the focus groups were asked about:

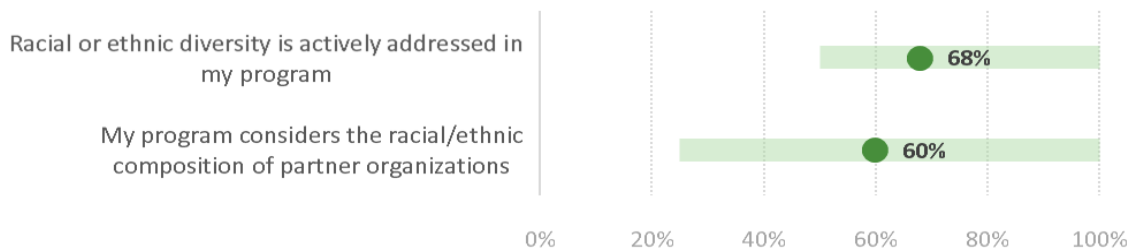
- recruitment into the program
- skills learned through the program
- favorite parts of the program
- parts of the program they would want to change
- their own racial or ethnic identity, experience in 4-H, and language usage

In several focus groups, a few adult staff and volunteers sat in on the focus group and provided some context for the youth responses.

Appendix C. Supplemental figures

The figures below reflect data shared in the above report and can function as stand-alone visuals

More than two-thirds of staff reported that their programs actively address racial and ethnic diversity. (N=50)



Notes: The light green bars represent the range of responses across seven LGUs with more than five adult respondents. These bars are included to show the variability between LGU programs. This question was only asked in surveys of staff.

Figure 39. Staff consideration of racial and ethnic diversity in programming and partnerships

Overall, the vast majority of teens reported that they had tried to recruit friends and classmates to join 4-H Healthy Habits Ambassadors programs. (N=76)



Figure 40. Teens who have encouraged friends and classmates to join their 4-H Healthy Habits Ambassadors program

Appendix D. Achievements and successes

The following section details the achievements that program leaders and participants described in open-ended questions about aspects of the 4-H Healthy Habits programming that they felt were most successful.

Teen Leaders

Most of the teens surveyed and engaged through focus groups viewed the 4-H Healthy Living Ambassador programs very positively. Many expressed how grateful they feel being a part of the 4HHLA program. One teen leader from a rural area stated, "Being pushed to be a 4-H Healthy Living Ambassador, there is not a single day I regret it. It has

opened so many doors for me and brought so many experiences. I love what I do and enjoy what I teach." Teens highly valued the opportunity to teach younger children and have a positive impact in their local community. Many teen leaders expressed that they had learned leadership and communication skills through their involvement as a 4-H Healthy Living Ambassador.

Public speaking skills were one of the most frequently referenced skills that teens reported they learned through the program. One teen remarked, "I'm a quiet person, so I don't tend to talk a lot. I do have to say the program helps me talk in front of people. It put me on the spot but I got better at it."

Another teen at another LGU echoed that sentiment, saying "My first year I was the shyest kid, but after throwing me into situations where I had to talk, I ended up speaking in front of 50-60 kids in D.C. and giving a presentation."

Another teen leader described their own growth, saying, "I talked really quietly and was nervous at first. But by legislative day, I was able to just talk. [It] will help in life to be able to talk."

One teen leader highlighted how he learned important leadership skills, remarking, "The biggest thing that I got to practice was collaboration with other teens and adults, delegating different tasks with other people, [and] keeping things organized. Working with kids has been an acquired skill for me...more and more I've gotten better at handling the kids. Teens also noticed the growth in their fellow teen leaders."

One teen in a 4HHLA club noted, "I've definitely seen remarkable improvement in other people's skills in leadership this year."

Teen leaders also frequently mentioned the ways in which their involvement in 4HHLA program influence their own health and nutrition behaviors. Many teens mentioned the cooking skills and techniques they learned, such as knife skills, as well as nutrition behaviors such as reading nutrition labels. Several teens mentioned behavior changes they or their families had made, such as drinking more water instead of soda or eating more vegetables.

Finally, many teens emphasized specific personal development that occurred through opportunities provided in the program. For several teens, the trip to D.C. was the first time they had travelled out of the state and been exposed to so many different cultures and experiences. Teens emphasized the ability to meet people from different backgrounds and areas of the country, as well as the opportunity to bond with their fellow leaders from their state as key parts of the Summit experience. As one teen put it, "The new experience makes you vulnerable, but it's more fun to do it with people."

In one 4HHLA program, the capstone activity was a challenging hike in a national park. This hike was cited as both a favorite part of the program and a transformational experience for many teens. One Hispanic teen recalled reading a sign at the national park that read, "Going down is optional, coming out is mandatory," and described the effect it had on him, saying, "[It] changed my perspective on life. When I'm faced with a problem in front of me, I have to fix it. I can't start and stop halfway. Whenever I have a challenge, I'm going to go back to the [national park] -- I had to get out of there."

Staff

Staff at the program with the national park hike also emphasized how that hike was a transformational experience for teens. One staff member stated:

The impact that has on these young people is tremendous. We're trying to measure that through a separate evaluation. As a cultural anthropologist hiking with those kids I can hear it, how they're interacting with each other...It really gets to some of those youth development goals—setting goals, decision making, planning, being responsible for yourself and others, etc.

At other programs, staff also highlighted high intensity programs as the most impactful. One LGU staff member described how great it was to see the teens take ownership of their cooking program. At another LGU, staff noted how making their 4-H Healthy Living Ambassador and mentorship program a more formal club with regular virtual meetings greatly helped the cohesion of their teen leaders and enhanced the mentorship component of the program.

Many staff listed their teen-led components when asked what parts of their program were most successful. One staff member remarked, "To have teens be able to voice their own opinions and that empowerment piece is key." Another

staff member at the same LGU noted, "Giving youth some freedom and opportunity to come up with things on their own makes it easier to implement that programming and more valuable to kids, which supports diversity." Staff perceived that teens were often more effective at reaching younger children than adult might be, saying, for example, "Younger youth enthusiastically responded to having the hip high schoolers deliver content. At another LGU, staff saw the success of the teens as teachers model as potentially having an important long-term impact on teen leaders' thoughts about career and future career development.

A number of LGUs also remarked on their success in reaching a large number of youth through the 4HHLA and 4HHHY programs. One program leader said, "Honestly, every year when we hit the numbers, I always think that it's an amazing achievement. When you play out the number divided by the hours your teaching and the number of kids, it's pretty amazing." At another LGU, staff highlighted their high retention rates in their teen leader program as a particular success. LGU staff also emphasized how 4-H Healthy Habits program had helped establish the 4-H identity in new neighborhoods without a historical 4-H presence.

