

NORTH CAROLINA

SNAP-Ed PROGRAM OUTCOME EVALUATION



FEDERAL FISCAL YEAR 2022

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NC DEPARTMENT OF
**HEALTH AND
HUMAN SERVICES**
Division of Child and Family Well-Being

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BACKGROUND

The Supplemental Nutrition Assistance Program Education (SNAP-Ed) is a federal nutrition education program of the United States Department of Agriculture (USDA) Food and Nutrition Service (FNS) Supplemental Nutrition Assistance Program (SNAP). The purpose of SNAP-Ed is to increase the likelihood that individuals with limited budgets will make healthy food choices and choose physically active lifestyles based on the current *Dietary Guidelines for Americans, 2020-2025* (USDA & U.S. Department of Health and Human Services, 2020) and the implementation of public health approaches.

SNAP-Ed programs are implemented across North Carolina to address nutrition and physical activity for individuals or families with low income (i.e., those with incomes at or below 185% of the federal poverty guidelines). Specifically, direct education programs are implemented to actively engage participants in learning about nutrition, how to make their food dollars stretch further, and ways to be more physically active (USDA-FNS, 2016). Recognizing that consumers' choices take place in the context of what is available, affordable, and accessible in their communities, SNAP-Ed also funds policy, systems, and environmental (PSE) change interventions to complement direct education efforts and support healthy behaviors. These PSE strategies function to help facilitate the adoption of healthy behaviors by changing the policies, systems, and environments in which individuals make decisions and make healthier choices more accessible. SNAP-Ed encourages multi-component and multi-level interventions that include marketing, education, staff trainings, and parent/community involvement to develop sustainable PSE changes.

To improve the health of eligible North Carolinians, the North Carolina Department of Child and Family Well-Being partners with the following nine SNAP-Ed implementing agencies (IAs):

1. Alice Aycock Poe Center for Health Education
2. Down East Partnership for Children
3. Durham County Department of Health – Durham's Innovative Nutrition Education
4. East Carolina University – Motivating Adolescents with Technology to Choose Health
5. North Carolina Agricultural and Technical State University – Try Healthy
6. North Carolina State University – Steps to Health
7. Second Harvest Food Bank of Northwest North Carolina
8. University of North Carolina at Chapel Hill – Center for Health Promotion and Disease Prevention
9. University of North Carolina at Greensboro – Recipe for Success

To ensure consistent and high-quality evaluation of SNAP-Education interventions, FNS adopted the SNAP-Education Evaluation Framework for its programs nationally in 2016 (USDA-FNS, 2016). This framework includes recommendations for assessing and reporting on indicators that evaluate outcomes related to direct education and PSE changes.

This report focuses on an evaluation of SNAP-Education direct nutrition education interventions and PSE changes implemented by the nine North Carolina IAs listed above for the federal fiscal year (FFY) 2022. Of particular interest were medium-term (MT) and long-term (LT) indicators focused on healthy eating behavior changes (MT1), the organizational adoption and promotion of nutrition supports (MT5, LT5), and physical activity and reduced sedentary behavior supports (MT6, LT6) that are defined by the Interpretive Guide to the SNAP-Education Evaluation Framework (USDA-FNS, 2016). While data were collected on the MT1, MT5, MT6, LT5, and LT6 indicators, the comprehensive work that is completed by IAs may not be entirely reflected in this evaluation. Activities may be reported under additional SNAP-Education Evaluation Framework indicators specific to the interventions that IAs implement independently.

METHODS

This section provides an overview of the methods used to evaluate the FFY 2022 direct nutrition education and PSE changes implemented by the North Carolina IAs including how information was obtained for the priority populations described in this report.

PARTICIPANTS AND PROCEDURE

The sample includes SNAP-Education direct education participants from the SNAP-Education-eligible population (at or below 185% of federal poverty guidelines) in North Carolina. IAs delivered direct education programming for varying age groups including children, teens, adults, and seniors. Age group and other demographic information were collected by IAs from direct education surveys. PSE data was reported at the site or organizational level. All nine IAs submitted both direct education and PSE data for FFY 2022.

DIRECT EDUCATION

Self-reported eating behaviors were assessed for direct education participants using pre- and post-surveys completed at the beginning and end of the direct education program. Participants' responses to questions were compared pre- to post-program to determine whether there were statistically significant changes in self-reported dietary consumption based on the MT1 sub-indicators for healthy eating behaviors, shown in Table 1. IAs used a variety of survey instruments and questions to capture this information. To account for the differences between

instruments, the Public Health Institute Center for Wellness and Nutrition (PHI CWN) developed guidelines per the SNAP-Ed Evaluation Framework (USDA-FNS, 2016) for recoding survey responses. To indicate whether participants' behavior conformed to the recommendations of the *Dietary Guidelines for Americans, 2020-2025*, PHI CWN established standards and cutoff criteria in consultation with nutrition evaluation experts and an expert committee for recoding responses for healthy eating behavior (MT1) changes. Each IA used these recoding guidelines, referred to as PHI CWN scoring, to recode participant responses from each survey before submitting data for evaluation.

Table 1. SNAP-Ed Evaluation Framework indicators relevant to the North Carolina direct education activities

| Relevant Indicator | Description |
|--------------------|---|
| MT1c | Eating more than one kind of fruit throughout the day or week |
| MT1d | Eating more than one kind of vegetable throughout the day or week |
| MT1g | Drinking water |
| MT1h | Drinking fewer sugar-sweetened beverages (SSBs) |
| MT1l | Cups of fruit consumed per day |
| MT1m | Cups of vegetables consumed per day |

POLICY, SYSTEMS, AND ENVIRONMENTAL CHANGES

North Carolina IAs reported PSE changes using the MT5 and MT6 indicators as described in Table 2. Those IAs that worked with sites or organizations to implement nutritional or physical activity supports reported each PSE site, PSE change, promotional effort, estimated reach, and other pertinent information to describe each PSE change. Reporting of reach was not standardized, but IAs were provided general guidelines to support them in estimating reach counts. North Carolina IAs also reported on LT5 and LT6 indicators for sites that implemented a multi-level and multi-component intervention (i.e., sites with a PSE change and one or more of the following components: evidence-based education, marketing, parent/community involvement, and staff training on continuous program and policy implementation).

Table 2. SNAP-Ed Evaluation Framework indicators relevant to PSE work in North Carolina

| Relevant Indicator | Description |
|--------------------|---------------------------------------|
| MT5b/MT6b | Total number of policy changes |
| MT5c/MT6c | Total number of systems changes |
| MT5d/MT6d | Total number of environmental changes |

| Relevant Indicator | Description |
|--------------------|---|
| MT5e/MT6e | Total number of promotional efforts for a PSE change |
| MT5f/MT6f | Potential Reach: Total potential number of individuals who encountered the improved environment or were affected by the policy change on a regular (typical) basis and were assumed to be influenced by it. |
| LT5a/LT6a | Total number of sites or organizations that implemented a multi-component and multi-level intervention with one or more changes in MT5/MT6 (site or organizational adoption of PSE changes and promotion) and one or more of the following additional components: <ol style="list-style-type: none"> 1. Evidence-based education 2. Marketing 3. Parent/community involvement 4. Staff training on continuous program and policy implementation |
| LT5b/LT6b | Total number of components per site or organization, and types of components implemented during the period assessed |



STATISTICAL ANALYSIS

The following statistical analyses were performed to evaluate direct education and PSE changes across all nine North Carolina IAs.

DIRECT EDUCATION

Direct education participant demographics and survey data were recorded by the North Carolina SNAP-Ed IAs in a Microsoft Excel template and reported to PHI CWN. Descriptive

statistics (frequencies, percentages) of the sample that completed assessments for direct education interventions in North Carolina were computed.

To evaluate changes in the percentage of participants meeting dietary guidelines, statistical analyses were performed comparing pre- and post-survey data. For dichotomous outcomes, such as indicators related to healthy eating (MT1), McNemar tests were conducted to test for differences in the proportion of participants that met guidelines pre- and post-intervention. For continuous outcomes, such as cups of fruit (MT1l) and cups of vegetables (MT1m) consumed per day, paired-samples *t*-tests were conducted to test for differences in mean self-reported cups of fruits or vegetables pre- to post-intervention. For statistically significant results on McNemar tests or paired-samples *t*-tests ($p < .05$), an effect size was calculated to report the magnitude of differences between post- and pre-tests.

Since SNAP-Ed interventions are tailored for specific age groups to address different dietary needs for each age group, statistical analyses for direct education were conducted by age group (i.e., children, teenagers, adults, and seniors) and not combined.

POLICY, SYSTEMS, AND ENVIRONMENTAL CHANGES

Nutrition and physical activity supports were assessed to identify the number of PSE sites and changes that were implemented within various community settings throughout North Carolina. For the MT5 and MT6 indicators listed previously in Table 2, the total number of policy (MT5b, MT6b), systems (MT5c, MT6c), and environmental (MT5d, MT6d) changes, the number of promotional efforts (MT5e, MT6e), and the top settings where PSEs occurred were reported. Estimated reach (MT5f, MT6f) was reported for PSE changes. For LT5 and LT6 indicators the total number of sites that implemented a multi-component and multi-level intervention with one or more changes in MT5/MT6 (LT5a, LT6a) as well as the total number of components per site, and types of components implemented (LT5b/LT6b) were reported. PSE activities were reported in the Program Evaluation and Reporting System (PEARS), and an export was generated for this analysis. Descriptive statistics were conducted to analyze PSE outcomes of interest.

FINDINGS

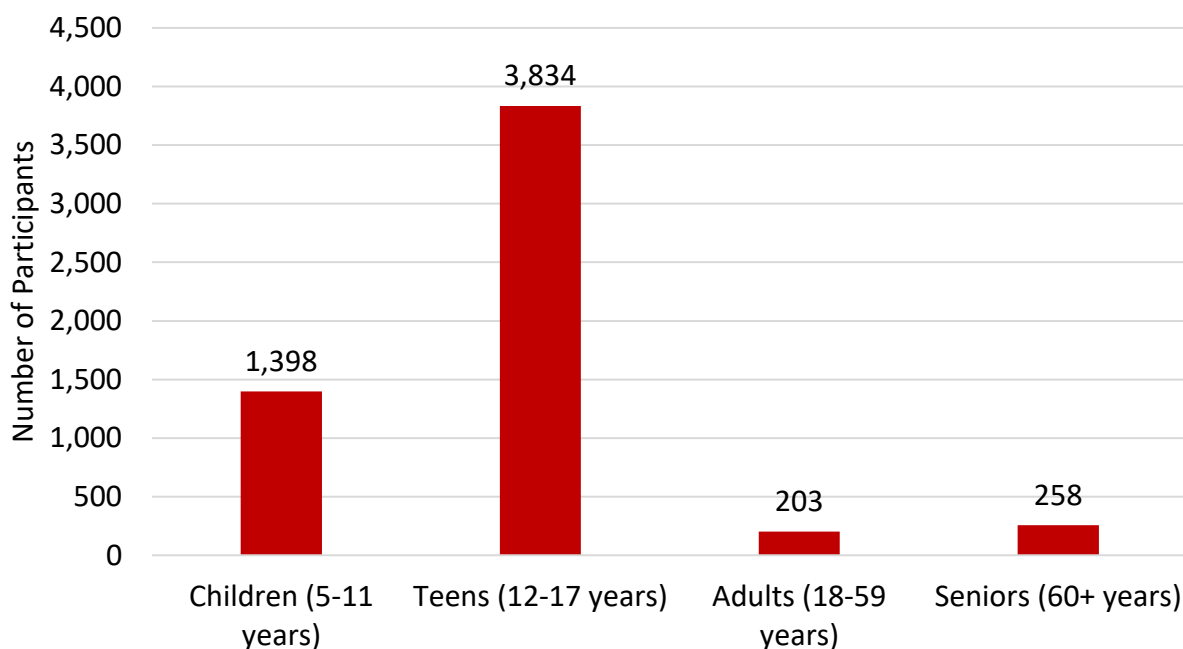
The findings for the direct education and PSE changes implemented are presented below. Direct education findings are presented for the MT1 indicator and disaggregated by age (i.e., child, teen, adult, and senior). PSE findings are presented for the MT5 and MT6 indicators and

disaggregated by domain and setting. Additionally, implementation supports for PSEs (LT5 and LT6 indicators) and COVID-19 impacts on PSE changes are included in the findings for FFY 2022.

