

Table of Contents

Final Report of Arizona FY2010 Nutrition Education Activities

Section A.1 SNAP-Ed Overview	1
Section A.2 SNAP-Ed Administrative Expenses.....	3
Section A.3 SNAP-Ed Evaluation Reports	4
Section A.4 SNAP-Ed Planned Improvements.....	8
Section A.5 EARS Feedback	9
Section A.6 Appendices Optional Info	11

Appendices

Appendix A: Arizona Nutrition Network Evaluation

Appendix B: Behavior Model Research Report Wave III

Appendix C: Building Better Bones Program Evaluation

Appendix D: Fruits and Veggies - More Matters™ Class Evaluation

Appendix E: “Fruits and Veggies More Matters” Post Campaign Research Report

Appendix F: “Go Low” Post Campaign Research Report

Appendix G: “Grow a Healthy Child” Post Campaign Research Report

Appendix H: Media Usability Report

Appendix I: Partner Satisfaction Survey

1. SNAP-Ed Program Overview:

▪ Progress in Achieving Overarching Goal(s):

The Arizona Nutrition Network (AzNN) had two main goals and eight related objectives for FY10, here are the highlights:

Goal 1: Promote healthier eating habits and lifestyles

Objective 1: Social Marketing completed 3 full campaign waves, including *Go Low* (consuming low fat dairy), *Fruits and Vegetables More Matters*, and *Grow a Healthy Child* (family togetherness with gardening and meal preparation). Each included TV (over 11 million impressions with each campaign), radio (over 28 million impressions per campaign), direct mailers to SNAP participants (120,000 households each campaign), door hangers (110,000/campaign X 2.77 family size=304,700 people reached/campaign), additional print materials were provided as well, including over 150,000 pieces per campaign.

Objective 2: Community based nutrition education

AzNN partnered with 26 agencies (Partners) that provide direct nutrition education in a variety of settings, these range from schools, to community centers, to after school programs, to parks and recreation programs and more. AzNN provided materials and training to these agencies to improve nutrition education services. AzNN's monitoring of these contracts has shown that these Partners have provided significant Nutrition Education across Arizona as reflected in the extensive Workplan provided for FY10.

Objective 3: Food Demonstrations

AzNN provided food demonstration training to Partners who provide direct education. New in FY 10 AzNN has completed 41 food demonstrations in SNAP eligible grocery stores, reaching over 1,850 contacts. AzNN Partners completed several interventions that included a food demonstration(number to be provided with EARS).

Goal 2: Improve nutrition assistance program management and customer service.

Objective 4: Materials Distribution

See Social Marketing above

Objective 5: Local Incentive Award Program

AzNN continued to Partner with over 26 local agencies who provide direct service to SNAP eligible participants

Objective 6 Evaluation

AzNN's evaluation committee was formed and met quarterly. There was an evaluation toolkit developed and shared with LIA Partners. AzNN staff met with LIA partners to assist in development of evaluation tools for their specific programs.

Objective 7 Management Evaluations

AzNN worked closely with the Department of Economic Security in FY10. Two Management Evaluations were completed, there were no deficiencies found.

Objective 8: EARS development

AzNN continued to analyze the data collection methods established by our staff. Improvements were found and great confidence in the data was achieved.

- **Number of New Projects implemented during the reporting year by primary approach (Direct, Indirect, and Social Marketing):**

There were no new LIA Partners in FY 10. Program improvements are listed above in Social marketing and food demonstration objectives.

- **Number of ongoing Projects that were operational during the reporting year by primary approach (Direct, Indirect and Social Marketing):**

There were a total of 33 active contracts in FY10. There were 24 separate entities and 9 sub groups within the University of Arizona Cooperative Extension Contract. In all cases direct and indirect interventions were provided. AzNN provides the social marketing interventions within Arizona (some partners had plans for this but they did not materialize)

- **Major Achievements (not already addressed):**

See comments above

- **Major Setbacks, if any:**

AzNN struggled again with staffing shortages in FY10, because of extensive medical leave by two different staff people and resignations. Additionally, some approved positions were unfilled for part of the year due to hiring restrictions at the state level. State staff were also subject to six furlough days in FY10 (that will continue in FY11 and FY12, it also anticipated that the number of furlough days may increase in FY11).

- **Overall Assessment:**

AZNN is happy to report that the vast majority of tasks within their FY10 Workplan were successfully completed.

2. SNAP-Ed Administrative Expenditures

Type of Administrative Expense:	% of Total Administrative Expenditures for each Implementing Agency by Type of Expense					
	Name of IA:		Name of IA:		Name of IA:	
	% values	\$ values	% values	\$ values	% values	\$ values
Administrative Salary						
Administrative Training Functions						
Reporting Costs (identify % related to EARS, if possible)						
Equipment/Office Supplies						
Operating Costs						
Indirect Costs						
Overhead Charges (space, HR services, etc.)						

AzNN is unable to provide the numbers requested above. Fiscal tracking at the State level is not completed in this manner. Nor is it available for each contracted entity. Additionally there are still some outstanding invoices for FY10-therfore these numbers would not match question 10 in EARS. The question is somewhat misleading as it asks for IA details but refers to question 10 in EARS which includes IA and contracted partners.

3. SNAP-Ed Evaluation Reports Completed for this Reporting Year

Project Name	Key Project Objective(s)	Target Audience	Check all Evaluation Types for which Reports Are Included*			
			FE	PE	OE	IE
Arizona Nutrition Network Evaluation	Identify the components of behavior change in the SNAP eligible population as a result of Arizona Nutrition Network messages and education.	Adult SNAP Participants			X	
Behavior Model Research Report Wave III	Measure changes in behavior or readiness to change with regard to eating fruits and vegetables, drinking 1% low fat or fat free milk, eating whole grain foods, eating lean proteins, and providing healthy meals to their families.	SNAP-Eligible women ages 18-49 with children ages 2-11	X		X	
Building Better Bones School Curriculum	Increase consumption of high calcium low fat foods and increase regular weight-bearing exercise.	5th grade students		X	X	
Fruits and Vegetables - More Matters™ School Curriculum	Increase fruit and vegetable consumption among low income children.	3 rd grade students		X	X	
Fruits and Vegetables - More Matters™ Social Marketing Post Campaign Report	Test awareness and effectiveness of the Fruits and Vegetables - More Matters™ Social Marketing Campaign.	SNAP-Eligible women ages 18-49 with children ages 2-11	X	X	X	
Go Low Social Marketing Post Campaign Report	Test awareness and effectiveness of the Go Low Social Marketing Campaign promoting increased consumption of 1% low fat milk.	SNAP-Eligible women ages 18-49 with children ages 2-11	X	X	X	
Grow a Healthy Child Social Marketing Post Campaign Report	Test awareness and effectiveness of the Grow a Healthy Child Social Marketing Campaign featuring obesity prevention messages.	SNAP-Eligible women ages 18-49 with children ages 2-11	X	X	X	
Media Usability Study	Measure target audiences' use of computers, Internet, cell phones, and social media.	SNAP-Eligible Women and Children/ Youth (ages 5-17)	X			
Partner Satisfaction Survey	Assess Partner satisfaction with program planning and implementation, leadership, community outreach, communication, progress and outcome, and overall impression of the Network	AzNN Partners		X		

* FE = Formative Evaluation PE = Process Evaluation OE = Outcomes Evaluation IE = Impact Evaluation

Highlights of each evaluation report are provided below and full evaluation reports are provided in Appendices.