Appendix E. Challenges and barriers to success

Rural challenges

Operating programs in rural areas can bring a particular set of challenges. In the U.S, rural areas typically have higher rates of poverty and lower rates of employment and job availability, in addition to transportation challenges posed by a sparse population distributed over a large area.^{80–82} Many Extension programs, including 4-H Healthy Habits programs, serve large numbers of youth in rural areas.

Given both the challenges inherent in working in rural areas and the degree to which many 4-H programs work in these areas, we asked staff and volunteers about challenges they had faced in serving rural youth in both the adult surveys and in semi-structured interviews. Many of the primary challenges identified by multiple staff across LGUs that served rural youth had to do with transportation. The rural areas served by LGUs often lack public transportation altogether, or they have very limited public transportation. This means that either teens must have access to a car or parents, staff, and volunteers must provide transportation. One LGU reported that they make a particular effort to provide transportation, which often means that staff spend a substantial amount of time driving their teens so that they can participate in program. The same LGU also provided gas cards to families and volunteers in certain rural areas to help defray the costs of transportation, as many families they served lived 25 to 50 miles away from the nearest school or Extension office. At another LGU, a staff member had wanted to hold a summer day camp in a town where a number of stores were located, but she had to adjust the location to be closer to where youth lived. "Picking a correct location" was listed by one staff member as the primary challenge her program faced, as they had to find good partners located near where kids lived. She mentioned that local churches were often good partners in rural communities from an accessibility standpoint.

Staff noted that travel time and costs have to be built into budgets and often limit the programming that can be carried out in rural areas. Several LGUs with significant work in rural areas noted that, compared to more densely populated urban areas, reaching rural youth requires significant more time and monetary investment for a smaller number of overall participants. One staff member noted that serving a rural county was difficult and constrained by funding, saying "It comes down to funding. If we had funding to pay someone 10 hours a week to spearhead programming down there, we could have a more robust program." The program currently relied on staff and volunteers traveling several hours to provide programming in that county.

Beyond transportation challenges, internet access is often limited in rural areas. One staff member reported, "Internet access is also a challenge in rural areas—emails might not be read at home, and online curriculum can't be seen." Additionally, some teens lacked access to a printer at home, meaning that they had to either visit a library to use a printer or have staff mail paper forms back in forth. This limitation was challenging for a program that provided a stipend for teens that required use of a university reimbursement form.

Finally, food access can be a serious challenge in many rural areas. Multiple staff and volunteers noted that many communities lack larger grocery stores, which means that youth are limited in the kinds of foods they can access. One staff member remarked that she had to travel to another town to purchase fruits and vegetables for her 4-H members to try, while another noted that many of the youth had difficulty obtaining the kinds of food they were promoting in the 4-H Healthy Habits programs.

Broad challenges

The following section lists themes and illustrative anecdotes or quotations that emerged from open-ended questions about challenges and barriers to program success as well as grantee reports.

Transportation

- While the specific challenges of rural transportation are discussed further in the Rural Challenges section, this was a theme in both rural and urban programs.
- "Transportation for teen leaders - this is a large barrier for youth of color. Our city does have public transportation and it used to be free for teens in the summer, but is no longer. Many teens are not familiar with public transportation and it is cumbersome to use to get to our sites from their homes."
- "Due to risk management, we no longer transport our teens."
- "Lack of transportation for youth is often difficult so we try to utilize our school partnerships to overcome that."

- “The biggest challenge in serving rural areas is the access to the food items we are promoting or them having transportation to events outside of the school setting.”
- “The only challenge is transportation to and from events.”
- “A lot of our teens don’t drive yet, so without adults to provide transportation, they can’t get there yet.”
- “The lower-income kids or the ones I suspect to be don’t participate as much because it’s harder to get there.”

Funding

- “Each year the funding decreases and it’s difficult to maintain the same level of excellence.”¹¹
- “Funding to expand the program into other school districts.”
- “The biggest challenge is that of funding. Funding is often an issue because we are in a poverty stricken area.”
- “Cost of meals”
- “Dollars will always be a challenge because of minimal tax-base to generate program dollars and a small business base to solicit donations.”
- “Staff are trying to hit numbers, going to where biggest numbers are. Going to after school program where diversity isn’t where we’d love to see, but if we had more resources, could spend more time reaching smaller populations. Right now, I’m going to go where I can get in.”
- “The persistent challenge and the one that finally led us to conclude that we would not re-apply for the Youth Voice: Youth Choice funding is the expected reach of the grant for the allocated funds. Unlike urban settings in other states, most of the audience we need to reach in Oregon is spread widely in small communities in very rural areas. In some cases engaging an entire community results in less than 50 youth participants. The impact on these youth and their families and communities can be profound and long lasting, but doing so takes a great deal of dedicated staff time, with little left over to work with other communities to reach the additional 250 youth needed in each county to make the required reach. While we can document wonderful impact, as witnessed in the success stories we are providing, the strain of trying to reach the required numbers with the limited amount of funding that is dedicated to personnel is just too much.”
- “There needs to be additional dollars to make the impact that reaches the audiences who Walmart [Foundation] wants us to reach. We need to reach the most vulnerable youth and underserved and youth – we need more to reach those. We can reach the top, easy to reach youth with this.”

Time

- Time was frequently coupled with funding and/or transportation as a concern.
- “Staff time to support the program (training and mentoring teen teachers at sites)”
- “The unrealized impact of the program, and the source of many of our challenges, is that developing and mobilizing teen teachers take an enormous amount of staff time; time that is not supported through the grant program budget. We have come to realize that without sufficient staff FTE to support this program, we are not able to move its development much further.”

Over- committed teens & teen recruitment

- “Probably the most challenging issue by far is scheduling of activities for a youth population that is increasingly busy with other extracurricular, sports, and church activities.”
- “Our biggest challenge is that kids leave 4-H to be in FFA. One of the things that we have to figure out is that it doesn’t have to be either-or. It’s a struggle in this state, a long-running cultural one. We lose a lot of our kids to FFA. That is a daily battle. The other thing is that some of our kids are in small schools, only nine kids in their class. So they’re everything in their school, involved in everything. And they can’t miss because they’re crucial. “
- “A lot of teens are really active and involved with the community, so getting them involved during the school year has been challenging with all their other activities.”
- “Living and serving a very rural community the Leaders and participants finding time to do 4-H Healthy Habits Programs that are involved with band, sports, other clubs, church, etc.”
- “Teens have a hard time with too many things going on.”