DIRECT EDUCATION

9,155 SNAP-Ed participants responded to at least one indicator on either the pre- or post-survey. This evaluation focuses, however, on the 5,693 participants who provided data for both pre- and post-intervention for at least one MT1 indicator. As shown in Figure 1, 1,398 participants were children (ages 5-11), 3,834 were teens (ages 12-17), 203 were adults (ages 18-59), and 258 were seniors (ages 60+). The Appendix shows the demographics of the entire sample (Table A1).

Figure 1. Direct education participants with pre- and post-intervention data by age group (N = 5,693)



In addition to age, ethnicity, race, and sex were reported for many participants, as shown in Figures 2-4. Demographic characteristics were not reported for most children ages 5-11 years. These results are also presented in table format in Appendix I (Table A2).

Figure 2. Direct education participants with pre- and post-intervention data by ethnicity and age (N = 5,693)

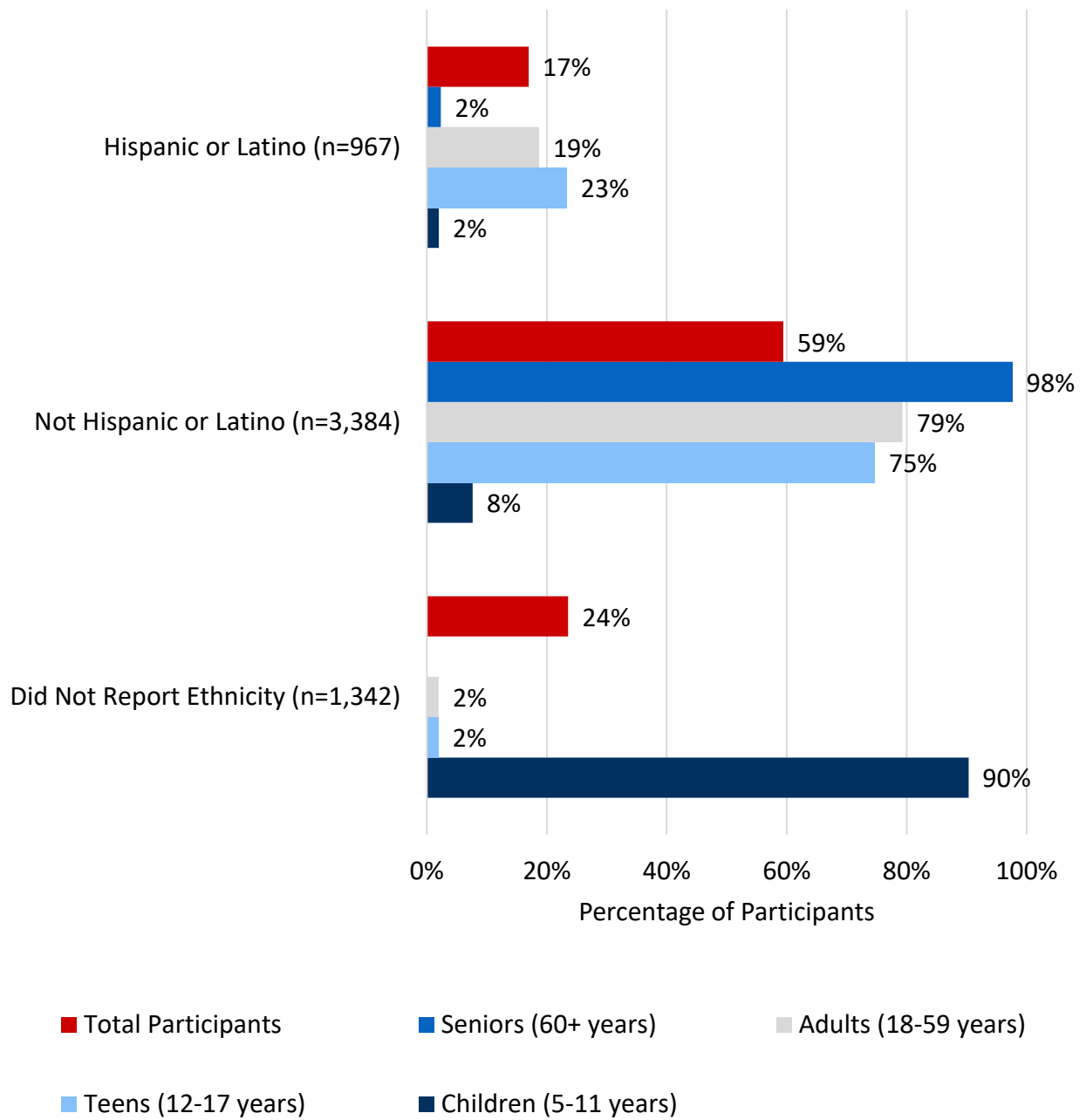


Figure 3. Direct education participants with pre- and post-intervention data by race and age (N = 5,693)

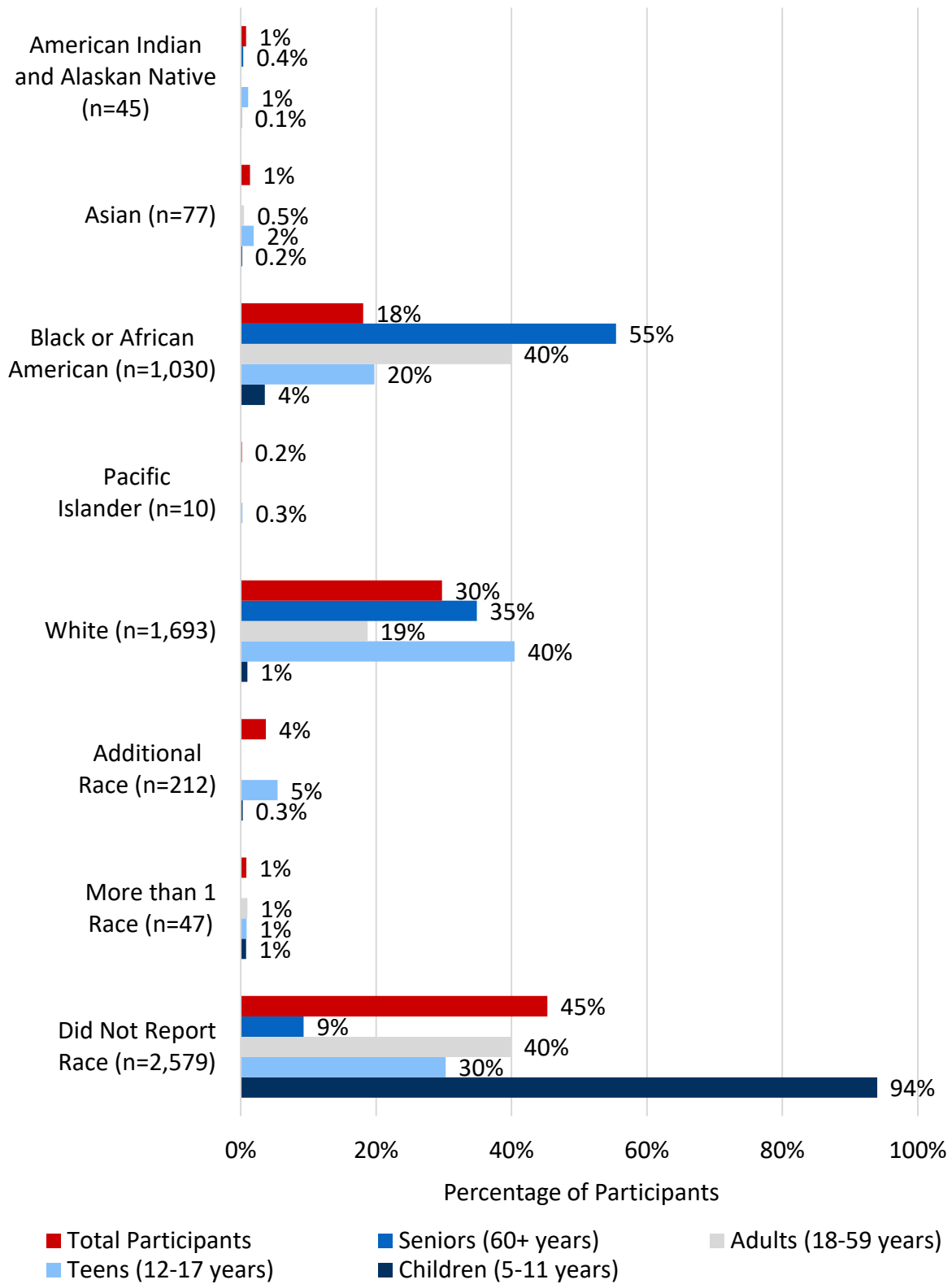
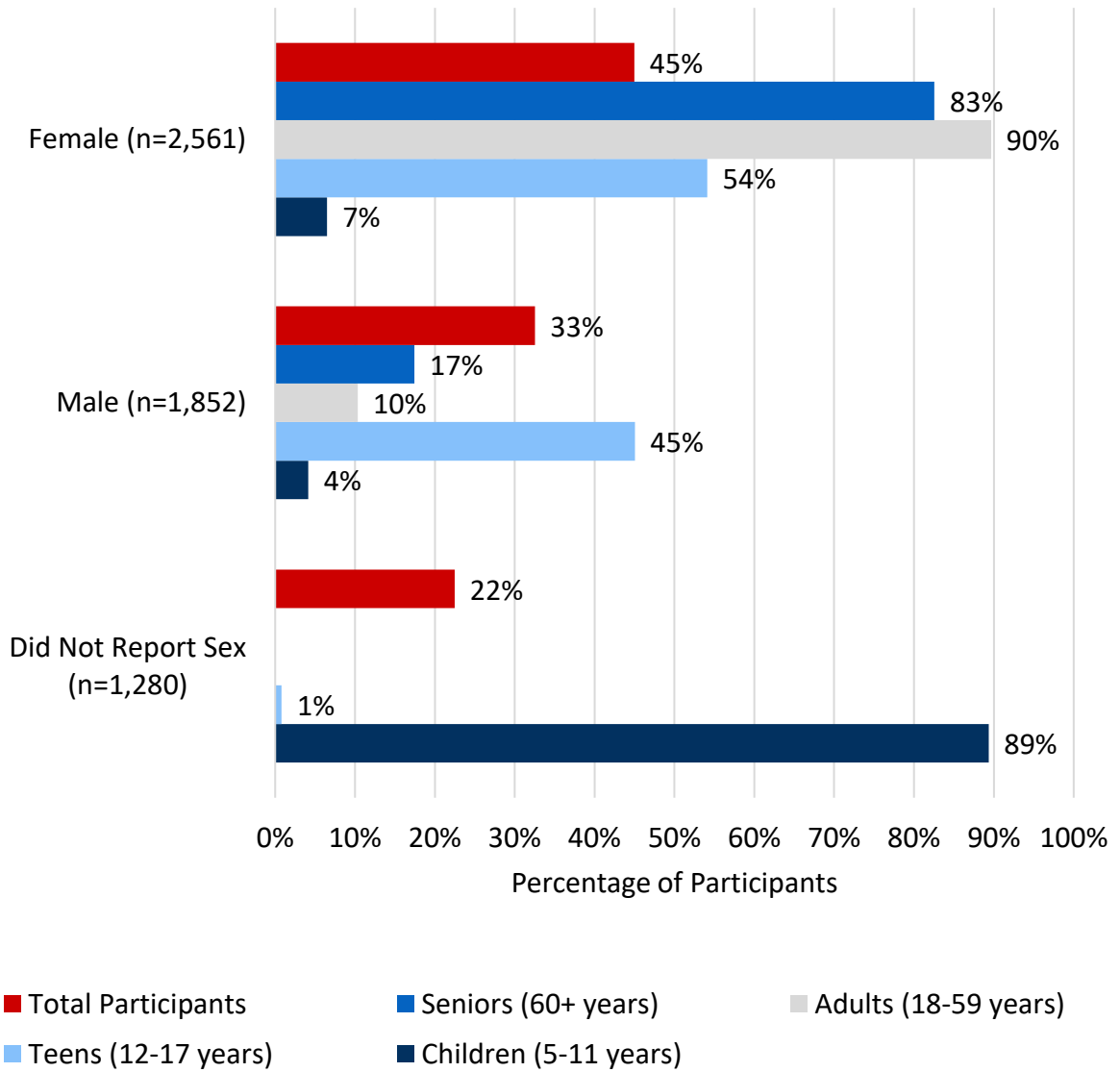