Arizona Nutrition Network Evaluation

- Evaluation was conducted using a weighted random sample of Arizona WIC Program and Department of Economic Security (DES) offices throughout Arizona.
- A total of 1307 surveys were collected at 11 WIC and 18 DES sites.
- Almost sixty percent of respondents (58.2%) reported they had seen one or more of the selected logos used by the Network.
- More respondents met recommendations for vegetable and fruit consumption in 2010 (Veg-10.5%; Fr-43.5%) than in 2009 (Veg-8.0%; Fr 31.0%)
- More individuals surveyed report drinking fat free or 1% low fat milk in 2010 (25.5%) than in 2009 (24.0%) and fewer respondents reported drinking 2% low fat milk in 2010 (37.8%) than in 2009 (44.0%). The number of people reporting consumption of whole milk increased between 2009 (22.0%) and 2010 (26.7%).

Behavior Model Research Report Wave III

- Intercept surveys were conducted with 805 low income mothers with children ages 2-11 in Phoenix, Tucson, Flagstaff, and Yuma.
- Among the 82% of the mothers receiving some type of food assistance, nearly all (93.0%) were receiving SNAP benefits.
- Compared to responses to similar questions in 2008 and 2009, more mothers report eating canned and frozen vegetables in the 2010 survey (2008-43%; 2009-56%; 2010-63%).
- Nearly 7 in 10 mothers (68.0%) report eating whole grain bread as compared to those who say they eat white bread (48%).
- Hispanic women are significantly more likely (10-12%) than non-Hispanic women to agree with statements regarding the benefits of drinking 1% low fat or fat free milk and eating whole grains.

Building Better Bones School Curriculum

- A total of 4,658 students completed the three-class Building Better Bones (BBB) curriculum and submitted a post-test.
- All knowledge-related questions assessed in the test showed a statistically significant knowledge increase between the pre- and post-tests.
- Two-thirds (68.3%) of students reported that they drank or ate more calcium-rich foods after the BBB program.
- Over three-quarters (78.6%) of students reported that the BBB Program helped them become more physically active.

Fruits and Vegetables - More Matters™ School Curriculum

- Use of the pre- and post-test became optional for Arizona Nutrition Network Partners in the 2009-2010 school year with data reported for 810 students from three counties.
- Students demonstrated a statistically significant knowledge increase for seven of eight knowledge-related questions measured on the pre-and the post-survey.

- Students reported a statistically significant behavior change for previous day fruit and vegetable consumption.
- Only student preference for broccoli was shown to have a statistically significant difference between the pre- and post-test results.

Fruits and Vegetables - More Matters™ Social Marketing Post Campaign Report

- Intercept surveys were conducted with 803 low income mothers with children ages 2-11 in Phoenix, Tucson, Flagstaff, Cottonwood, Winslow, and Yuma.
- Nearly half of the mothers (43.0%) recalled the Fruits and Vegetables - More Matters™ (FVMM) campaign and nearly all (98.0%) reported finding the advertising easy-to-understand.
- Overwhelmingly, mothers most often recalled seeing the advertising on television (86.0%) and more than half (52.0%) reported seeing the FFMM messages in government offices.
- Nearly nine out of ten mothers (88.0%) who are currently trying, planning, or thinking about eating more fruits and vegetables in the near future indicated the FFMM campaign positively influenced them to increase their consumption.

Go Low Social Marketing Post Campaign Report

- Intercept surveys were conducted with 830 low income mothers with children ages 2-11 in Phoenix, Tucson, Flagstaff, and Yuma.
- Nearly four in ten mothers interviewed (38%) recalled the Go Low campaign and the advertising had a very high level of understandability (98.0%).
- Mothers reported seeing the Go Low messages on television most often (89.0%) and in government offices (54%) as the next most frequent location.
- The number of mothers reported drinking 1% low fat or fat free milk remained stable in the past two years (2008-41.0%; 2010-40.0%).
- White mothers are significantly more likely to drink 1% low fat or fat free milk while African American mothers are significantly more likely than all other racial groups to report drinking whole milk.
- Hispanic mothers are more likely to indicate they drink 2% reduced fat milk than non-Hispanic mothers.

Grow a Healthy Child Social Marketing Post Campaign Report

- Intercept surveys were conducted with 801 low income mothers with children ages 2-11 in Phoenix, Tucson, Flagstaff, Cottonwood, Winslow, and Yuma.
- Mothers whose families participate in a food assistance program were significantly more likely than those who do not to have seen the Grow a Healthy Child campaign messages or materials (34.0% versus 21.0%).
- Television was the most common response as to where mothers saw campaign advertising (77.0%) and government offices (65.0%) was the next most common location reported.
- Walking with their child was reported as the most popular outdoor activity by mothers (89.0%), playing ball (85.0%), running/chasing (75.0%), and swimming (73.0%). Dancing with their child was an activity most popular with the youngest mothers (ages 18 to 25).
- Nearly half of the mothers (48.0%) reported that their children helped them plan meals “often” or “always”.

Media Usability Study

- Intercept interviews were conducted with 885 women and 255 children or adolescents in Phoenix, Tucson, Flagstaff, Winslow, and Sierra Vista.
- Nearly all of the moms interviewed (85.0%) have access to a computer and many (78.0%) have internet access.
- More than half (63.0%) sought health, nutrition, or disease-related information online.
- Women surveyed were significantly more likely to have cell phones (81.0%) than landlines (47.0%).
- Nearly all of the children/youth interviewed (99.0%) have access to a computer at school or at home.
- Two in ten (20%) of the kids that use the Internet have visited the Arizona Nutrition Network's website www.eatwellbewell.org and a more than three quarters (76.0%) indicate they like the site (a lot-70%; a little-26%).

Partner Satisfaction Survey

- A web-based survey link was distributed via e-mail to approximately 300 Network partners in June 2010 with 31 partners completing the survey (estimated 10% response rate).
- Strengths of the Network identified by partners include design of the website, Fun Food News, posters, and recipe cards as well as the social marketing campaigns.
- Areas for improvement as identified by partners include availability of incentive items and materials as well as the on-line ordering system.