¹¹ Note that the source of declining funding (e.g., Walmart Foundation or state funds to the LGU) was not identified.

- “Kids school, sports other extra-curricular activities and jobs. We try to agree on a day of the week that works and time. They know to ask off work and keep that slot available for meetings. We try to keep meeting short and productive.”

Collecting evaluation data

- “It was a double edge sword trying to work with non-traditional groups but then having them do IRB and consent and surveys and these partners don’t see the benefit of doing those things.”
- “Data entry of thousands of surveys also is challenging; however, grant funding allows us to hire program assistants to enter the data.”
- Getting back consent forms for the surveys was a big hassle and they weren’t allowed to use assent forms

Family Engagement

- Staff expressed that a lack of parental buy-in to the lessons could hinder their effectiveness. Many staff mentioned that they would like to see more parental engagement with the program.

Kitchen access

- “Need more advanced kitchen facilities. “
- “Finding a place that can hold 25 youth in a kitchen without charging “
- “In some situations, finding a suitable location to hold cooking classes and recreational activities has been a problem. Agents are addressing this by using “Kitchen in a Box” techniques in a smaller space and seeking other locations such as middle/high school FACS labs through a school partnership/collaboration.”
- “Some facilities where programs are offered do not allow students to use knives or cooking equipment to learn how to prepare healthy foods or they do not allow food in from the outside at all. We have adapted our curriculum to include more activities that teach the important concepts of health and nutrition, so we can deliver an effective program in these non-optimal conditions. We look for opportunities where food preparation is allowed, but we do not want to turn away from places that need interventions even though there are restrictions.”

Partnership issues

- “The school says yes you're good to come, then they have snow days and say we can't come.”
- “Some counties they say the plan to go into schools and deliver it, but then teacher didn’t actually let it, so have to regroup, find another school or classroom. This happens about once every grant period.”
- “Some of the school districts are more difficult to work with. The bureaucracy is difficult, onerous. The 1-1 school relationship might be OK, but the district level partnerships are harder; many more complications. There are places where we would like to have more partnerships to serve particular youth, but the school administration seems to be in disarray. It’s been hard to pin people down, and there’s been a lot of turnover.”

Appendix F. Suggested Readings

For more information on the topics covered here, consider these references.

Positive Youth Development for Diverse Youth

- Cabrera, N. J. (2013). Positive development of minority children. *Social Policy Report*, 27(2), 22.
- Cabrera, N. J., & Leyendecker, B. (Eds.). (2017). *Handbook on Positive Development of Minority Children and Youth*. Cham, Switzerland: Springer. https://doi.org/10.1007/978-3-319-43645-6_25
- Eccles, J., & Gootman, J. A. (2002). Community programs to promote youth development. Washington, DC: Committee on Community-Level Programs for Youth. Board on Children, Youth, and Families, Commission on Behavioral and Social Sciences Education, National Research Council and Institute of Medicine. <https://doi.org/10.17226/10022v>
- Fredricks, J. A., & Simpkins, S. D. (2012). Promoting Positive Youth Development Through Organized After-School Activities: Taking a Closer Look at Participation of Ethnic Minority Youth. *Child Development Perspectives*, 6(3), 280–287. <https://doi.org/10.1111/j.1750-8606.2011.00206.x>
- Garner, P. W., Mahatmya, D., Brown, E. L., & Vesely, C. K. (2014). Promoting Desirable Outcomes Among Culturally and Ethnically Diverse Children in Social Emotional Learning Programs: A Multilevel Heuristic Model. *Educational Psychology Review*, 26(1), 165–189. <https://doi.org/10.1007/s10648-014-9253-7>
- Gast, M. J., Okamoto, D. G., & Feldman, V. (2017). “We Only Speak English Here”: English Dominance in Language Diverse, Immigrant After-School Programs. *Journal of Adolescent Research*, 32(1), 94–121. <https://doi.org/10.1177/0743558416674562>
- Gutiérrez, V., Larson, R. W., Raffaelli, M., Fernandez, M., & Guzman, S. (2017). How Staff of Youth Programs Respond to Culture-Related Incidents: Nonengagement Versus Going “Full-Right-In.” *Journal of Adolescent Research*, 32(1), 64–93. <https://doi.org/10.1177/0743558416664028>
- Larson, R. W., & Ngo, B. (2017). Introduction to Special Issue: The Importance of Culture in Youth Programs. *Journal of Adolescent Research*, 32(1), 3–10. <https://doi.org/10.1177/0743558416675234>
- Lerner, R. M., & Lerner, J. V. (2013). *The Positive Development of Youth: Comprehensive Findings from the 4-H Study of Positive Youth Development*, 1-53.
- Lin, A. R., Simpkins, S. D., Gaskin, E. R., & Menjivar, C. (2018). Cultural values and other perceived benefits of organized activities: A qualitative analysis of Mexican-origin parents’ perspectives in Arizona. *Applied Developmental Science*, 22(2), 89–109. <https://doi.org/10.1080/10888691.2016.1224669>
- Nicholson, H. J., Collins, C., & Holmer, H. (2004). Youth as People: The Protective Aspects of Youth Development in After-School Settings. *Annals of the American Academy of Political and Social Science*, 591, 55–71. <https://doi.org/10.1177/0002716203260081>
- Roth, J. L., & Brooks-Gunn, J. (2016). Evaluating youth development programs: Progress and promise. *Applied Developmental Science*, 20(3), 188–202. <https://doi.org/10.1080/10888691.2015.1113879>
- Simpkins, S. D., Riggs, N. R., Ngo, B., Vest Ettekal, A., & Okamoto, D. (2017). Designing Culturally Responsive Organized After-School Activities. *Journal of Adolescent Research*, 32(1), 11–36. <https://doi.org/10.1177/0743558416666169>
- Spencer, M. B., & Spencer, T. R. (2014). Invited Commentary: Exploring the Promises, Intricacies, and Challenges to Positive Youth Development. *Journal of Youth and Adolescence*, 43(6), 1027–1035. <https://doi.org/10.1007/s10964-014-0125-8>
- Williams, J. L., & Deutsch, N. L. (2016). Beyond between-group differences: Considering race, ethnicity, and culture in research on positive youth development programs. *Applied Developmental Science*, 20(3), 203–213. <https://doi.org/10.1080/10888691.2015.1113880>