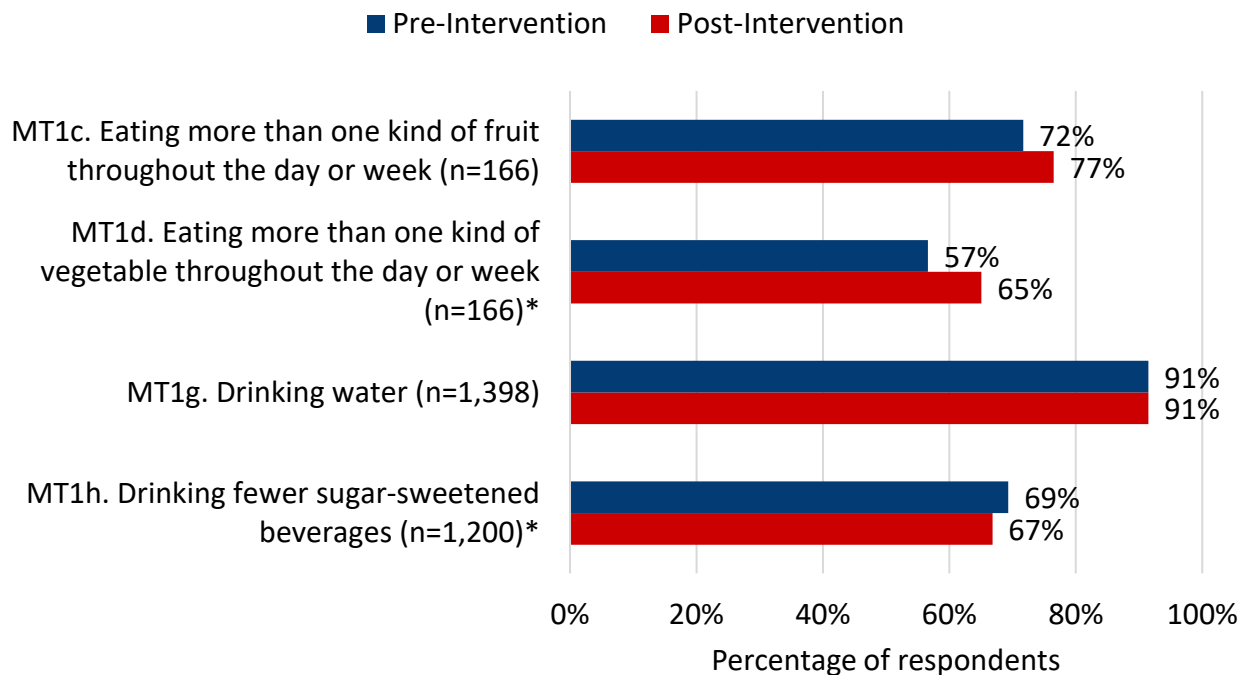
Figure 4. Direct education participants with pre- and post-intervention data by sex and age (N = 5,693)



CHILD DIRECT EDUCATION RESULTS

This section presents the results for children (ages 5-11) for each MT1 indicator and is visually presented in Figure 5.

Figure 5. Percentage of children (ages 5-11 years) who met *Dietary Guidelines for Americans* recommendations for MT1 indicators



*Note: * indicates a statistically significant change from pre- to post-intervention based on McNemar’s test at a significance level of alpha=0.05.*

MT1c. Eating more than one kind of fruit throughout the day or week

A total of 166 children reported whether they ate more than one kind of fruit throughout the day or week. In the pre-test, 119 children (72%) reported eating more than one kind of fruit throughout the day or week, which increased slightly in the post-test to 127 children (77%) reporting eating more than one kind of fruit throughout the day or week. A McNemar test showed this change was not statistically significant ($X^2(1) = 1.29, p = 0.260$).

MT1d. Eating more than one kind of vegetable throughout the day or week

A total of 166 children reported whether they ate more than one kind of vegetable throughout the day or week. In the pre-test, 94 children (57%) met the recommendation, whereas, in the post-test, 108 children (65%) met the recommendation. A McNemar test showed this increase was statistically significant ($X^2(1) = 3.84, p = 0.050, g = 0.160$).

MT1g. Drinking water

A total of 1,398 children reported whether they drank water the previous day. Almost all children ($n = 1,279, 91%$) reported meeting the recommendation for drinking water and there was no change from pre-test to post-test.

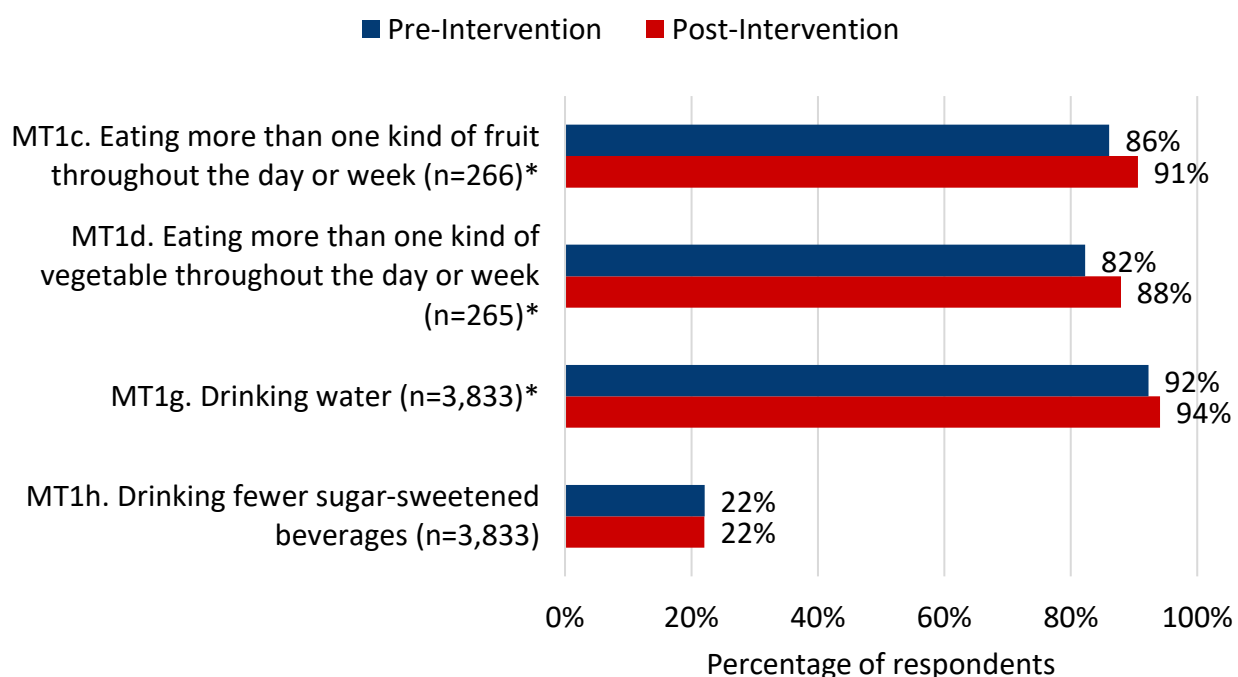
MT1h. Drinking fewer sugar-sweetened beverages

A total of 1,200 children reported the frequency with which they drank any sugar-sweetened beverages (SSBs) during the previous day. In the pre-test, 69% of children ($n = 832$) met the recommendation which decreased slightly in the post-test, where 802 children (67%) met the recommendation. A McNemar test showed this to be a statistically significant change in the percentage of children meeting the dietary guidelines recommendation for drinking SSBs from pre-test to post-test ($\chi^2(1) = 4.04, p = 0.04, g = -.070$).

TEENAGER DIRECT EDUCATION RESULTS

This section presents the results for teenagers (ages 12-17) for each MT1 indicator and is visually presented in Figure 6.

Figure 6. Percentage of teenagers (ages 12-17) who met *Dietary Guidelines for Americans* recommendations for MT1 indicators



*Note: * indicates a statistically significant change from pre- to post-intervention based on McNemar's test at a significance level of $\alpha=0.05$.*

MT1c. Eating more than one kind of fruit throughout the day or week

A total of 266 teenagers reported whether they ate more than one kind of fruit throughout the day or week. Compared to the pre-test, more teens reported more than one kind of fruit throughout the day or week at the post-test. In the pre-test, 229 teenagers (86%) met the recommendation, whereas, in the post-test, 241 teenagers (91%) met the recommendation. A

McNemar test showed this was a statistically significant increase in the number of teenagers who met recommendations for eating more than one kind of fruit throughout the day or week ($\chi^2(1) = 3.78$, $p = 0.052$, $g = 0.190$).