Arizona Nutrition Network Annual Report FY 2010

4. SNAP-Ed Planned Improvements

AzNN has made several improvements for the FY11:

- Increase the number of schools participating in SNAP Ed
- Increase the number of Food Demonstrations provided in schools
- Increase the number of Food Demonstrations provided in SNAP eligible groceries
- Add social marketing campaigns around Lean meats and beans and whole grains
- Increase the number of SNAP offices that are “adopted”
- Continue to monitor and improve reporting systems
- Increase collaboration with other agencies providing nutrition education
- Complete Research around technology in the classroom and most effective methods for sharing nutrition messages
- Extensive lesson plan development-creating more tools for Partners
- Update the evaluation toolkit/evaluation systems available for Partners
- Pilot projects with County Health Departments to build nutrition education in their communities

AzNN hopes to provide some additional recruitment for FY 12. However, pending CNR resolution and clear direction for the program activities will be on hold.

5. EARS Feedback:

- Comments regarding any challenges you encountered in gathering and reporting data for EARS and actions taken to resolve or address these challenges.

The sheer volume of data is overwhelming. We discovered that local providers AKA “partners” were spending countless hours compiling multiple reports into the IA Excel templates. In an attempt to simplify the process for local partners, the IA now accepts multiple reports from each agency. An Access database was then created to compile the data at year end. This increased the number of reports from 312 (26 partners x 12 months) to 2,786... an increase of 893%.

Collecting in-school teacher (local share) activities has proven especially difficult. Teachers are overworked and do not want to complete “one more form”. In order to capture the data (and local share) a simplified report template was created (piloted in FY09 and rolled out in FY10). While this report template is not ideal, it does bring us comfortably in-line with the EARS Guidelines. Additionally, many local partners have set up incentive programs for their participating schools to encourage teacher participation.

It is extremely difficult to track participants through the program. Each partner is able track this information within their own program, but where there is overlap within sites (i.e. one partner serves the in-school program and another serves the parks & rec program) the information is kept separately. It is therefore possible that participants are counted by both Partners even though it is the same person. Without participants “registering” in the program and receiving a unique ID number, which is not feasible, we do not know how to address this issue.

- Does FNS need to provide additional EARS training or resources? If yes, specify training topics and/or type of resources needed.

Yes. Clearer definitions are required. One example: Discussions have taken place in our state about what types of activities are considered “direct” (i.e. Are there minimum criteria other than what is outlined in the guidance? Should there be?). When other states were approached about this question, the answers varied greatly. There does not seem to be consistency, thus making state to state comparisons invalid.

A forum where best practices could be shared with all Implementing Agencies (i.e. a forum where sample documents could be shared and discussed, demographic collection methods, etc.) would be beneficial. Not only would this increase consistency across states, but it would help to streamline processes and make data more valuable.

USDA should contract with an agency to build a consistent uniform data collection system. They should ask 5-10 IAs to be the team to work with the agency to build a system that will work for all and will ensure that the data collected is the data the USDA wants.

- What, if any, changes did you make in your IT system or manual data collection procedures for EARS in the prior fiscal year? If available, attach a description of updated IT systems and/or manual data collection procedures.

Many changes to the data collection process and forms were implemented between FY08 & FY09. Local partners had a difficult time adjusting to these changes. We thought it was best to have a year of reprieve and only address any major concerns identified during FY09. The biggest concern was the in-school teacher section of the reports (known as the Teacher Tab) which was piloted in FY09. The Teacher Tab was adjusted and rolled out in FY10 (we believe all issues have been fixed with the revised Teacher Tab). No other adjustments were made.

- Do you plan to make any changes in your IT system or manual data collection procedures for EARS in the next FY? If yes, provide a short summary of changes planned.

No changes were implemented for FY11. However, an EARS Committee, made up of local partner staff and IA staff, have started discussing possible changes for FY12. Additionally discussions are underway for creation of a more formal (not Access database) data collection system are beginning. This is a very large project that will require many work hours and manpower. AzNN is hesitant to begin this process pending CNR and any programming changes that may come in the next few years.

- Will all IAs report actual unduplicated data for EARS in the upcoming fiscal year? If no, why?

Yes

- Share suggestions for modifications to the EARS form, if any. Indicate how the modification would improve EARS, i.e. the reporting process for State, data quality, etc.

No modifications are needed to the EARS form (other than the training needs addressed above). States are in need of a true data collection system.

- Other comments

Ideally, the numbers reported in the Annual report would match the numbers reported in the EARS reports. However, with the annual report due one month earlier the numbers don't match (i.e. we are still pending final invoices from local agencies). It would be helpful to have both reports due at the same time. However, moving the EARS submission to November 30th would make this process more difficult. Generally, October & November are spent cleaning up data, tracking down missing reports, closing out accounts, etc. If the EARS deadline was moved up, it would not leave sufficient time to correctly compile the data.

The FPRS system has data parameters for some of the fields that limit how the EARS data is reported. For example, the session length field does not allow an IA to report a session length greater than 120 minutes even though we occasionally do have direct education activities greater than 120 minutes. This data is lost when it is transmitted to USDA.

6. Appendixes:

Optional

- *Staff/Partner Trainings*

Partner meetings X 3=285 attendees

Site visits 1 formal, 17 informal/Technical Assistance, 11 lesson observation, 15 fiscal audits, 2 Formal Management evaluations

Policy and Procedure Trainings X 3=88 attendees

Application training X 3=78 attendees

Food Demo Training X 2=25

Crystal reports=2 state staff

- *Conference presentations and or journal publications*

Dana Goodloe provided a presentation about how Arizona completes Social Marketing Activities to over 65 attendees at the Association of State Nutrition Network Administrators in Washington DC in February 2010

- *Curriculum development*

- *Partnership activities*

Green Room: Monthly electronic newsletter for Network Partners and their teams, includes important program information, resource for nutrition education curriculum and materials, and other updates

Discussion Board: Part of the eatwellbewell.org website this provides a forum for Partners to “talk” to one another about Nutrition education and their programs

State Nutrition Action Committee (SNAC): Led by Sharon Sass, Nutrition Education Advisor, Network Staff participated in quarterly meetings and strategic planning

Department of Education-Coordinated School Health; Network Staff met quarterly with Department of Education staff to review program roles and collaboration efforts

Department of Education-Fruit and Veggie Snack Program: the AzNN was able to coordinate with this program and provide Nutrition Education Reinforcement items to 51schools, 27,000students

Grocery Store food demos: 41 completed (see Program Overview)

Department of Economic Security-Preventing Childhood Hunger; AzNN staff attended meetings and provided materials to hunger advocates in the community. Many of these advocates will provide SNAP application assistance at their sites.