Diversity in the Context of 4-H

- Alston, A., & Crutchfield, C. (2009). A Descriptive Analysis of the Perceptions of North Carolina 4-H Agents Toward Minority Youth Participation in Agricultural-Related Activities. *Journal of Extension*, 47(5), 1–10. Retrieved from <https://www.joe.org/joe/2009october/rb5.php>
- Avent, M. D., & Jayaratne, K. S. U. (2017). Factors Limiting Youth Participation in 4-H and Other Youth Development Programs in Underserved Communities. *Journal of Extension*, 55(4).
- Castro, F. G., Barrera Jr, M., & Holleran Steiker, L. K. (2010). Issues and challenges in the design of culturally adapted evidence-based interventions. *Annual Review of Clinical Psychology*, 6, 213-239.
- Carrasco, C. P. D., & Bird, M. (2017). 4-H as a Culturally Responsive Program: Building an Afterschool 4-H Program that Engages Latino Youth and Parents in Sacramento, CA. *Cambio de Colores/Change of Colors*, 51–55.
- Colby, M., Hecht, M. L., Miller-Day, M., Krieger, J. L., Syvertsen, A. K., Graham, J. W., & Pettigrew, J. (2013). Adapting school-based substance use prevention curriculum through cultural grounding: A review and exemplar of adaptation processes for rural schools. *American Journal of Community Psychology*, 51(1-2), 190-205.
- Hamilton, S. F., Northern, A., & Neff, R. (2014). Strengthening 4-H by Analyzing Enrollment Data. *Journal of Extension*, 52(3), 1–13.
- LaVergne, D. (2013). Diversity Inclusion in 4-H Youth Programs: Examining the Perceptions Among West Virginia 4-H Youth Professionals. *Journal of Extension*, 51(4), 1–12. Retrieved from [https://articles.extension.org/sites/default/files/4H youth programs' professionals' perceptions.pdf](https://articles.extension.org/sites/default/files/4H%20youth%20programs%20professionals%20perceptions.pdf)
- Lavergne, D. D. (2015). Perceptions of 4-H Professionals on Proposed Solutions Towards Diversity Inclusive 4-H Youth Programs. *Journal of Youth Development: Bridging Research and Practice*, 10(1), 1–13.
- Newby, L., & Sallee, J. (2010). 4-H Membership Recruitment/Retention Problems: A Meta-Analysis of Possible Causes and Solutions. *Journal of Youth Development: Bridging Research and Practice*, 6(4), 1–10.

Teens as Teachers, Youth-Adult Partnerships, and Mentoring

- Blake-Beard, S., Bayne, M. L., Crosby, F. J., & Muller, C. B. (2011). Matching by race and gender in mentoring relationships: Keeping our eyes on the prize. *Journal of Social Issues*, 67(3), 622–643. <https://doi.org/10.1111/j.1540-4560.2011.01717.x>
- Fornier, T., Fries, E., Meyer, A., Buzzard, M., Uguay, S., Ramakrishnan, R., ... Danish, S. (2010). Results of a rural school-based peer-led intervention for youth: Goals for health. *Journal of School Health*, 80(2), 57–65. <https://doi.org/10.1111/j.1746-1561.2009.00466.x>
- Greene, K. (2013). The Theory of Active Involvement: Processes underlying interventions that engage adolescents in message planning and/or production. *Health communication*, 28(7), 644-656.
- Lee, F. C. H., & Murdock, S. (2001). Teenagers as teachers programs: Ten essential elements. *Journal of Extension*, 39(1), 1–6. Retrieved from <http://www.joe.org/joe/2001february/rb1.php>
- Ponzio, R. C., & Peterson, K. D. (1999). Adolescents as effective instructors of child science: Participant perceptions. *Journal of Research and Development in Education*, 33(1), 36–46. Retrieved from <https://eric.ed.gov/?id=EJ600381>
- Weybright, E. H., Hrcirik, L. M., White, A. J., Cummins, M. M., Deen, M. K. Y., & Calodich, S. (2016). "I felt really respected and I know she felt respected too": Using youth-adult partnerships to promote positive youth development in 4-H youth. *Journal of Human Sciences and Extension*, 4(3), 93–110.
- Weybright, E. H., Trauntvein, N., & Deen, M. K. (2017). "It Was Like We Were All Equal": Maximizing Youth Development Using Youth-Adult Partnerships. *Journal of Park and Recreation Administration*, 35(1), 5–19. <https://doi.org/10.18666/JPra-2017-V35-I1-7246>
- Zeldin, S., Christens, B. D., & Powers, J. L. (2013). The Psychology and Practice of Youth-Adult Partnership: Bridging Generations for Youth Development and Community Change. *American Journal of Community Psychology*, 51(3–4), 385–397. <https://doi.org/10.1007/s10464-012-9558-y>

Zeldin, S., Petrokubi, J., & MacNeil, C. (2008). Youth adult partnerships in Community Decision Making: What does it take to engage adults in the practice? *American Journal of Community Psychology*, 41, 262–277.