MT1d. Eating more than one kind of vegetable throughout the day or week

A total of 265 teenagers reported whether they ate more than one kind of vegetable throughout the day or week. Like fruit, more teenagers reported more than one kind of vegetable throughout the day or week in the post-test than in the pre-test. In the pre-test, 218 teenagers (82%) met the recommendation, whereas, in the post-test, 233 teenagers (88%) met the recommendation. A McNemar test showed this to be a statistically significant increase in the number of teenagers who met recommendations for eating more than one kind of vegetable throughout the day or week ($\chi^2(1) = 5.60$, $p = .018$, $g = 0.214$).

MT1g. Drinking water

A total of 3,833 teenagers reported whether they drank water the previous day. Most teenagers reported drinking water at the pre- and post-tests. In the pre-test, 3,537 teenagers (92%) met the recommendation which increased to 3,608 teenagers (94%) at the post-test. A McNemar test showed this to be a statistically significant change in reports of meeting the dietary guidelines recommendation for drinking water from pre-test to post-test ($\chi^2(1) = 12.86$, $p = <0.001$, $g = 0.093$).

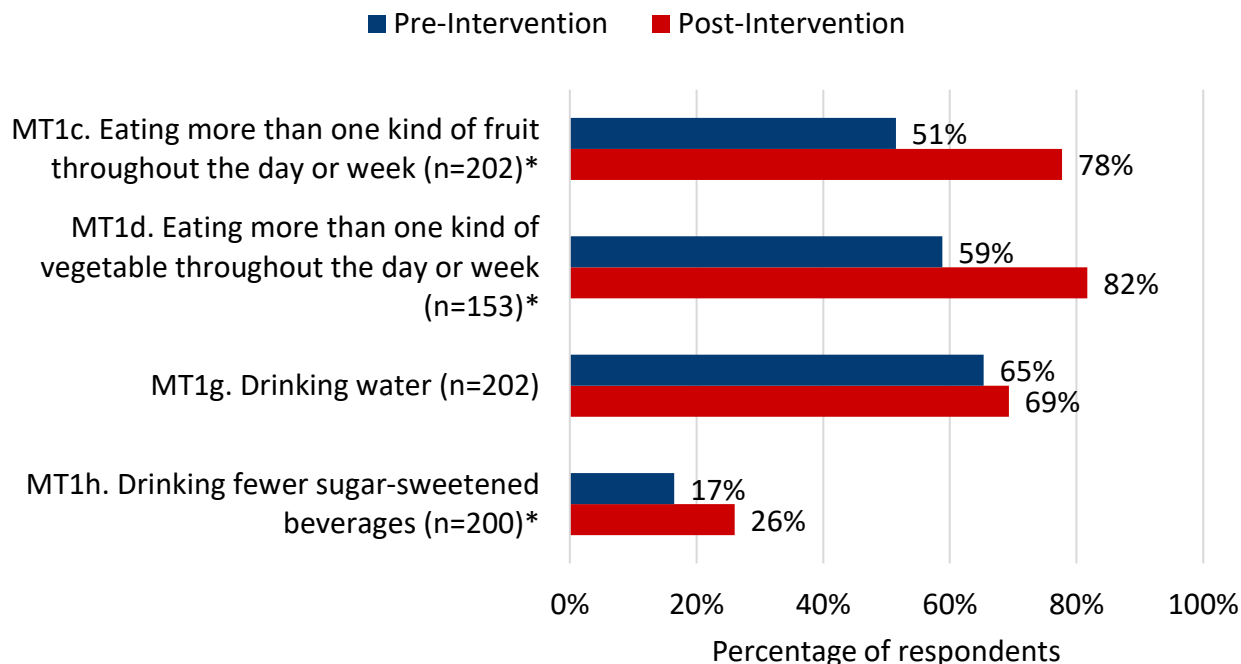
MT1h. Drinking fewer sugar-sweetened beverages

A total of 3,833 teenagers reported the frequency with which they drank any SSBs during the previous day. The number of teenagers reporting less SSB consumption was consistent at both pre- and post-test (22%).

ADULT DIRECT EDUCATION RESULTS

This section presents the results for adults (ages 18-59) for each MT1 indicator and is visually presented in Figure 7.

Figure 7. Percentage of adults (ages 18-59) who met *Dietary Guidelines for Americans* recommendations for MT1 indicators



Note: * indicates a statistically significant change from pre- to post-intervention based on McNemar's test at a significance level of $\alpha=0.05$.

MT1c. Eating more than one kind of fruit throughout the day or week

A total of 202 adults reported whether they ate more than one kind of fruit throughout the day or week. In the pre-test, about half of the adults ($n = 104, 51\%$) met the recommendation, which increased to more than three-quarters ($n = 157, 78\%$) in the post-test. A McNemar test showed this to be a statistically significant increase in the number of adults who met recommendations for eating more than one kind of fruit throughout the day or week ($\chi^2(1) = 40.36, p = <0.001, g = 0.396$).

MT1d. Eating more than one kind of vegetable throughout the day or week

A total of 153 adults reported whether they ate more than one kind of vegetable throughout the day or week. In the pre-test, 90 adults (59%) met the recommendation, which increased to 125 adults (82%) in the post-test. A McNemar test showed this to be a statistically significant increase in the number of adults who met recommendations for eating more than one kind of vegetable throughout the day or week ($\chi^2(1) = 31.24, p = <0.001, g = 0.473$).

MT1g. Drinking water

A total of 202 adults reported whether they drank water the previous day. Approximately, two-thirds of adults met the recommendation at both time points. In the pre-test, 132 adults (65%)

met the recommendation, whereas, in the post-test, 140 adults (69%) met the recommendation. This difference was not statistically significant according to a McNemar test ($\chi^2(1) = 2.23, p = 0.136$).

MT1h. Drinking fewer sugar-sweetened beverages

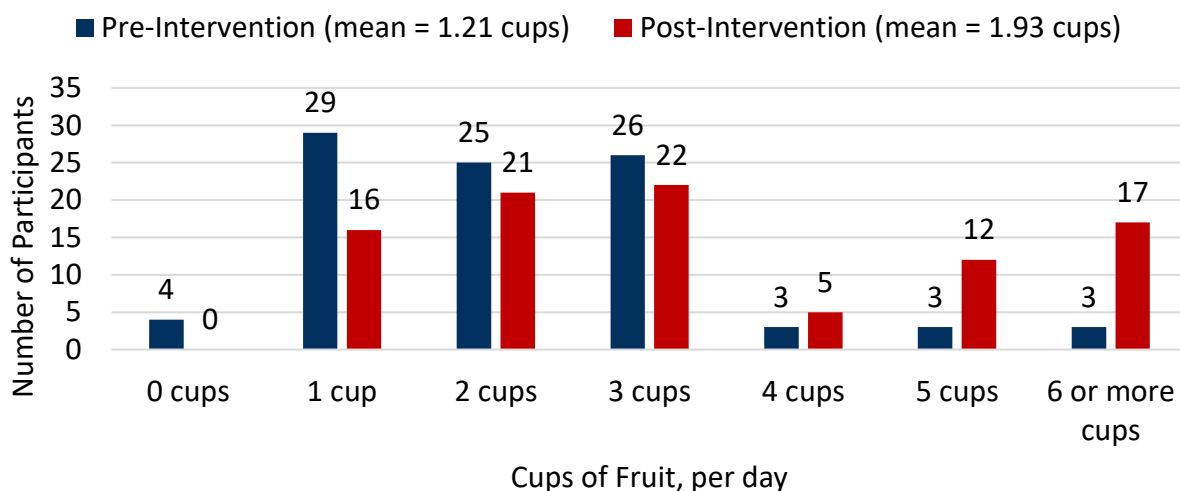
A total of 200 adults reported the frequency with which they drank any SSBs during the previous day. In the pre-test, 33 adults (17%) met the recommendation, which increased to 52 participants (26%) in the post-test. A McNemar test showed this to be a statistically significant increase in reports of meeting the dietary guidelines, which indicates a decrease in the reported frequency of drinking SSBs from pre- to post-test ($\chi^2(1) = 14.09, p < 0.001, g = 0.413$).

MT1i. Cups of fruit consumed per day

A total of 93 adult participants reported the number of cups of fruit they ate each day. The *Dietary Guidelines for Americans, 2020-2025*, recommends consuming two or more cups of fruit per day (USDA & U.S. Department of Health and Human Services, 2020). At the pre-test, 65% of adults ($n = 60$) reported that they ate two or more cups of fruit, which increased to 83% of adults ($n = 77$) at the post-test reporting that they ate two or more cups of fruit.

A paired-samples *t*-test revealed that there was a statistically significant increase in the mean cups of fruit adults reported consuming ($t(92) = -7.31, p < .001, d = 0.880$). At the pre-test, the mean cups of fruit reported was 1.21 (Standard Deviation [*SD*] = 0.79). At the post-test, the mean cups of fruit reported was 1.93 (*SD* = 0.84). Figure 8 shows the distribution of the cups of fruit adults reported consuming per day.

Figure 8. Cups of fruit consumed per day (adults)



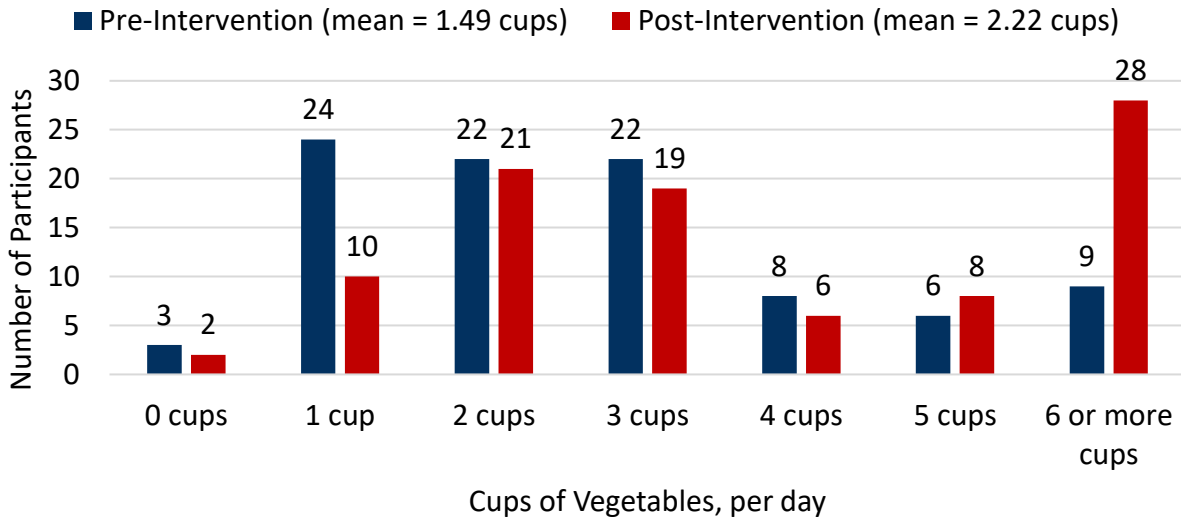
Note: Mean increase from pre- to post-intervention was statistically significant based on a paired samples t-test ($p < 0.001$).