Fruit and Vegetable Coordination Activities: Laura Astbury is the Arizona's ASTPHND Fruit and Vegetable Coordinator, she coordinated monthly Fruit and Vegetable Coordinator calls, she coordinated Fruit and Vegetable Month activities for Network Partners and eligible participants, there has been activity toward the revision of an Arizona specific Harvest Calendar (to assist SNAP participants in purchasing fruits and vegetables that are in season)

- *Case studies*

- *Awards*

- Arizona Public Health Association-Hemmy 2010 for Go Low campaign*

- Arizona Public Health Association-Hemmy 2010 for Grow a Healthy Child campaign*

Appendix A
Arizona Nutrition Network
Evaluation



Champions for Change

Arizona Nutrition Network

Arizona Nutrition Network Evaluation

FY 2010

Prepared by
Carmon Greene
Epidemiologist

November 2010

Introduction

The Arizona Nutrition Network is a public and private partnership led by the Arizona Department of Health Services' Bureau of Nutrition and Physical Activity that are committed to promoting behavior change among the Supplemental Nutrition Assistance Program (SNAP) eligible population in Arizona. The purpose of this evaluation is to investigate the components of behavior change in the SNAP eligible population as a result of Arizona Nutrition Network messages and education.

The Supplemental Nutrition Assistance Program provides supplemental food purchasing assistance for people at or below 130% of the federal poverty level (FPL). In Arizona, 14 percent of the population was living at or below 130% of the federal poverty level in 2000. As of September 2010, over one million people in Arizona were receiving SNAP benefits. Increasing by over seven percent (7.3%) since the previous year, SNAP issuance in Arizona exceeds \$133 million per month and continues to grow.

The objectives of the Arizona Nutrition Network focus on maintaining a healthy weight, increasing fruit and vegetable consumption, increasing low fat and fat free milk consumption, and increasing food security. Secondary goals of the Network include increasing the initiation and duration of breastfeeding, increasing folic acid consumption in pregnant women, and increasing physical activity.

The goals of the Network evaluation are to track the health behaviors of the SNAP eligible population and how they change over time.

Methods

Arizona Nutrition Network Evaluation surveys were conducted at a weighted random sample of State Supplemental Nutrition Program for Women, Infants, and Children (WIC) and Arizona Department of Economic Security (DES) offices throughout Arizona. A bilingual data collector asked participants to complete a survey while waiting for services provided at the location. A total of 1307 surveys were conducted at 18 DES and 11 WIC sites. Participants who completed a survey were given an incentive item containing SNAP education messages along with print materials such as the Fun Food News and harvest calendars.

The first half of the survey instrument is the Food Behavior Checklist, which was developed and validated by Dr. Marilyn Townsend Ph.D., RD at the University of California, Davis. The survey was validated for a fourth grade reading level, low income, and multi-ethnic population. The survey is simple to use with the SNAP population and meets the requirements for a tool that is valid, reliable, internally consistent, is sensitive to small dietary changes, is easy to administer and is inexpensive to score. It was discovered that while the survey instrument collected data that was important to the evaluation, it did not ask all of the questions that the Network staff was interested in. The second half of the survey instrument includes additional questions from other validated tools, such as the Behavior Risk Factor Surveillance System, the Economic Research

Service’s Food Behavior Questionnaire, The National Survey of Children’s Health and the National Health and Nutrition Examination Survey.

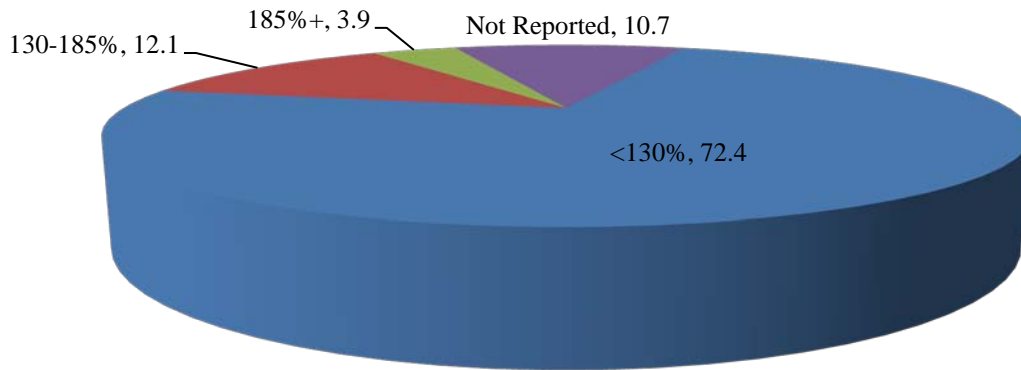
Results

Demographics

Of the 1307 participants who filled out a survey, 1245 (95.3%) reported their age. The average age of a respondent was 34.3 years, with a range from 14 to 87 years of age. The majority of participants (72.3%, n=945) were female, over one-quarter (26.0%, n=340) or respondents were male, and almost two percent (1.7%, n=22) did not report their gender. Over forty percent (41.2%, n=539) of respondents reported that they participated in SNAP, and almost forty percent (38.4%, n=502) of respondents reported that they participated in WIC. Over fifteen percent (15.1%, n=197) reported that they participated in both WIC and SNAP. Due to data integrity issues with the race/ethnicity question, analysis results on race and ethnicity are not included.

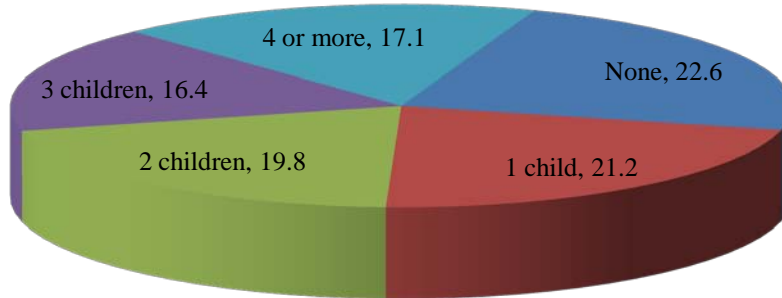
Respondents were asked to report the number of people living in their household and their household income. The federal poverty level for the household was calculated from this information. As Figure 1 shows, almost three-quarters (72.4%) of respondents were living at or below 130% of the federal poverty level, and another 12.1 percent were living at 130-185% of the federal poverty level.

Figure 1. Percentage of Respondents by Poverty Level, AzNN Evaluation, 2010



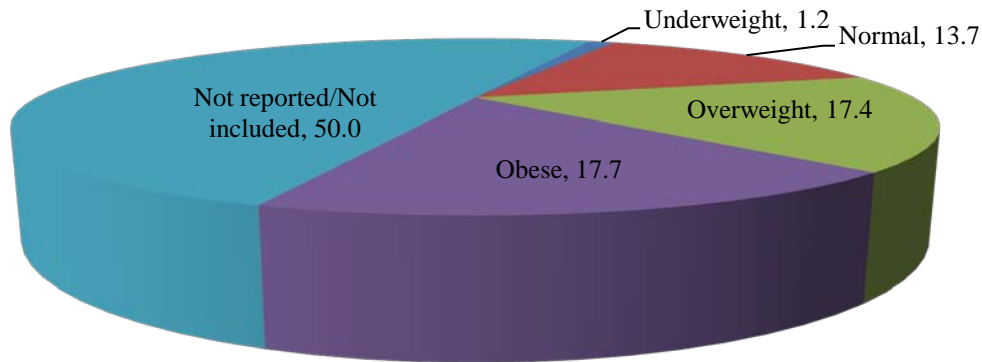
Respondents were asked to report the number of children age 18 and younger living in their household. Over three-quarters (77.4%, n=1012) of respondents reported that they had children age 18 and younger living in their household. One-third of respondents (33.1%, n=432) reported having children under the age of two living in their household, with an average of 1.2 children living in the household under the age of two (range 1 to 2). Almost two-thirds of respondents (63.4%, n=828) reported having children age two to 18 years of age living in their home, with an average of 2.3 children age two to 18 (range 1 to 8) living in their home. Figure 2 shows the percentage of respondents by the number of children age 18 and younger living in their home. As Figure 2 shows, a little over one-third (33.5%, n=438) of respondents had 3 or more children living in their household.