Nutrition and Physical Activity Outcomes

- Andersen, L. B., Riddoch, C., Kriemler, S., & Hills, A. (2011). Physical activity and cardiovascular risk factors in children. *British Journal of Sports Medicine*, 45(11), 871–876. <https://doi.org/10.1136/bjsports-2011-090333>
- Avery, A., Bostock, L., & McCullough, F. (2015). A systematic review investigating interventions that can help reduce consumption of sugar-sweetened beverages in children leading to changes in body fatness. *Journal of Human Nutrition and Dietetics*, 28(1, SI), 52–64. <https://doi.org/10.1111/jhn.12267>
- Biddle, S. J. H., & Asare, M. (2011). Physical activity and mental health in children and adolescents: A review of reviews. *British Journal of Sports Medicine*, 45(11), 886–895. <https://doi.org/10.1136/bjsports-2011-090185>
- Boeing, H., Bechthold, A., Bub, A., Ellinger, S., Haller, D., Kroke, A., ... Watzl, B. (2012). Critical review: Vegetables and fruit in the prevention of chronic diseases. *European Journal of Nutrition*, 51(6), 637–663. <https://doi.org/10.1007/s00394-012-0380-y>
- Carson, V., Hunter, S., Kuzik, N., Gray, C. E., Poitras, V. J., Chaput, J.-P., ... Tremblay, M. S. (2016). Systematic review of sedentary behaviour and health indicators in school-aged children and youth: An update. *Applied Physiology, Nutrition and Metabolism*, 41(6), S240–S265. <https://doi.org/10.1139/apnm-2015-0630>
- Cesa, C. C., Sbruzzi, G., Ribeiro, R. A., Barbiero, S. M., de Oliveira Petkowicz, R., Eibel, B., ... Pellanda, L. C. (2014). Physical activity and cardiovascular risk factors in children: Meta-analysis of randomized clinical trials. *Preventive Medicine*, 69, 54–62. <https://doi.org/10.1016/j.ypmed.2014.08.014>
- Daniels, M. C., & Popkin, B. M. (2010). Impact of water intake on energy intake and weight status: A systematic review. *Nutrition Reviews*, 68(9), 505–521. <https://doi.org/10.1111/j.1753-4887.2010.00311.x>
- Gillman, M. W., Rifas-Shiman, S. L., Frazier, a L., Rockett, H. R., Camargo, C. a, Field, a E., ... Colditz, G. a. (2000). Family dinner and diet quality among older children and adolescents. *Archives of Family Medicine*, 9(3), 235–240. <https://doi.org/10.1001/archfami.9.3.235>
- Holder, M. D., Coleman, B., & Sehn, Z. L. (2009). The contribution of active and passive leisure to children's well-being. *Journal of Health Psychology*, 14(3), 378–386. <https://doi.org/10.1177/1359105308101676>
- Janssen, I., & LeBlanc, A. G. (2010). Systematic review of the health benefits of physical activity and fitness in school-aged children and youth. *International Journal of Behavioral Nutrition and Physical Activity*, 7(1).
- Kelder, S. H., Perry, C. L., Klepp, K. I., & Lytle, L. (1994). Longitudinal tracking of adolescent smoking, physical activity, and food choice behaviors. *American Journal of Public Health*, 84(7), 1121–1126.
- Kremer, P., Elshaug, C., Leslie, E., Toumbourou, J. W., Patton, G. C., & Williams, J. (2014). Physical activity, leisure-time screen use and depression among children and young adolescents. *Journal of Science and Medicine in Sport*, 17(2), 183–187. <https://doi.org/10.1016/j.jsams.2013.03.012>
- Larson, N., Neumark-Sztainer, D., Story, M., & Hannan, P. J. (2004). Family meals in adolescence: Associations with dietary intake and meal patterns, 40(2007), 2007.
- Laska, M. N., Larson, N. I., Neumark-Sztainer, D., & Story, M. (2013). Does involvement in food preparation track from adolescence to young adulthood and is it associated with better diet quality? Findings from a ten-year longitudinal study. *Public Health Nutrition*, 15(7), 1150–1158. <https://doi.org/10.1017/S1368980011003004>.Does
- Ledoux, T. A., Hingle, M. D., & Baranowski, T. (2011). Relationship of fruit and vegetable intake with adiposity: A systematic review. *Obesity Reviews*, 12(501), 143–150. <https://doi.org/10.1111/j.1467-789X.2010.00786.x>
- Muckelbauer, R., Libuda, L., Clausen, K., Toschke, A. M., Reinehr, T., & Kersting, M. (2012). Promotion and provision of drinking water in schools for overweight prevention: Randomized, controlled cluster trial. *Nutrition Today*, 47(4 SUPPL.1). <https://doi.org/10.1097/NT.0b013e318264ef5b>
- Mytton, O. T., Nnoaham, K., Eyles, H., Scarborough, P., & Ni Mhurchu, C. (2000). Systematic review and meta-analysis of the effect of increased vegetable and fruit consumption on body weight and energy intake. *BMC Public Health*, 17(1), 662. <https://doi.org/10.1186/s12889-017-4664-2>

- Neumark-Sztainer, D., Hannan, P. J., Story, M., Croll, J., & Perry, C. (2003). Family meal patterns: Associations with sociodemographic characteristics and improved dietary intake among adolescents. *Journal of the American Dietetic Association*, 103(3), 317–322. <https://doi.org/10.1053/jada.2003.50048>
- Sund, A. M., Larsson, B., & Wichstrøm, L. (2011). Role of physical and sedentary activities in the development of depressive symptoms in early adolescence. *Social Psychiatry and Psychiatric Epidemiology*, 46(5), 431–441. <https://doi.org/10.1007/s00127-010-0208-0>
- Tremblay, M. S., LeBlanc, A. G., Kho, M. E., Saunders, T. J., Larouche, R., Colley, R. C., ... Connor Gorber, S. (2011). Systematic review of sedentary behaviour and health indicators in school-aged children and youth. *Applied Physiology, Nutrition and Metabolism*, 8(98), 1–22. <https://doi.org/10.1139/apnm-2015-0630>
- Van Duyn, M. A. S., & Pivonka, E. (2000). Overview of the Health Benefits of Fruit and Vegetable Consumption for the Dietetics Professional. *Journal of the American Dietetic Association*. [https://doi.org/10.1016/S0002-8223\(00\)00420-X](https://doi.org/10.1016/S0002-8223(00)00420-X)
- Videon, T. M., & Manning, C. K. (2003). Influences on adolescent eating patterns: The importance of family meals. *Journal of Adolescent Health*, 32(5), 365–373. [https://doi.org/10.1016/S1054-139X\(02\)00711-5](https://doi.org/10.1016/S1054-139X(02)00711-5)