MT1m. Cups of vegetables consumed per day

A total of 94 adult participants reported the number of cups of vegetables they ate each day. The *Dietary Guidelines for Americans, 2020-2025*, recommends consuming 2.5 or more cups of vegetables per day (USDA & U.S. Department of Health and Human Services, 2020). Since data were not collected in half-cups, those reporting 3 cups or more per day were considered to meet recommendations for vegetable consumption. In the pre-test, 48% of adults ($n = 45$) reported that they ate 3 or more cups of vegetables, which increased to 65% of adults ($n = 61$) in the post-test reporting that they ate 3 or more cups of vegetables.

A paired-samples t-test showed that there was a statistically significant increase in the number of cups of vegetables adults reported consuming ($t(93) = -7.14, p < .001, d = 0.840$). In the pre-test, the mean cups of vegetables reported were 1.49 ($SD = 0.82$). In the post-test, the mean cups of vegetables reported were 2.22 ($SD = 0.9$). Figure 9 shows the distribution of the number of cups of vegetables consumed per day.

Figure 9. Cups of vegetables consumed per day (adults)

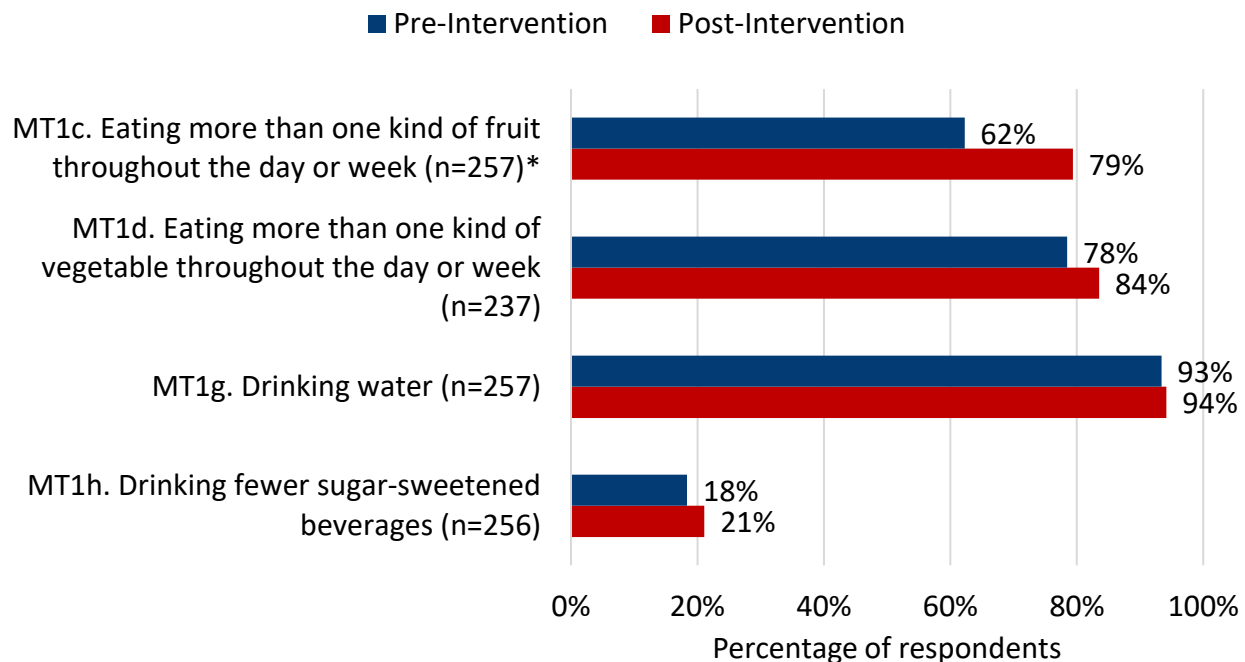


Note: Mean increase from pre- to post-intervention was statistically significant based on a paired samples t-test ($p < 0.001$).

SENIOR DIRECT EDUCATION RESULTS

This section presents the results for seniors (ages 60+) for each MT1 indicator and is visually presented in Figure 10.

Figure 10. Percentage of seniors (ages 60+) who met *Dietary Guidelines for Americans* recommendations for MT1 indicators



*Note: * indicates a statistically significant change from pre- to post-intervention based on McNemar's test at a significance level of alpha=0.05.*

MT1c. Eating more than one kind of fruit throughout the day or week

A total of 257 seniors reported whether they ate more than one kind of fruit throughout the day or week. In the pre-test, 160 seniors (62%) met the recommendation, which increased to 204 seniors (79%) in the post-test. A McNemar test showed this to be a statistically significant increase in the number of seniors who met recommendations for eating more than one kind of fruit throughout the day or week ($\chi^2(1) = 28.02, p = <0.001, g = 0.333$).

MT1d. Eating more than one kind of vegetable throughout the day or week

A total of 237 seniors reported whether they ate more than one kind of vegetable throughout the day or week. In the pre-test, more than three-quarters of seniors, ($n = 186, 78%$) met the recommendation which increased to 198 participants (84%) at the post-test. However, a McNemar test showed this increase not to be statistically significant ($\chi^2(1) = 2.42, p = 0.12$).

MT1g. Drinking water

A total of 257 seniors reported whether they drank water the previous day. Most seniors were meeting the recommendations in the pre- and post-test. In the pre-test, 240 seniors (93%) met the recommendation and in the post-test, 242 seniors (94%) met the recommendation. A McNemar test showed this change not to be statistically significant ($\chi^2(1) = 0.1, p = 0.75$).

MT1h. Drinking fewer sugar-sweetened beverages

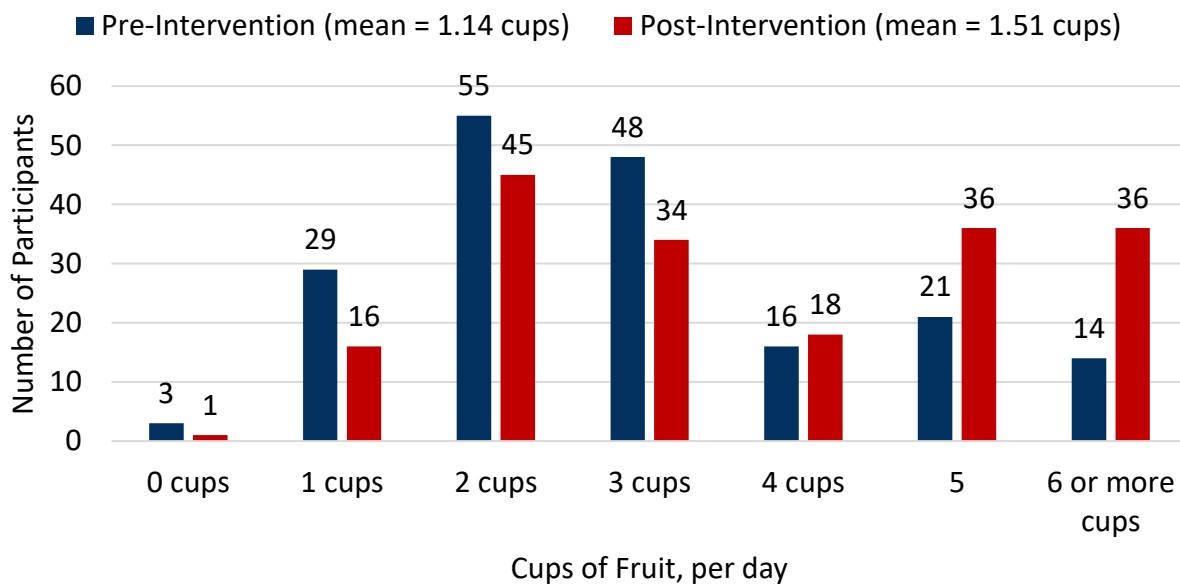
A total of 256 seniors reported the frequency with which they drank any SSBs during the previous day. Very few seniors reported drinking SSBs at either time point. In the pre-test, 47 seniors (18%) met the recommendation, whereas, in the post-test, 54 seniors (21%) met the recommendation. A McNemar test showed this not to be a statistically significant change ($\chi^2(1) = 1.71, p = 0.19$).

MT1i. Cups of fruit consumed per day

A total of 186 senior participants reported the number of cups of fruit they ate each day. The *Dietary Guidelines for Americans, 2020-2025*, recommends consuming two or more cups of fruit per day (USDA & U.S. Department of Health and Human Services, 2020). In the pre-test, 83% of seniors ($n = 154$) reported that they ate two or more cups of fruit per day, which increased to 91% of seniors ($n = 169$) at the post-test reporting that they ate two or more cups of fruit per day.

A paired-samples *t*-test revealed that there was a statistically significant increase in the mean cups of fruit seniors reported consuming ($t(185) = -5.48, p < .001, d = 0.410$). In the pre-test, the mean cups of fruit reported was 1.14 ($SD = .89$). In the post-test, the mean cups of fruit reported was 1.51 ($SD = 0.92$). Figure 11 shows the distribution of cups of fruit seniors reported consuming per day.

Figure 11. Cups of fruit consumed per day (seniors)



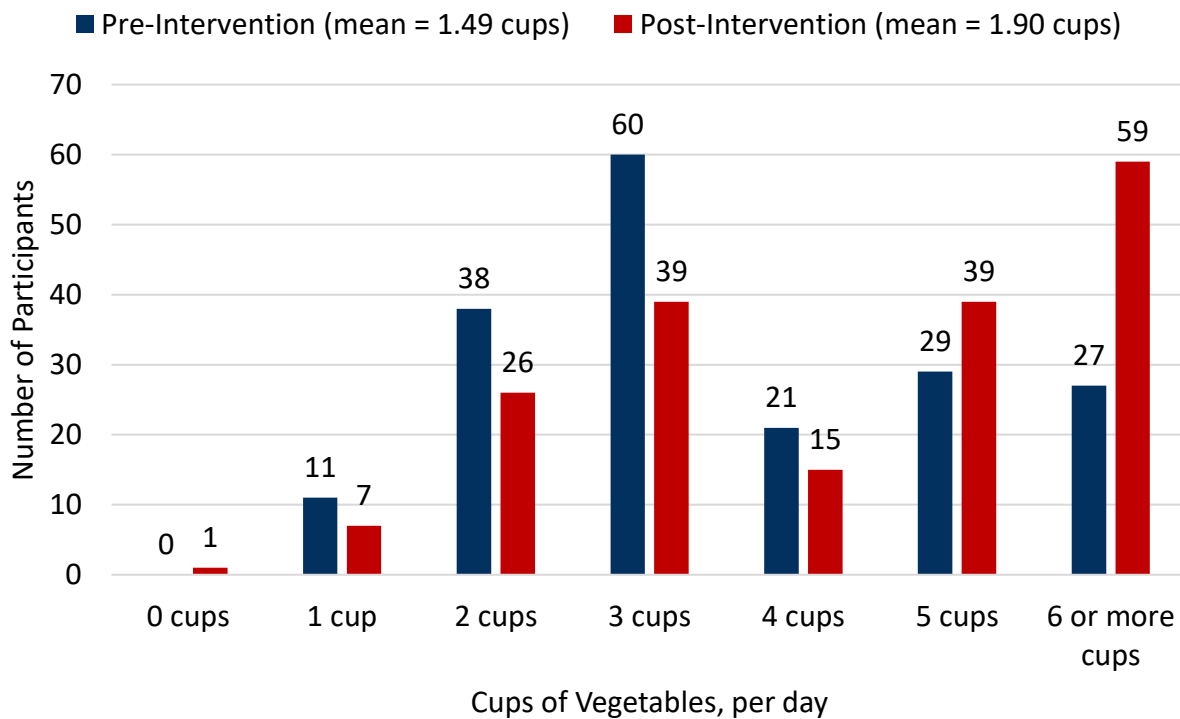
*Note: Mean increase from pre- to post-intervention was statistically significant based on a paired samples *t*-test ($p < 0.001$).*

MT1m. Cups of vegetables consumed per day

A total of 186 senior participants reported the number of cups of vegetables they ate each day. The *Dietary Guidelines for Americans, 2020-2025*, recommends consuming 2.5 or more cups of vegetables per day (USDA & U.S. Department of Health and Human Services, 2020). Since data were not collected in half-cups, those reporting 3 cups or more per day were considered to meet recommendations for vegetable consumption. In the pre-test, 74% of seniors ($n = 137$) reported that they ate 3 or more cups of vegetables, which increased to 82% of seniors ($n = 152$) at the post-test reporting that they ate 3 or more cups of vegetables.