Figure 2. Percentage of Respondents by Number of Children 18 and Younger Living in the Household, AzNN Evaluation, 2010



Respondents were asked to report their height and weight. Over eleven percent of respondents (11.5 % n=150) reported that they did not know their weight, and a similar amount (10.6%, n=139) reported that they did not know their height. Over seven percent (7.1% n=93) reported that they were pregnant. The respondent's Body Mass Index (BMI) was then calculated from this information for those respondents who reported their height and weight and were not pregnant. As Figure 3 shows, one-half of respondents did not report either their height or weight or were not included in the analysis (due to invalid entries or pregnancy status). Over thirty-five percent (35.1%, n=458) of respondents were classified as either overweight or obese.

Figure 3. Percentage of Respondents by BMI Category AzNN Evaluation, 2010

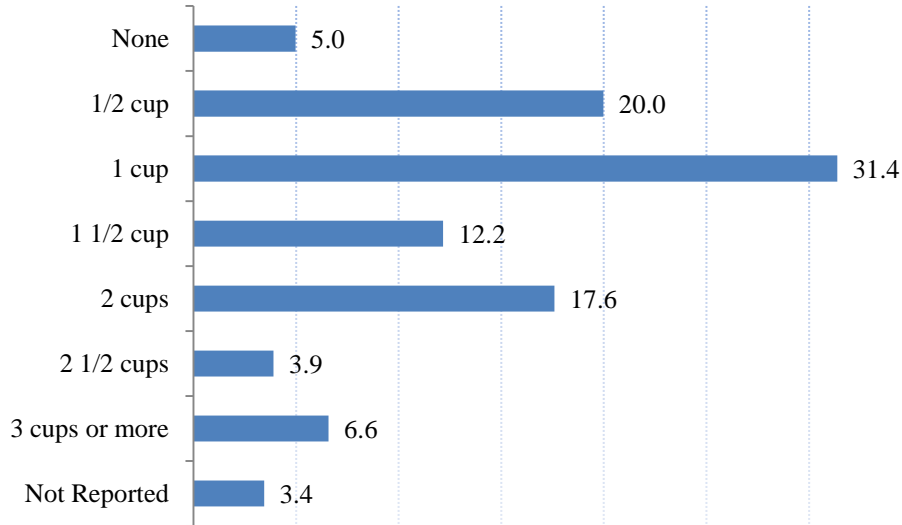


Fruit and Vegetable Consumption

The United States Department of Agriculture (USDA) has revised the recommendations regarding the amount of fruits and vegetables a person needs.² Rather than having a one-size-fits-all recommendation, it is tailored to a person's gender, age and level of physical activity. In general the recommendation is that for women (depending on age and physical activity), the minimum recommended amount of vegetables to consume each day ranges from two and a half to three cups per day, while the recommended amount for men ranges from three to four cups per day. As Figure 4 shows, over eighty-six percent

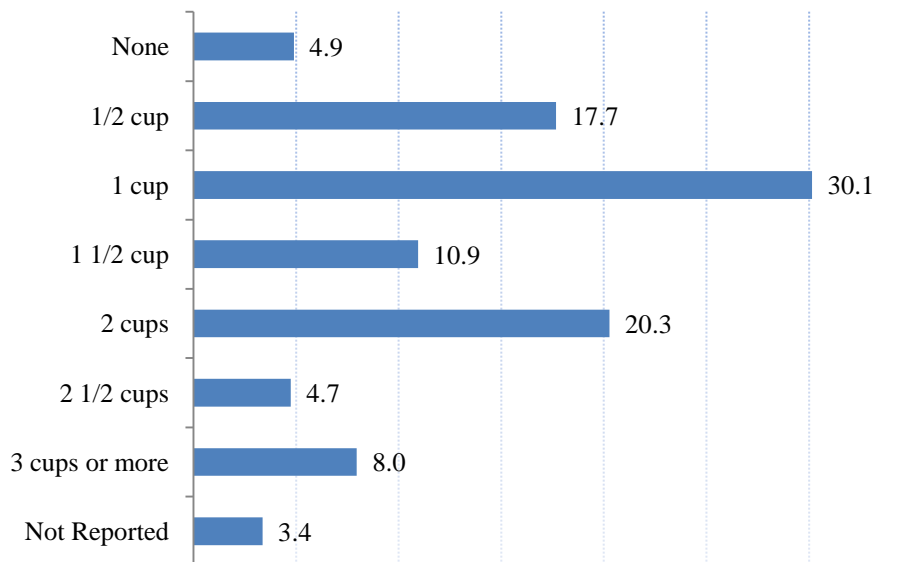
(86.1%, n=1125) of respondents reported eating less than two and a half cups of vegetables per day, which is lower than the minimum recommended amount based on a 2,000 calorie diet.

Figure 4. Percentage of Respondents by Cups of Vegetables Consumed Each Day, AzNN Evaluation FY 2010



In general, the recommendation is that for women (depending on age and physical activity), the minimum recommended amount of fruit to consume ranges from one and a half to two cups per day, while the recommended amount for men ranges from two to two and a half cups per day. As Figure 5 shows, over sixty percent (63.7%, n=832) of respondents reported eating two cups or less of fruit each day, which is lower than the minimum recommended amount based on a 2,000 calorie diet.