References

1. Roth, J. L., & Brooks-Gunn, J. (2016). Evaluating youth development programs: Progress and promise. *Applied Developmental Science, 20*(3), 188–202. doi:10.1080/10888691.2015.1113879
2. Lerner, R. M., & Lerner, J. V. (2013). *The Positive Development of Youth : Comprehensive Findings from the 4-h Study of Positive Youth Development*.
3. Eccles, J., & Gootman, J. A. (Eds.). (2002). *Community Programs to Promote Youth Development*. Washington, D.C.: National Academy Press. doi:10.17226/10022
4. Simpkins, S. D., Riggs, N. R., Ngo, B., Vest Ettekal, A., & Okamoto, D. (2017). Designing Culturally Responsive Organized After-School Activities. *Journal of Adolescent Research, 32*(1), 11–36. doi:10.1177/0743558416666169
5. Larson, R. W., & Ngo, B. (2017). Introduction to Special Issue: The Importance of Culture in Youth Programs. *Journal of Adolescent Research, 32*(1), 3–10. doi:10.1177/0743558416675234
6. Fredricks, J. A., & Simpkins, S. D. (2012). Promoting Positive Youth Development Through Organized After-School Activities: Taking a Closer Look at Participation of Ethnic Minority Youth. *Child Development Perspectives, 6*(3), 280–287. doi:10.1111/j.1750-8606.2011.00206.x
7. Kauh, T. J. (2010). *Recruiting and Retaining Older African American and Hispanic Boys in After-School Programs: What We Know and What We Still Need to Learn*.
8. Gutiérrez, V., Larson, R. W., Raffaelli, M., Fernandez, M., & Guzman, S. (2017). How Staff of Youth Programs Respond to Culture-Related Incidents: Nonengagement Versus Going “Full-Right-In.” *Journal of Adolescent Research, 32*(1), 64–93. doi:10.1177/0743558416664028
9. Neville, H. A., Awad, G. H., Brooks, J. E., Flores, M. P., & Bluemel, J. (2013). Color-blind racial ideology theory, training, and measurement implications in psychology. *American Psychologist, 68*(6), 455–466. doi:10.1037/a0033282
10. Spencer, M. B. (2011). American identity: Impact of youths’ differential experiences in society on their attachment to American ideals. *Applied Developmental Science, 15*(2), 61–69. doi:10.1080/10888691.2011.560806
11. Spencer, M. B., & Swanson, D. P. (2013). Opportunities and challenges to the development of healthy children and youth living in diverse communities. *Development and Psychopathology, 25*(4 PART 2), 1551–1566. doi:10.1017/S095457941300076X
12. National 4-H Council. (n.d.). 2016 -17 4-H Youth Voice: Youth Choice Request For Applications – 4-H Healthy Living Sub-grants supported by the Walmart Foundation.
13. Ammerman, A., Smith, T. W., & Calancie, L. (2014). Practice-Based Evidence in Public Health: Improving Reach, Relevance, and Results. *Annual Review of Public Health, 35*(1), 47–63. doi:10.1146/annurev-publhealth-032013-182458
14. Seawright, J., & Gerring, J. (2008). Case Selection Techniques in Case Study Research: A Menu of Qualitative and Quantitative Options. *Political Research Quarterly, 61*(2), 294–308. doi:10.1177/1065912907313077
15. Braun, V., & Clarke, V. (2008). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. doi:10.1191/1478088706qp063oa
16. Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In M. Lerner & W. Damon (Eds.), *The handbook of child psychology: Vol. 1. Theoretical models of human development* (6th ed., pp. 793–828). Hoboken, NJ: Wiley.
17. Braun, B., Bruns, K., Cronk, L., Fox, L. K., Koukel, S., Menestrel, S. Le, ... Warren, T. (2014). Cooperative Extension’s national framework for health and wellness. *United States Department of Agriculture, National Institute of Food and Agriculture*.
18. Williams, J. L., & Deutsch, N. L. (2016). Beyond between-group differences: Considering race, ethnicity, and culture in research on positive youth development programs. *Applied Developmental Science, 20*(3), 203–213. doi:10.1080/10888691.2015.1113880
19. Spencer, M. B., & Spencer, T. R. (2014). Invited Commentary: Exploring the Promises, Intricacies, and



- Challenges to Positive Youth Development. *Journal of Youth and Adolescence*, 43(6), 1027–1035. doi:10.1007/s10964-014-0125-8
20. Outley, C. W., & Witt, P. A. (2006). Working with diverse youth: Guidelines for achieving youth cultural competency in recreation services. *Journal of Park and Recreation Administration*, 24(4), 111–126.
 21. Natasha D. Watkins, Reed W. Larson, & Patrick J. Sullivan. (2007). Bridging Intergroup Difference in a Community Youth Program. *American Behavioral Scientist*, 51(3), 380–402.
 22. Erbstein, N., & Fabionar, J. (2014). *Latin@ Youth Participation In Youth Development Programs*. Davis, CA.
 23. Kelder, S. H., Perry, C. L., Klepp, K. I., & Lytle, L. (1994). Longitudinal tracking of adolescent smoking, physical activity, and food choice behaviors. *American Journal of Public Health*, 84(7), 1121–1126.
 24. Van Duyn, M. A. S., & Pivonka, E. (2000). Overview of the Health Benefits of Fruit and Vegetable Consumption for the Dietetics Professional. *Journal of the American Dietetic Association*. doi:10.1016/S0002-8223(00)00420-X
 25. Boeing, H., Bechthold, A., Bub, A., Ellinger, S., Haller, D., Kroke, A., ... Watzl, B. (2012). Critical review: Vegetables and fruit in the prevention of chronic diseases. *European Journal of Nutrition*, 51(6), 637–663. doi:10.1007/s00394-012-0380-y
 26. Mytton, O. T., Nnoaham, K., Eyles, H., Scarborough, P., & Ni Mhurchu, C. (2000). Systematic review and meta-analysis of the effect of increased vegetable and fruit consumption on body weight and energy intake. *BMC Public Health*, 17(1), 662. doi:10.1186/s12889-017-4664-2
 27. Muckelbauer, R., Libuda, L., Clausen, K., Toschke, A. M., Reinehr, T., & Kersting, M. (2012). Promotion and provision of drinking water in schools for overweight prevention: Randomized, controlled cluster trial. *Nutrition Today*, 47(4 SUPPL.1). doi:10.1097/NT.0b013e318264ef5b
 28. Pan, A., Malik, V. S., Schulze, M. B., Manson, J. E., Willett, W. C., & Hu, F. B. (2012). Plain-water intake and risk of type 2 diabetes in young and middle-aged women. *American Journal of Clinical Nutrition*, 95, 1454–1460. doi:10.3945/ajcn.111.032698.1
 29. Gillman, M. W., Rifas-Shiman, S. L., Frazier, a L., Rockett, H. R., Camargo, C. a, Field, a E., ... Colditz, G. a. (2000). Family dinner and diet quality among older children and adolescents. *Archives of family medicine*, 9(3), 235–240. doi:10.1001/archfami.9.3.235
 30. Neumark-Sztainer, D., Hannan, P. J., Story, M., Croll, J., & Perry, C. (2003). Family meal patterns: Associations with sociodemographic characteristics and improved dietary intake among adolescents. *Journal of the American Dietetic Association*, 103(3), 317–322. doi:10.1053/jada.2003.50048
 31. Eisenberg, M. E., Olson, R. E., Neumark-Sztainer, D., Story, M., & Bearinger, L. H. (2004). Correlations Between Family Meals and Psychosocial Well-being Among Adolescents. *Archives of Pediatrics & Adolescent Medicine*, 158(8), 792–796. doi:10.1001/archpedi.158.8.792
 32. Hammons, A. J., & Fiese, B. H. (2011). Is Frequency of Shared Family Meals Related to the Nutritional Health of Children and Adolescents? *Pediatrics*, 127(6), e1565–e1574. doi:10.1542/peds.2010-1440
 33. Biddle, S. J. H., & Asare, M. (2011). Physical activity and mental health in children and adolescents: A review of reviews. *British Journal of Sports Medicine*, 45(11), 886–895. doi:10.1136/bjsports-2011-090185
 34. Hills, A. P., Andersen, L. B., & Byrne, N. M. (2011). Physical activity and obesity in children. *British Journal of Sports Medicine*, 45(11), 866–870. doi:10.1136/bjsports-2011-090199
 35. Holder, M. D., Coleman, B., & Sehn, Z. L. (2009). The contribution of active and passive leisure to children's well-being. *Journal of Health Psychology*, 14(3), 378–386. doi:10.1177/1359105308101676
 36. Wiles, N. J., Jones, G. T., Haase, A. M., Lawlor, D. A., Macfarlane, G. J., & Lewis, G. (2008). Physical activity and emotional problems amongst adolescents. *Social Psychiatry and Psychiatric Epidemiology*, 43(10), 765–772. doi:10.1007/s00127-008-0362-9
 37. Janssen, I., & LeBlanc, A. G. (2010). Systematic review of the health benefits of physical activity and fitness in school-aged children and youth. *International Journal of Behavioral Nutrition and Physical Activity*, 7(1).
 38. Cesa, C. C., Sbruzzi, G., Ribeiro, R. A., Barbiero, S. M., de Oliveira Petkowicz, R., Eibel, B., ... Pellanda, L. C. (2014). Physical activity and cardiovascular risk factors in children: Meta-analysis of randomized clinical trials. *Preventive Medicine*, 69, 54–62. doi:10.1016/j.ypmed.2014.08.014