A paired-samples t -test showed that there was a statistically significant increase in the mean cups of vegetables seniors reported consuming ($t(185) = -4.87, p < .001, d = 0.430$). In the pre-test, the mean cups of vegetables reported were 1.49 ($SD = 0.91$). In the post-test, the mean cups of vegetables reported were 1.90 ($SD = 0.98$). Figure 12 shows the distribution of the cups of vegetables consumed per day.

Figure 12. Cups of vegetables consumed per day (seniors)



Note: Mean increase from pre- to post-intervention was statistically significant based on a paired samples t -test ($p < 0.001$).



DIRECT EDUCATION SUMMARY OF RESULTS

The overall results of the aggregated analyses for FFY 2022 direct education programs were generally positive with several findings that indicate improvements in healthy eating behaviors after participating in a direct education program. The analyses revealed that from pre- to post-intervention, more teens, adults, and seniors reported eating more fruit while more children, teens, and adults reported eating more vegetables. The positive findings for healthy beverage intake were more limited as teenagers were the only age group that reported drinking more water and adults were the only age group that reported drinking fewer SSBs at post-test. However, almost all children, teens, and seniors (>90%) met recommendations for water consumption at both time points, leaving little room for improvement. Additionally, children reported on average drinking more SSBs at post-test and a much higher rate than all other age groups.

Table 3 shows effect size estimates and interpretations for direct education results that showed a statistically significant change from the pre-test to the post-test. Teens had a small impact improvement in eating more than one kind of fruit while adults and seniors had a large impact improvement for the same outcome. Additionally, children and teens had a medium impact improvement in eating more than one kind of vegetable, while adults had a large impact improvement in the same outcome. Large and small impact improvements were seen among adults and seniors for increasing intake of fruits and vegetables (reported as cups of fruits and vegetables).

In addition to the positive findings in fruit and vegetable intake, there were encouraging findings for healthy beverage intake. There was a small impact improvement in water drinking among teens and a significant impact improvement in drinking fewer SSBs among adults. On

the other hand, children had a small impact decline and on average drank more SSBs from pre-test to post-test. Statistically significant findings were not found for the senior group for either beverage outcome (water or SSBs).

Table 3. Interpretation of effect size for direct education results

| Age Group | Indicator | Description | Direction of Change from Pre-test to Post-test | Effect Size | Effect Size Interpretation |
|-----------|-----------|--|--|--------------|----------------------------|
| Child | MT1d | Ate more than one kind of vegetable | Increased vegetable consumption | $g = 0.160$ | Medium |
| Child | MT1h | Drinking fewer sugar-sweetened beverages | Increased SSB consumption | $g = -0.070$ | Small |
| Teen | MT1c | Ate more than one kind of fruit | Increased fruit consumption | $g = 0.190$ | Medium |
| Teen | MT1d | Ate more than one kind of vegetable | Increased vegetable consumption | $g = 0.214$ | Medium |
| Teen | MT1g | Drinking Water | Increased water consumption | $g = 0.093$ | Small |
| Adult | MT1c | Ate more than one kind of fruit | Increased fruit consumption | $g = 0.396$ | Large |
| Adult | MT1d | Ate more than one kind of vegetable | Increased vegetable consumption | $g = 0.473$ | Large |
| Adult | MT1h | Drinking fewer sugar-sweetened beverages | Decreased SSB consumption | $g = 0.413$ | Large |
| Adult | MT1l | Cups of fruit consumed per day | Increased fruit consumption | $d = .880$ | Large |
| Adult | MT1m | Cups of vegetables consumed per day | Increased vegetable consumption | $d = .840$ | Large |
| Senior | MT1c | Ate more than one kind of fruit | Increased fruit consumption | $g = 0.333$ | Large |

| Age Group | Indicator | Description | Direction of Change from Pre-test to Post-test | Effect Size | Effect Size Interpretation |
|-----------|-----------|-------------------------------------|--|-------------|----------------------------|
| Senior | MT1l | Cups of fruit consumed per day | Increased fruit consumption | d = .410 | Small |
| Senior | MT1m | Cups of vegetables consumed per day | Increased vegetable consumption | d = .430 | Small |

Note: *g* = Cohen's *g* statistic, *d* = Cohen's *d* statistic

POLICY, SYSTEMS, AND ENVIRONMENTAL CHANGES

Eight IAs reported a total of 315 PSE changes at 105 sites with a combined reach of 108,309 people. Of those changes, there were 12 (4%) policy changes, 133 (42%) systems changes, and 170 (54%) environmental changes.

POLICY CHANGES

In total, 12 policy changes were reported across IAs, with all 12 changes related to nutrition. No policy changes were related to physical activity.

Most nutrition policy changes were for policies that encourage the establishment of new food distribution sites, food banks, food pantries, etc. ($n = 7$), followed by a food/beverage or nutrition-related policy ($n = 2$). Other policy changes included zoning policies for food/beverage outlets, policies for increasing or improving nutrition education or cooking activities, and policies limiting unhealthy foods ($n = 1$ each) (Table 4).

Table 4. Nutrition-related policy changes (MT5b)

| Policy Change Description | Frequency |
|---|-----------|
| Policy that encourages the establishment of new food distribution sites, food banks, food pantries, etc. | 7 |
| Food/beverage or nutrition related policy (childcare wellness, school wellness, workplace wellness, etc.) | 2 |
| Zoning policy for food/beverage outlets (e.g., stores, community gardens, farmers markets, food distribution sites, etc.) | 1 |
| Policy for increasing or improving nutrition education or cooking activities | 1 |
| Policy limiting unhealthy foods | 1 |

SYSTEMS CHANGES

In total, 133 systems changes were reported, with 127 changes related to nutrition, 5 changes related to physical activity, and 1 change related to both nutrition and physical activity.

The most common systems changes related to nutrition were related to initiating or expanding a mechanism for distributing produce to families or communities ($n = 32$), initiating, improving, or expanding the use of standardized, healthy recipes ($n = 22$), and initiating or expanding the use of farm-to-table and fresh or local produce ($n = 15$). Table 5 lists the top five system changes related to nutrition in North Carolina.

Table 5. Nutrition-related systems changes (MT5c)

| Systems Change Description | Frequency |
|--|-----------|
| Mechanism for distributing produce to families or communities (e.g., gardens, or farmer's markets) | 32 |
| Use of standardized, healthy recipes | 22 |
| Farm-to-table/use of fresh or local produce | 15 |
| Opportunities for parents/students/community to work in the garden | 14 |
| Opportunities for parents/students/community to access fruits and vegetables from the garden | 13 |

As shown in Table 6, the most frequently reported systems changes related to physical activity were related to incorporating physical activity into the school day or during classroom-based instruction outside of recess or PE (physical education) ($n = 2$). Other physical activity-related policy changes included complete streets, regular physical activity fundraisers or events, and increasing the quality of PE ($n = 1$).

Table 6. Physical Activity-related systems changes (MT5d)

| Systems Change Description | Frequency |
|---|-----------|
| Incorporation of physical activity into the school day or during classroom-based instruction (not recess/free play or PE) | 2 |
| Complete streets systems change (e.g., street design manual, transit system improvements, active transportation prioritized in city budget, etc.) | 1 |
| Regular (e.g., annual) physical activity-related fundraisers (e.g., Walk-a-thon) or events | 1 |

| Systems Change Description | Frequency |
|---|-----------|
| Quality of PE (physical education) (e.g., activities that increase time moving, evidence-based or standards-based PE, etc.) | 1 |

Additionally, physical activities incorporating more culturally relevant practices was the one system change related to both nutrition and physical activity reported from North Carolina.

ENVIRONMENTAL CHANGES

In total, 170 environmental changes were reported, with 156 changes related to nutrition and 14 changes related to physical activity.

The most common environmental changes related to nutrition were related to initiating, improving, expanding, reinvigorating or maintenance of edible gardens ($n = 35$), using interactive educational displays to prompt healthy eating behavior choices ($n = 28$), providing storage for fresh produce and other perishables foods ($n = 17$), and using the garden for nutrition education ($n = 17$). Table 7 lists the top environmental changes related to nutrition in North Carolina.

Table 7. Nutrition-related environmental changes (MT5d)

| Environmental Change Description | Frequency |
|--|-----------|
| Initiation, improvement, expansion, reinvigoration, or maintenance of edible gardens | 35 |
| Ongoing, point-of-decision prompts to make a healthy eating behavior choice (could include signage, taste tests, and other interactive displays) | 28 |
| Storage for fresh produce and other perishable foods | 17 |
| Use of the garden for nutrition education | 17 |
| Decreased space/amount/variety of unhealthy options (includes shelf space, number of booths, options on menus) | 9 |
| Healthy food/beverage defaults (whole wheat bread, salad, or fruit instead of fries, water instead of soda, etc.) | 9 |

As shown in Table 8, the most common environmental change related to physical activity reported was increasing opportunities for physical activity ($n = 4$). Other environmental changes related to physical activity include increasing access or safety of walking or bicycling paths or other physical activity facilities, improving the quality of structured physical activity, and using interactive displays to prompt physical activity choices.