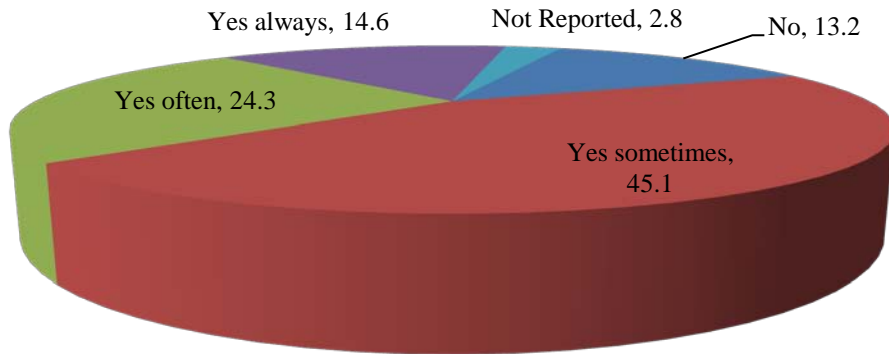
Figure 5. Percentage of Respondents by Cups of Fruit Consumed Each Day, AzNN Evaluation FY 2010



Participants were also asked how often they ate fruits or vegetables as snacks. Almost all (96.6%, n=1262) respondents reported that they ate fruits and vegetables as snacks, however just over 20 percent of respondents (22.7%, n=297) reported eating fruits or vegetables as snacks every day. Over forty-five percent (45.4%, n=594) of respondents reported eating fruits or vegetables as snacks sometimes, and over twenty-eight percent (28.4%, n=371) of respondents reported eating fruits or vegetables as snacks often. Participants were also asked if they had citrus fruit or juice during the past week. Over three-quarters (75.2%, n=983) of respondents reported that they had citrus fruit or citrus juice during the past week.

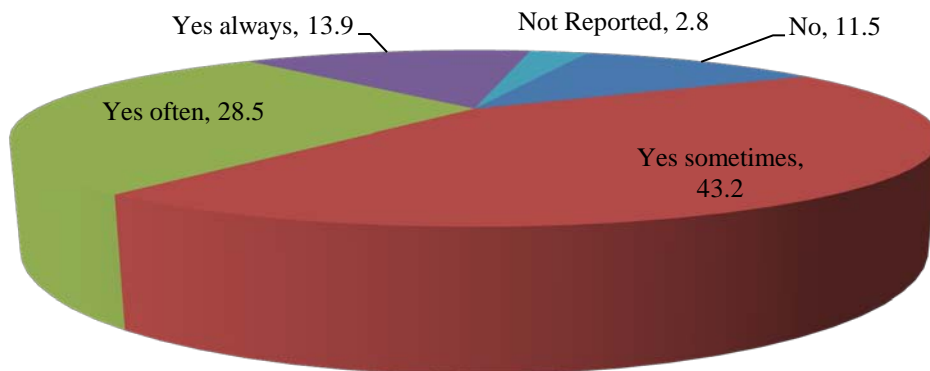
A series of questions were asked to gauge the variety of fruit and vegetables in respondents' diets. As Figure 6 shows, almost forty percent (38.9%, n=509) of respondents reported that they often or always ate more than one kind of fruit each day.

**Figure 6. Do you eat more than one kind of fruit each day?
AzNN Evaluation, 2010**



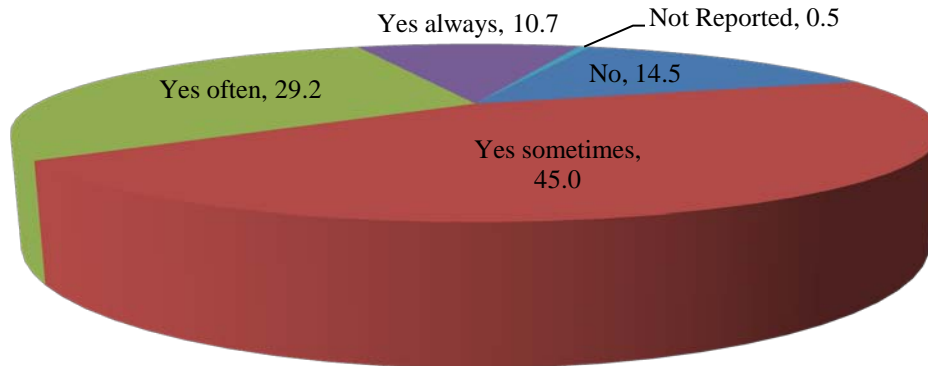
As Figure 7 shows, over forty percent (42.5%, n=555) of respondents reported often or always eating more than one kind of vegetable each day.

**Figure 7. Do you eat more than one kind of vegetable each day?
AzNN Evaluation, 2010**



Participants were also asked if they eat two or more vegetables at their main meal. As Figure 8 shows, almost forty percent (39.9%, n=522) of respondents reported that they often or always ate two or more vegetables at their main meal.

**Figure 8. Do you eat two or more vegetables at your main meal?
AzNN Evaluation 2010**



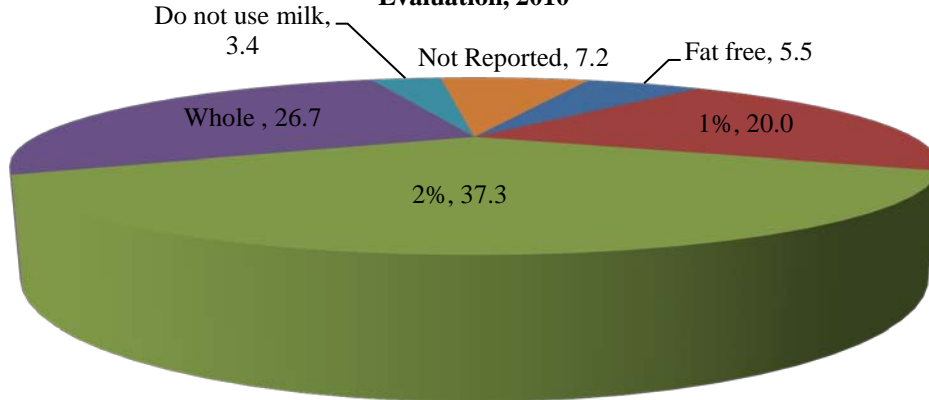
Whole Grain Consumption

Similar to fruit and vegetables, the USDA recommendations for grain consumption depend on a person’s gender, age and physical activity level.² In general, the USDA recommends that women consume between six and eight ounces of grains per day, with at least half coming from whole grains. Respondents were asked to report how many times they ate whole grain cereals such as Cheerios, Raisin Bran, Shredded Wheat, Total, Wheaties or oatmeal in the past week. Over fifteen percent (15.6%, n=204) of respondents reported that they did not eat whole grain cereal. Over half (56.0%, n= 732) of respondents reported eating whole grain cereal during the past week. Participants reported eating whole grain cereal an average of 1.4 times per day, with a range from 1 to 4 times per day. Almost one-quarter (24.4%, n=319) of respondents reported eating whole grain cereal at least once per day.

Dairy Consumption

The USDA recommends that adults consume three cups of low fat or fat free milk and/or milk products per day.² The majority (85.0%, n=1111) of respondents reported drinking milk or using it on their cereal during the past week. Participants were also asked if they drank milk. Almost one-third (32.2%, n=421) of respondents reported that they drink milk everyday; just under one-quarter (23.6%, n=309) of respondents reported often drinking milk; over thirty percent (30.6%, n=400) of respondents reported sometimes drinking milk; and over ten percent of participants reported that they did not drink milk (10.6%, n=139). Almost three percent (2.9%, n=38) of respondents did not answer the question. Figure 9 shows the percentage of respondents by the type of milk they usually drink or use. As Figure 9 shows, one-fifth (37.3%, n=487) of respondents reported using whole or 2% reduced fat milk, and one-quarter (20.0%, n=261) of respondents reported using 1% low fat or fat free milk. Over ten percent of respondents (10.6%, n=138) reported that they did not use milk or did not answer the question.