39. Tremblay, M. S., LeBlanc, A. G., Kho, M. E., Saunders, T. J., Larouche, R., Colley, R. C., ... Connor Gorber, S. (2011). Systematic review of sedentary behaviour and health indicators in school-aged children and youth. *Applied Physiology, Nutrition and Metabolism*, 8(98), 1–22. doi:10.1139/apnm-2015-0630
40. Costigan, S. A., Barnett, L., Plotnikoff, R. C., & Lubans, D. R. (2013). The health indicators associated with screen-based sedentary behavior among adolescent girls: A systematic review. *Journal of Adolescent Health*, 52(4), 382–392. doi:10.1016/j.jadohealth.2012.07.018
41. Hamer, M., Stamatakis, E., & Mishra, G. (2009). Psychological Distress, Television Viewing, and Physical Activity in Children Aged 4 to 12 Years. *Pediatrics*, 123(5), 1263–1268. doi:10.1542/peds.2008-1523
42. Kremer, P., Elshaug, C., Leslie, E., Toumbourou, J. W., Patton, G. C., & Williams, J. (2014). Physical activity, leisure-time screen use and depression among children and young adolescents. *Journal of Science and Medicine in Sport*, 17(2), 183–187. doi:10.1016/j.jsams.2013.03.012
43. Page, A. S., Cooper, A. R., Griew, P., & Jago, R. (2010). Children's Screen Viewing is Related to Psychological Difficulties Irrespective of Physical Activity. *Pediatrics*, 126(5), e1011–e1017. doi:10.1542/peds.2010-1154
44. Ammerman, A., Smith, T. W., & Calancie, L. (2014). Practice-Based Evidence in Public Health: Improving Reach, Relevance, and Results. *Annual Review of Public Health*, 35(1), 47–63. doi:10.1146/annurev-publhealth-032013-182458
45. SAMHSA. (2018). Emerging Evidence in Culture-Centered Practices. *SAMHSA's National Registry of Evidence-based Programs and Practices*.
46. Berkel, C., Mauricio, A. M., Schoenfelder, E., & Sandler, I. N. (2011). Putting the Pieces Together: An Integrated Model of Program Implementation. *Prevention Science*, 12, 23–33. doi:10.1007/s11121-010-0186-1
47. Pérez, D., Van der Stuyft, P., Zabala, M. C., Castro, M., & Lefèvre, P. (2016). A modified theoretical framework to assess implementation fidelity of adaptive public health interventions. *Implementation Science*, 11(1), 1–11. doi:10.1186/s13012-016-0457-8
48. Century, J., Rudnick, M., & Freeman, C. (2010). A Framework for Measuring Fidelity of Implementation: A Foundation for Shared Language and Accumulation of Knowledge. *American Journal of Evaluation*, 31(2), 199–218. doi:10.1177/1098214010366173
49. Durlak, J. A. (2010). The importance of doing well in whatever you do: A commentary on the special section, "Implementation research in early childhood education." *Early Childhood Research Quarterly*, 25(3), 348–357. doi:10.1016/j.ecresq.2010.03.003
50. Griner, D., & Smith, T. B. (2006). Culturally adapted mental health intervention: A meta-analytic review. *Psychotherapy: Theory, Research, Practice, Training*, 43(4), 531–548. doi:10.1037/0033-3204.43.4.531
51. Botvin, G. J. (2004). Advancing Prevention Science and Practice: Challenges, Critical Issues, and Future Directions. *Prevention Science*, 5(1), 69–72. doi:10.1023/B:PREV.0000013984.83251.8b
52. Dusenbury, L., Brannigan, R., Falco, M., & Hansen, W. B. (2003). A review of research on fidelity of implementation: implications for drug abuse prevention in school settings. *Health Education Research*, 18(2), 237–256. doi:10.1093/her/18.2.237
53. Hamilton, S. F., Northern, A., & Neff, R. (2014). Strengthening 4-H by Analyzing Enrollment Data. *Journal of Extension*, 52(3), 1–13.
54. Colby, M., Hecht, M. L., Miller-Day, M., Krieger, J. L., Syvertsen, A. K., Graham, J. W., & Pettigrew, J. (2013). Adapting School-Based Substance Use Prevention Curriculum Through Cultural Grounding: A Review and Exemplar of Adaptation Processes for Rural Schools. *American Journal of Community Psychology*, 51(1–2), 190–205. doi:10.1007/s10464-012-9524-8
55. Trickett, E. J., Beehler, S., Deutsch, C., Green, L. W., Hawe, P., McLeroy, K., ... Trimble, J. E. (2011). Advancing the science of community-level interventions. *American journal of public health*, 101(8), 1410–9. doi:10.2105/AJPH.2010.300113
56. Kreuter, M. W., Lukwago, S. N., Bucholtz, D. C., Clark, E. M., & Sanders-Thompson, V. (2003). Achieving Cultural Appropriateness in Health Promotion Programs: Targeted and Tailored Approaches. *Health Education & Behavior*, 30(2), 133–146. doi:10.1177/1090198102251021