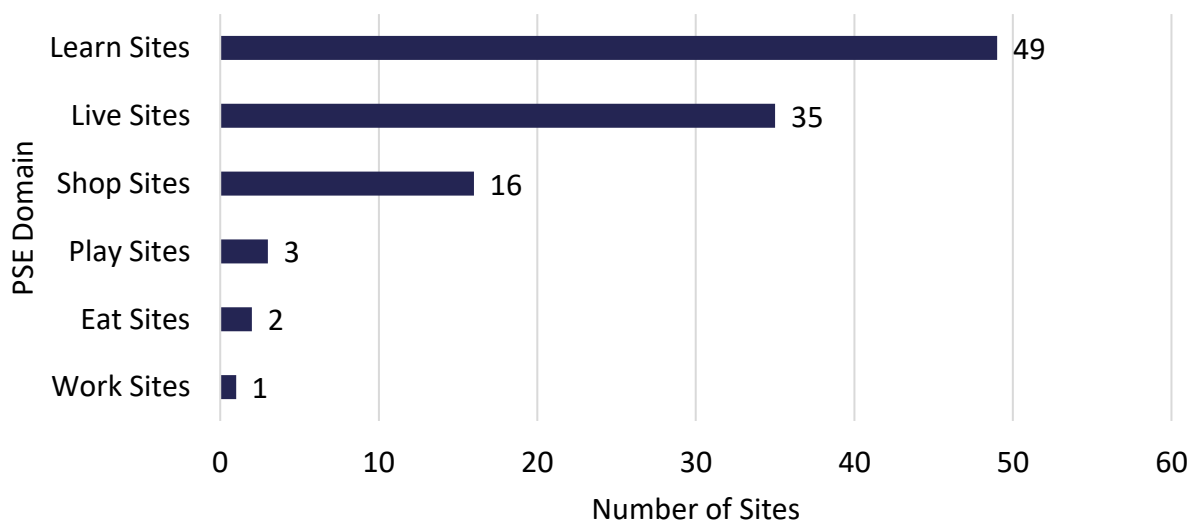
Table 8. Physical activity-related environmental changes

| Environmental Change Descriptions | Frequency |
|---|-----------|
| Opportunities for structured physical activity | 4 |
| Access or safety of walking or bicycling paths | 2 |
| Physical activity facilities, equipment, structures, or outdoor space | 2 |
| Quality of structured physical activity (non-PE) (e.g., activities that increase time moving, evidence-based interventions, etc.) | 2 |
| Ongoing, point-of-decision prompts to make physical activity choices (could include signage and other interactive educational displays to prompt physical activity such as walking, stairs, or bicycle paths) | 2 |

PSEs BY DOMAIN

PSE changes took place in multiple settings where North Carolinians eat, learn, live, play, shop, and work. Most PSEs took place at sites where people learn ($n = 49$), live ($n = 35$), and shop ($n = 16$). All domains are shown in Figure 13.

Figure 13. PSE changes by setting domain



In addition to reporting domain, IAs also reported the reach of PSE changes (Table 9). The total estimated reach for all PSEs was 108,309 people. The highest reach for PSE changes were reported in the shop setting ($n = 53,907$) and the learn setting ($n = 36,287$).

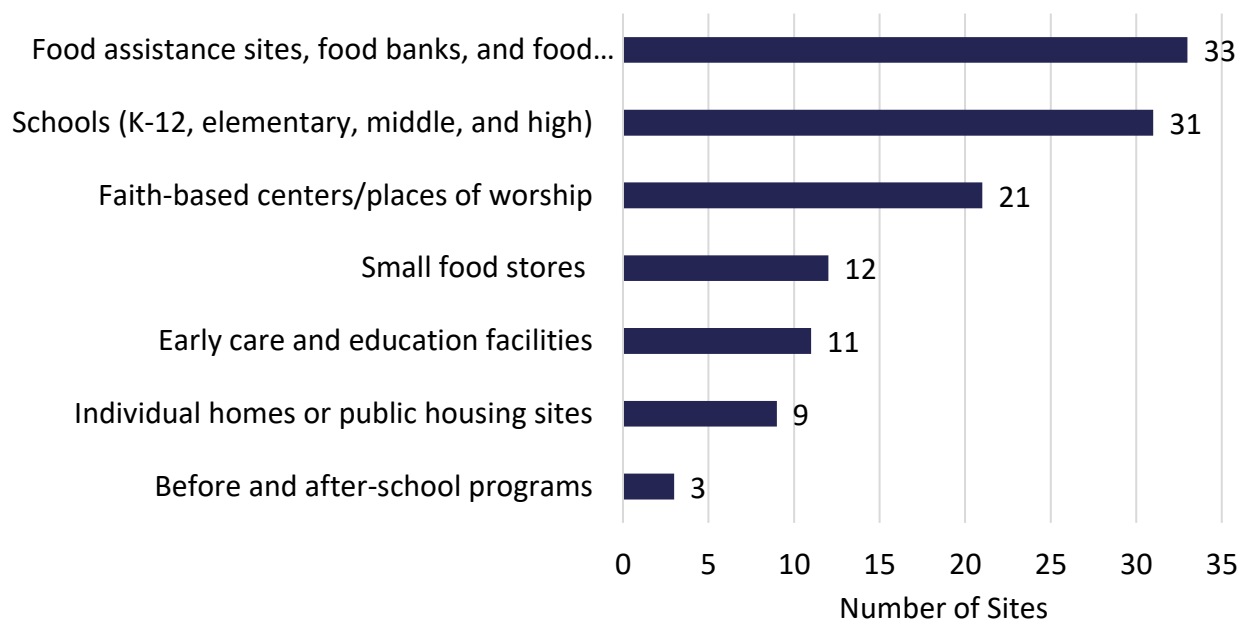
Table 9. PSE change reach by domain

| Domain | Frequency | Percent |
|------------------------------|----------------|---------------|
| Shop Reach | 53,907 | 49.8% |
| Learn Reach | 36,287 | 33.5% |
| Play Reach | 11,569 | 10.7% |
| Live Reach | 5,658 | 5.2% |
| Eat Reach | 844 | 0.8% |
| Work Reach | 44 | 0.0% |
| Total Estimated Reach | 108,309 | 100.0% |

PSEs BY SETTING

North Carolina IAs reported the specific settings where PSE changes took place. As shown in Figure 11, the most frequently reported settings were food assistance, food banks, food pantry sites ($n = 33$), and schools ($n = 31$). In addition to the settings included in Figure 14, North Carolina IAs also reported PSEs at community and recreation centers, community organizations, group living arrangements, health care clinics and hospitals, libraries, congregate meal sites and other senior nutrition centers, family resource centers, farmers markets, parks and open spaces, and other places people go to work, learn, or eat outside of their home.

Figure 14. PSE changes by setting



Note: Only settings reported by 3 or more sites are included in the graph (total settings = 19).

NUTRITION AND PHYSICAL ACTIVITY SUPPORTS IMPLEMENTATION (LT5/LT6)

Implementation of PSE changes was assessed by looking at the number of sites in each type of setting within the eat, learn, live, play, shop, and work domains reporting a multi-component and multi-level intervention. The implementation features are intended to enhance the likelihood of the interventions’ impact and sustainability and therefore represent the long-term (LT5 and LT6) indicators from the SNAP-Ed Evaluation Framework (USDA-FSN, 2016). A total of 68 sites reported at least one nutritional support (MT5) PSE change and one or more of the following components and a total of 14 sites reported at least one physical activity support (MT6) PSE change and one or more of the following components:

- Evidence-based education
- Marketing
- Parent/community involvement
- Staff training or continuous program and policy implementation

The total number of components per site reported by IAs for those with at least one nutritional component can be found in Table 10.

Table 10. Total number of components per site for sites that implemented at least one MT5 (Nutrition) PSE change (LT5b)

| Number of Components | Number of Sites |
|----------------------|-----------------|
| One component | 38 |
| Two components | 19 |
| Three components | 7 |
| Four components | 4 |
| Total | 68 |

The most frequently reported component paired with MT5 PSE changes was evidence-based education (*n* = 42), followed by marketing (*n* = 31). A complete list of the specific components reported can be found in Table 11.

Table 11. Number of sites implementing at least one MT5 (Nutrition) PSE change and each type of specific additional component (LT5b)

| Specific Component | Number of Sites |
|--|-----------------|
| Evidence-based education | 42 |
| Marketing | 31 |
| Staff training or continuous program and policy implementation | 21 |
| Parent/community involvement | 20 |

A total of 14 sites reported at least one physical activity support (MT6) PSE change and one or more of the components listed above. For physical activity supports, IAs most reported one component ($n = 8$) for at least one MT6 PSE change for sites. The total number of components per site with at least one MT6 PSE change can be found in Table 12.

Table 12. Total number of components per site for sites that implemented at least one MT6 (Physical activity) PSE change (LT6b)

| Number of Components | Number of Sites |
|----------------------|-----------------|
| One component | 8 |
| Two components | 4 |
| Three components | 1 |
| Four components | 1 |
| Total | 14 |

The most frequently reported component paired with MT6 PSE changes is staff training or continuous program and policy implementation ($n = 10$), followed by evidence-based education ($n = 6$). A complete list of the specific components can be found in Table 13.

Table 13. Number of sites implementing at least one MT6 (Physical activity) PSE change and each type of specific additional component (LT6b)

| Specific Component | Number of Sites |
|--|-----------------|
| Staff training or continuous program and policy implementation | 10 |

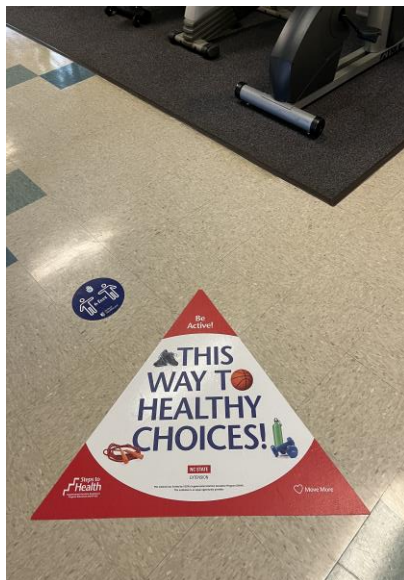
| Specific Component | Number of Sites |
|------------------------------|-----------------|
| Evidence-based education | 6 |
| Marketing | 4 |
| Parent/community involvement | 3 |

COVID-19 IMPACTS

IAs were asked to voluntarily report on how COVID-19 impacted their PSE interventions in FFY 2022. Of those who provided information ($n = 45$), no impact was the most reported impact ($n = 20$), followed by modified ($n = 17$). Sixty-three sites did not report that COVID-19 had an impact on their PSE changes. A complete list of the COVID-19 impacts can be found in Table 14.

Table 14. COVID-19 impacts on PSE changes

| COVID-19 Impact Description | Frequency |
|-----------------------------|-----------|
| No Impact | 20 |
| Modified | 17 |
| Postponed | 5 |
| New Interventions | 3 |



PSE SUMMARY OF RESULTS

IAs reported a total of 315 PSE changes at 105 sites, which had a combined reach of 108,309 people. Of those changes, 12 were policy changes, 133 were systems changes, and 170 were environmental changes. Most PSE changes were related to nutrition ($n = 295$), while 19 changes were related to physical activity. Multi-component and multi-level interventions were reported at 68 sites with nutrition-related PSE changes and 14 sites with physical activity-related PSE changes. FFY 2022 was the second full year of SNAP-Ed programming during the COVID-19 pandemic. Among those who reported the COVID-19 impacts on PSE interventions, COVID-19 was most frequently reported to have no impact on PSE interventions ($n = 20$). Among those interventions that were impacted by the COVID-19 pandemic, 17 interventions were modified, 5 interventions were postponed, and 3 new PSE interventions were developed because of the pandemic.

CONCLUSION AND DISCUSSION

Teenagers and adults are consistently improving healthy eating behaviors.