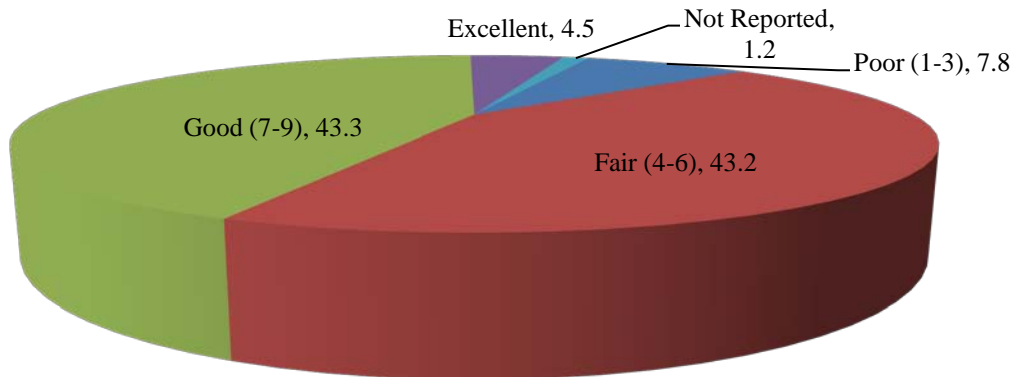
Figure 9. Percentage of Respondents by Type of Milk Usually Used, AzNN Evaluation, 2010



Diet Quality

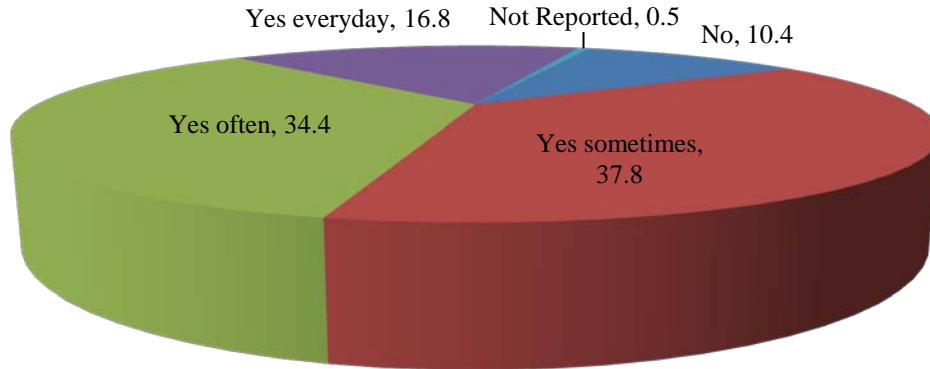
Respondents were asked to rank their eating habits on a scale of one to ten, with 1=poor, 4=fair, 7=good, and 10=excellent. Of the 1291 (98.8%) respondents who answered the question, the average rank was 5.9, which falls in the 'Fair' range. Figure 10 shows the percentage of respondents by how they ranked their eating habits. As the Figure shows, almost half (51.0%, n=660) of respondents ranked their eating habits as poor or fair, while a similar amount (47.8%, n=625) ranked their eating habits as good or excellent.

Figure 10. Percentage of Respondents by Self-Reported Eating Habits Rank, AzNN Evaluation, 2010



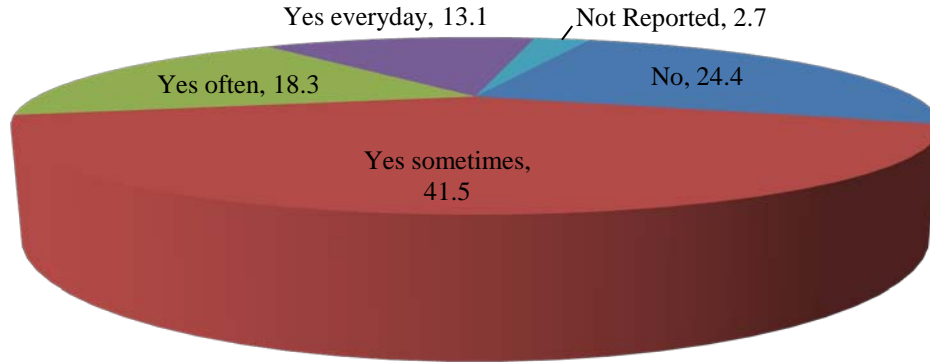
Respondents were asked questions related to dietary quality. Two questions were focused on added sugar in beverages. The majority (89.1%, n=1164) of respondents reported that they drank fruit drinks, sports drinks or punch. Almost forty percent of respondents (37.8%, n=494) reported drinking these drinks sometimes, and a similar amount reported drinking these drinks often or every day (51.3%, n=670). Figure 11 shows the percentage of respondents by frequency of drinking fruit drinks, sports drinks or punch.

**Figure 11. Do you drink fruit drinks, sports drinks or punch?
AzNN Evaluation, 2010**



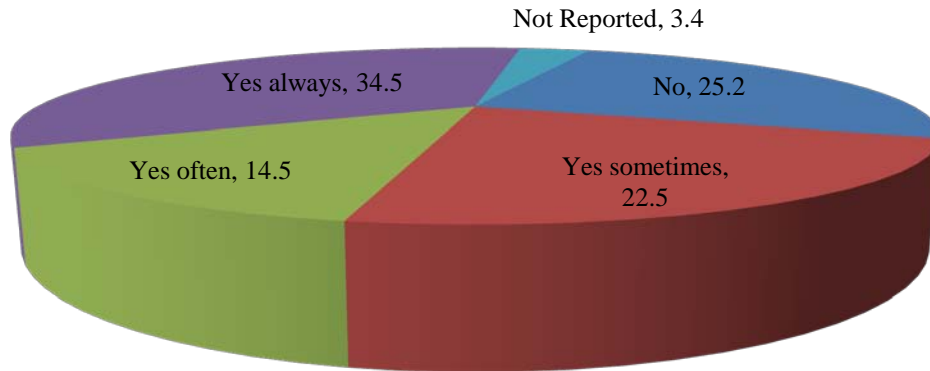
Almost three-quarters (72.9%, n=953) of respondents reported drinking regular (non-diet) soda. Over forty-one percent (41.5%, n=543) of respondents reported sometimes drinking regular soda, while almost one-fourth (24.4%, n=319) reported not drinking regular soda at all. Almost one-third (31.4%, n=410) of respondents reported drinking regular soda often or every day. Figure 12 shows the percentage of respondents by frequency of drinking regular soda.