57. Rogler, L. H., Malgady, R. G., Costantino, G., & Blumenthal, R. (1987). What do culturally sensitive mental health services mean? The case of Hispanics. *American Psychologist*, 42(6), 565–570. doi:10.1037/0003-066X.42.6.565
58. Greene, K. (2013). The Theory of Active Involvement: Processes Underlying Interventions That Engage Adolescents in Message Planning and/or Production. *Health Communication*, 28(7), 644–656. doi:10.1080/10410236.2012.762824
59. Resnicow, K., Baranowski, T., Ahluwalia, J. S., & Braithwaite, R. L. (1999). Cultural sensitivity in public health: defined and demystified. *Ethnicity & disease*, 9(1), 10–21. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/10355471>
60. Flynn, M. A. T., McNeil, D. A., Maloff, B., Mutasingwa, D., Wu, M., Ford, C., & Tough, S. C. (2006). Reducing obesity and related chronic disease risk in children and youth: a synthesis of evidence with “best practice” recommendations. *Obesity Reviews: An Official Journal Of The International Association For The Study Of Obesity*, 7(Suppl 1), 7–66. doi:OBR242 [pii]n10.1111/j.1467-789X.2006.00242.x
61. Institute of Medicine. (2007). *Progress in preventing childhood obesity: How do we measure up?* (J. P. Koplan, C. T. Liverman, V. I. Krrak, & S. L. Wisham, Eds.). Washington, D.C.: The National Academies Press. doi:10.17226/11722
62. Smith, E. P., Witherspoon, D. P., & Osgood, D. W. (2017). Positive Youth Development Among Diverse Racial–Ethnic Children: Quality Afterschool Contexts as Developmental Assets. *Child Development*, 88(4), 1063–1078. doi:10.1111/cdev.12870
63. Jones, J. A., Pracht, D., Simonne, E., Renfrow, K., & Hunter, C. (2018). Nonprofit Partnerships in Extension Programming : A Pilot Study. *Journal of Extension*, 56(2), 1–10.
64. Blake-Beard, S., Bayne, M. L., Crosby, F. J., & Muller, C. B. (2011). Matching by race and gender in mentoring relationships: Keeping our eyes on the prize. *Journal of Social Issues*, 67(3), 622–643. doi:10.1111/j.1540-4560.2011.01717.x
65. Arnold, M. E., Flesch, J. M., Ashton, C., Black, L., Brody, B., Hosty, M., & Northway, S. (2016). YA4-H! Youth Advocates for Health : Impact of a 4-H teens-as- teachers program. *Journal of Extension*, 54(6).
66. Lee, F. C. H., & Murdock, S. (2001). Teenagers as Teachers Programs: Ten Essential Elements. *Journal of extension*, 39(1). Retrieved from <https://www.joe.org/joe/2001february/rb1.php>
67. Hammond-Diedrich, K. C., & Walsh, D. (2006). Empowering Youth through a Responsibility-Based Cross-Age Teacher Program: An Investigation into Impact and Possibilities, Physical Educator, 2006. *Physical Educator*, 63(3), 134–142. Retrieved from <https://eric-ed-gov.ezproxy1.library.arizona.edu/?id=EJ768177>
68. Ponzio, R. C., & Peterson, K. D. (1999). Adolescents as effective instructors of child science: Participant perceptions. *Journal of Research and Development in Education*, 33(1), 36–46.
69. Sundeen, R. A., & Raskoff, S. A. (n.d.). *Ports of Entry and Obstacles Teenagers’ Access to Volunteer Activities*. Retrieved from <https://onlinelibrary-wiley-com.ezproxy1.library.arizona.edu/doi/pdf/10.1002/nml.11204>
70. Weybright, E. H., Trauntvein, N., & Deen, M. K. (2017). “It Was Like We Were All Equal”: Maximizing Youth Development Using Youth-Adult Partnerships. *Journal of Park and Recreation Administration*, 35(1), 5–19. doi:10.18666/JPra-2017-V35-11-7246
71. Serido, J., Borden, L. M., & Wiggs, C. B. (2014). Breaking Down Potential Barriers to Continued Program Participation. *Youth & Society*, 46(1), 51–69. doi:10.1177/0044118X11424916
72. Weybright, E. H., Hrnčirik, L. M., White, A. J., Cummins, M. M., Deen, M. K. Y., & Calodich, S. (2016). “ I felt really respected and I know she felt respected too ”: Using youth-adult partnerships to promote positive youth development in 4-H youth. *Journal of Human Sciences and Extension*, 4(3), 93–110.
73. Syed, M., Azmitia, M., & Cooper, C. R. (2011). Identity and Academic Success among Underrepresented Ethnic Minorities: An Interdisciplinary Review and Integration, Identity and Academic Success among Underrepresented Ethnic Minorities: An Interdisciplinary Review and Integration. *Journal of Social Issues*, 67, 67(3, 3), 442, 442–468, 468. doi:10.1111/j.1540-4560.2011.01709.x, 10.1111/j.1540-4560.2011.01709.x
74. Newby, L., & Sallee, J. (2010). 4-H Membership Recruitment/Retention Problems: A Meta-Analysis of Possible Causes and Solutions. *Journal of Youth Development: Bridging research and practice*, 6(4), 1–10.



75. Alston, A., & Crutchfield, C. (2009). A Descriptive Analysis of the Perceptions of North Carolina 4-H Agents Toward Minority Youth Participation in Agricultural-Related Activities. *Journal of Extension*, 47(5), 1–10.
76. LaVergne, D. (2013). Diversity Inclusion in 4-H Youth Programs: Examining the Perceptions Among West Virginia 4-H Youth Professionals. *Journal of Extension*, 51(4), 1–12.
77. Lavergne, D. D. (2015). Perceptions of 4-H Professionals on Proposed Solutions Towards Diversity Inclusive 4-H Youth Programs. *Journal of Youth Development: Bridigng research and practice*, 10(1), 1–13.
78. Avent, M. D., & Jayaratne, K. S. U. (2017). Factors Limiting Youth Participation in 4-H and Other Youth Development Programs in Underserved Communities. *Journal of Extension*, 55(4).
79. National 4-H Council. (n.d.). Youth Voice: Youth Choice 2015-2016 Request for Applications.
80. Warner, M., & Hefetz, A. (2002). The uneven distribution of market solutions for public goods. *Journal of Urban Affairs*, 24(4), 445–459. doi:10.1111/1467-9906.t01-1-00146
81. Wilkinson, K. P. (1991). *The community in rural America*. New York: Greenwood Press.
82. Kidder, B. (2006). *The Challenges of Rural Transportation*. Logan, UT.