This evaluation provides evidence of positive changes in healthy eating behaviors among teen and adult participants in SNAP-Ed direct nutrition education programs in North Carolina. When compared to the direct education evaluation results from FFY 2021, teens and adults were the only age groups with statistically significant improvements in fruit and vegetable intake for both FFY 2021 and FFY 2022. While the evaluation results from FFY 2021 and FFY 2022 show that children in North Carolina are consistently eating more vegetables, there was no significant improvement in fruit intake this year. Additionally, seniors show a consistent improvement in eating more than one type of fruit each week and an increase in cups of fruit and vegetables consumed in a day, but no significant improvement for eating more than one kind of vegetable throughout the day or week reported for FFY 2022. It is unclear why fruit intake for children and vegetable intake for seniors was not significantly improved for this evaluation but one difference between FFY 2021 and FFY 2022 was the total number of participants reached through direct education programs. Last year 2,378 participants provided both pre- and post-intervention data for at least one MT1 indicator while there were responses from 5,693 participants in the current year. Statistically, the number of participants more than doubled for this current year which could have affected the significance testing for fruit and vegetable intake but the increase in direct education participation provides evidence for the positive impact the IAs have on the SNAP-Ed community in North Carolina.

There are less consistent improvements in healthy drinking habits among SNAP-Ed participants.

Fewer improvements in healthy drinking behaviors were found in FFY 2022 among participants in SNAP-Ed direct nutrition education programs in North Carolina, particularly related to SSBs. While the reach of direct education participation did increase from 2,378 to 5,693, there is a consistent lack of improvement in healthy drinking behaviors in children and seniors. Children and seniors have not seen much improvement in water intake, however, almost all met recommendations for water intake at both time points leaving little room for improvement. Seniors have consistently seen no significant improvements between years for SSB consumption while children increased the number of SSBs from pre- to post-test for the current year. Additionally, children consume SSBs at a much higher rate than all age groups. Teens and adults did show significant improvements in healthy drinking behaviors, however. When compared to the direct education evaluation results from FFY 2021, teens were the only age groups with statistically significant improvements in drinking more water for both FFY 2021 and FFY 2022 and adults were the only age group with statistically significant improvements in drinking fewer SSBs for the same years. It should be noted, however, that the large sample size of teenage respondents compared to the other groups could partly explain the increased number of significant findings.

The total number and reach of PSE changes in North Carolina increased from FFY 2021 to FFY 2022.

A total of 315 PSE changes were implemented in North Carolina with a combined reach of 108,309 people across 106 sites. Compared to FFY 2021, the total number of PSE changes increased, including increases in the number of policy changes, systems changes, and environmental changes. Additionally, more IAs reported that COVID-19 had no impacts on PSE work, and fewer IAs reported having to modify their PSE intervention this year compared to last year. The increase in PSE changes, reach, and sites and the reported impacts of COVID-19 on PSE interventions suggest that North Carolina IAs have continued to adapt to the pandemic and effectively serve the SNAP-Ed community.

RECOMMENDATIONS

Based on the findings of this evaluation, the following recommendations should be considered:

Consider alternative approaches to improve healthy beverage intake among SNAP-Ed participants.

- Compared to fruit and vegetable intake, the evaluation results for healthy beverage intake were less favorable, particularly related to SSBs. Tailoring outreach and education by age group and increasing the diversity of approaches (i.e., social marketing campaigns, community challenges, etc.) to increase drinking water and decrease drinking sugar-sweetened beverages could help boost more favorable outcomes for future SNAP-Ed evaluations.

Consider tailoring direct education approaches for children and seniors to increase healthy food and beverage intake among these populations.

- As children and seniors are opposites when looking at SNAP-Ed participants by age group, direct education approaches for these groups should be tailored to ensure the information is relevant to the participants. For example, children may enjoy direct education approaches that are gamified to increase participation and saliency while seniors may enjoy a more hands-on approach. Consider getting to know each audience before implementing direct education to increase the likelihood of active participation and understanding for SNAP-Ed participants.

Consider increasing direct nutrition education outreach efforts for adults and seniors.

- Adults and seniors consistently have the lowest number of participants when looking at direct nutrition education participants by age group. Increasing outreach and accessibility (i.e., convenient times and locations for direct education) for adults and seniors can lead to better nutrition habits for the whole family as adults are becoming increasingly responsible for both their children (ages 5 to 18) and their parents (ages 60+).

Continue using a racial equity lens when implementing PSE changes.

- Using a racial equity lens for PSE interventions can improve SNAP-Ed outcomes for all, regardless of race. Continue being intentional when implementing PSE changes by centering the SNAP-Ed-eligible community and being aware of diverse needs based on race and culture. Additionally, creates processes and systems to include the diverse SNAP-Ed community at all stages of planning and implementation.

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APPENDIX

A total of 9,155 participants responded to at least one indicator at either the pre-test or post-test. Table A1 shows the demographics of the entire sample.

Table A1. Direct Education participants with pre- or post-intervention data, by ethnicity, race, and sex by age category (N = 9,155)

| | | Children (5-11 years) N = 1,428 | Teens (12- 17 years) N = 7,229 | Adults (18-59 years) N = 223 | Seniors (60+ years) N = 275 | Number of Total Participants N = 9,155 |
|------------|----------------------------------|--|--------------------------------------|---------------------------------------|--------------------------------------|---|
| Categories | Subcategories | n (%) | n (%) | n (%) | n (%) | n (%) |
| Ethnicity | Hispanic or Latino | 38 (2.7%) | 1,558 (21.6%) | 40 (17.9%) | 10 (3.6%) | 1,646 (18.0%) |
| Ethnicity | Not Hispanic or Latino | 124 (8.7%) | 5,593 (77.4%) | 175 (78.5%) | 265 (96.4%) | 6,157 (67.3%) |
| Ethnicity | Did Not Report Ethnicity | 1,266 (88.7%) | 78 (1.1%) | 8 (3.6%) | 0 (0.0%) | 1,352 (14.8%) |
| Race | American Indian or Alaska Native | 2 (0.1%) | 83 (1.1%) | 0 (0.0%) | 0 (0.0%) | 85 (0.9%) |
| Race | Asian | 4 (0.3%) | 119 (1.6%) | 1 (0.4%) | 1 (0.4%) | 125 (1.4%) |
| Race | Black | 50 (3.5%) | 1,882 (26.0%) | 85 (38.1%) | 145 (52.7%) | 2,162 (23.6%) |
| Race | Pacific Islander | 0 (0.0%) | 20 (0.3) | 0 (0.0%) | 0 (0.0%) | 20 (0.2%) |
| Race | White | 14 (1.0%) | 2,841 (39.3%) | 38 (17.0%) | 90 (32.7%) | 2,983 (32.6%) |
| Race | Additional Race Not Listed | 4 (0.3%) | 398 (5.5%) | 0 (0.0%) | 0 (0.0%) | 402 (4.4%) |
| Race | More Than 1 Race | 11 (0.8%) | 34 (0.5%) | 2 (0.9%) | 0 (0.0%) | 47 (0.5%) |
| Race | Did Not Report Race | 1,343 (94.0%) | 1,852 (25.6%) | 97 (43.5%) | 39 (14.2%) | 3,331 (36.4%) |
| Sex | Female | 108 (7.6%) | 3,938 (54.5%) | 197 (88.3%) | 228 (82.9%) | 4,471 (48.8%) |

| | | Children (5-11 years) N = 1,428 | Teens (12- 17 years) N = 7,229 | Adults (18-59 years) N = 223 | Seniors (60+ years) N = 275 | Number of Total Participants N = 9,155 |
|------------|-----------------------|--|---|---|--|---|
| Categories | Subcategories | n (%) | n (%) | n (%) | n (%) | n (%) |
| Sex | Male | 70 (4.9%) | 3,260 (45.1%) | 26 (11.7%) | 47 (17.1%) | 3,403 (37.2%) |
| Sex | Did Not Report Sex | 1,250 (87.5%) | 31 (0.4%) | 0 (0.0%) | 0 (0.0%) | 1,281 (14.0%) |

Table A2. Direct Education participants with pre- and post-intervention data, by ethnicity, race, and sex by age category (N = 5,693)

| | | Children (5-11 years) N = 1,398 | Teens (12- 17 years) N = 3,834 | Adults (18-59 years) N = 203 | Seniors (60+ years) N = 258 | Number of Total Participants N = 5,693 |
|------------|--|--|---|---|--|---|
| Categories | Subcategories | n (%) | n (%) | n (%) | n (%) | n (%) |
| Ethnicity | Hispanic or Latino | 28 (2.0%) | 895 (23.3%) | 38 (18.7%) | 6 (2.3%) | 967 (17.0%) |
| Ethnicity | Not Hispanic or Latino | 107 (7.7%) | 2,864 (74.7%) | 161 (79.3%) | 252 (97.7%) | 3,384 (59.4%) |
| Ethnicity | Did Not Report Ethnicity | 1,263 (90.3%) | 75 (2.0%) | 4 (2.0%) | 0 (0.0%) | 1,342 (23.6%) |
| Race | American Indian or Alaska Native | 2 (0.1%) | 42 (1.1%) | 0 (0.0%) | 1 (0.4%) | 45 (0.8%) |
| Race | Asian | 3 (0.2%) | 73 (1.9%) | 1 (0.5%) | 0 (0.0%) | 77 (1.4%) |
| Race | Black | 50 (3.6%) | 756 (19.7%) | 81 (39.9%) | 143 (55.4%) | 1,030 (18.1%) |
| Race | Pacific Islander | 0 (0.0%) | 10 (0.3%) | 0 (0.0%) | 0 (0.0%) | 10 (0.2%) |
| Race | White | 14 (1.0%) | 1,551 (40.5%) | 38 (18.7%) | 90 (34.9%) | 1,693 (29.7%) |

| | | Children (5-11 years) N = 1,398 | Teens (12- 17 years) N = 3,834 | Adults (18-59 years) N = 203 | Seniors (60+ years) N = 258 | Number of Total Participants N = 5,693 |
|------------|----------------------------------|--|---|---|--|---|
| Categories | Subcategories | n (%) | n (%) | n (%) | n (%) | n (%) |
| Race | Additional Race Not Listed | 4 (0.3%) | 208 (5.4%) | 0 (0.0%) | 0 (0.0%) | 212 (3.7%) |
| Race | More Than 1 Race | 11 (0.8%) | 34 (0.9%) | 2 (1.0%) | 0 (0.0%) | 47 (0.8%) |
| Race | Did Not Report Race | 1,314 (94.0%) | 1,160 (30.3%) | 81 (39.9%) | 24 (9.3%) | 2,579 (45.3%) |
| Sex | Female | 91 (6.5%) | 2,075 (54.1%) | 182 (89.7%) | 213 (82.6%) | 2,561 (45.0%) |
| Sex | Male | 58 (4.1%) | 1,728 (45.1%) | 21 (10.3%) | 45 (17.4%) | 1,852 (32.5%) |
| Sex | Did Not Report Sex | 1,249 (89.3%) | 31 (0.8%) | 0 (0.0%) | 0 (0.0%) | 1,280 (22.5%) |

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- Alice Aycock Poe Center for Health Education
- Down East Partnership for Children
- Durham County Department of Health – Durham’s Innovative Nutrition Education (DINE)
- East Carolina University – Motivating Adolescents with Technology to Choose Health (MATCH)
- North Carolina Agricultural and Technical State University – Try Healthy
- North Carolina State University – Steps to Health
- Second Harvest Food Bank of Northwest North Carolina
- University of North Carolina at Chapel Hill – Center for Health Promotion and Disease Prevention
- University of North Carolina at Greensboro – Recipe for Success



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