**Figure 12. Do you drink regular soda?
AzNN Evaluation 2010**



Respondents were asked if they take the skin off chicken before cooking or eating it. The purpose of this question was to assess a respondent's choice of lower-fat foods. Research related to the validity of the food behavior checklist (the first half of the survey) found that women who selected lower-fat foods were also more likely to consume fruits and vegetables.⁴ Figure 13 shows the percentage of respondents by frequency of whether or not they removed skin from chicken before cooking or consuming it. As Figure 13 shows, over one-third (34.5%, n=451) of respondents reported always taking the skin off chicken before cooking or consuming it, while over one-quarter (25.2%, n=329) of respondents reported that they did not take the skin off the chicken before consuming it.

**Figure 13. Do you take the skin off chicken?
AzNN Evaluation, 2010**

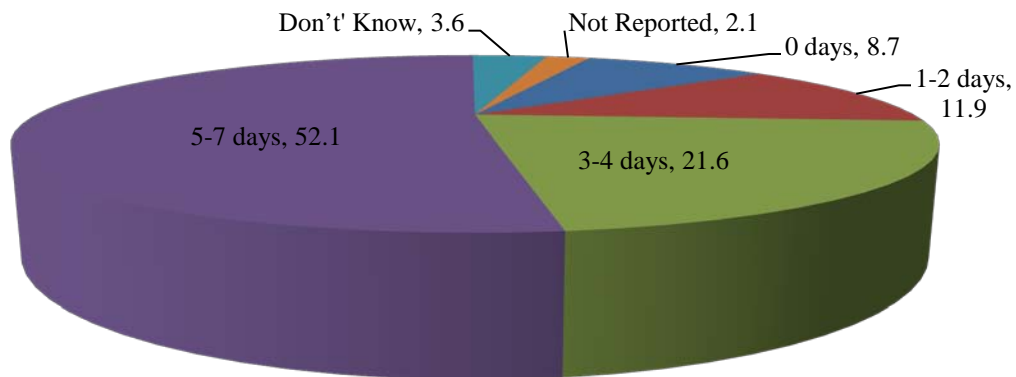


Respondents were also asked if they had eaten fish during the past week. Almost sixty percent (59.8%, n=782) of respondents reported that they had not had fish during the past week, and over one-third (37.5%, n=490) of respondents reported that they had eaten fish during the past week.

Family Meals

Research has shown that family meals are an important factor in nutrition and eating behaviors of children and adolescents.⁵ Additionally, research has shown that family meals are associated with increased consumption of fruits and vegetables, and dairy products. Over half (52.1%, n=681) of respondents reported eating a meal with the entire family five to seven days per week. Figure 14 shows the percentage of respondents by the number of days in the past week that all the family members in the household ate a meal together.

Figure 14. During the past week, on how many days did all the family members who live with you eat a meal together? AzNN Evaluation, 2010

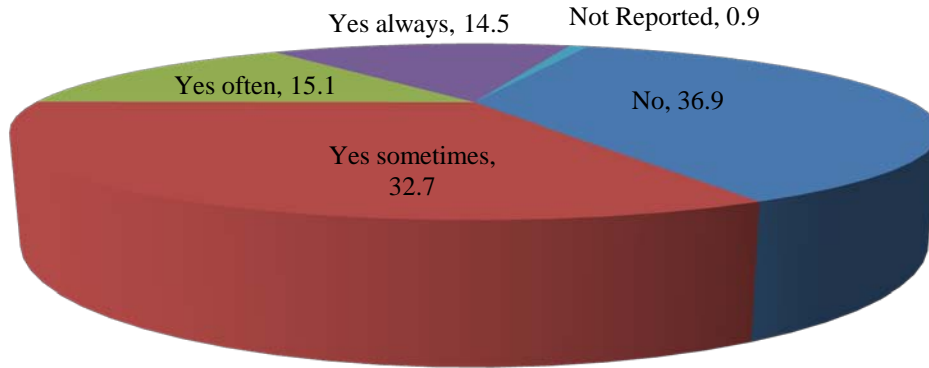


Shopping Behaviors/Food Security

Respondents were shown a picture of a woman shopping using the nutrition facts label on a box of cereal and asked ‘Do you use this label when food shopping?’. Almost two-thirds (62.2%, n=813) of respondents reported using the nutrition facts label when

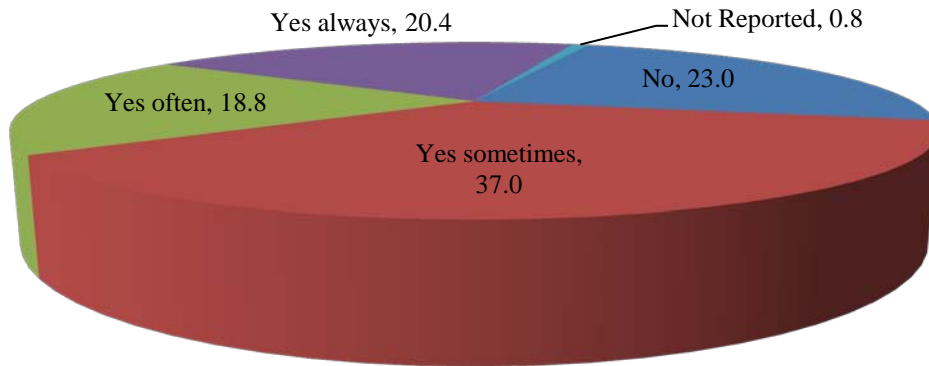
shopping. One third (36.9%, n=482) reported that they did not use the nutrition facts label when shopping. Figure 15 shows the percentage of respondents by frequency of using the nutrition facts label when shopping.

Figure 15. Do you use this label when food shopping?
AzNN Evaluation, 2010



Respondents were asked how often they run out of food before the end of the month. Over three-quarters (76.2%, n=996) of participants reported that they ran out of food before the end of the month. Almost forty percent (39.3%, n=513) of respondents reported that they often or always ran out of food before the end of the month. Figure 16 shows the percentage of respondents by frequency that they run out of food before the end of the month.

Figure 16. Do you run out of food before the end of the month?
AzNN Evaluation, 2010



Screen Time

The American Academy of Pediatrics recommends that children age two to 18 spend two or less hours of “screen time” per day.⁶ Screen time is defined as time spent in front of a screen watching television, playing games or watching videos. Respondents who indicated that they had children between these ages were asked to report the number of hours that their oldest child watched television, played video games, or played computer games on the prior day. Of the 856 respondents who indicated that they had children age two to 18 living in their household, over one-quarter (26.5%, n=227) did not know how

much time their child had spent on the previous day in front of a screen. For the 629 respondents (73.5%) who knew the amount of time their child spent in front of a screen, the average number of hours the oldest child in the house spent in front of a screen was 2.9 hours, with a range of zero hours to 14 hours. Over one-third (33.6%, n=288) of respondents reported that the oldest child in their household spent more than the recommended two or less hours per day in front of a screen. Recent research on screen time in child care settings indicate that the estimates reported by parents are probably an underestimate of the total time a child spends in front of a screen each day.⁷

Physical Activity

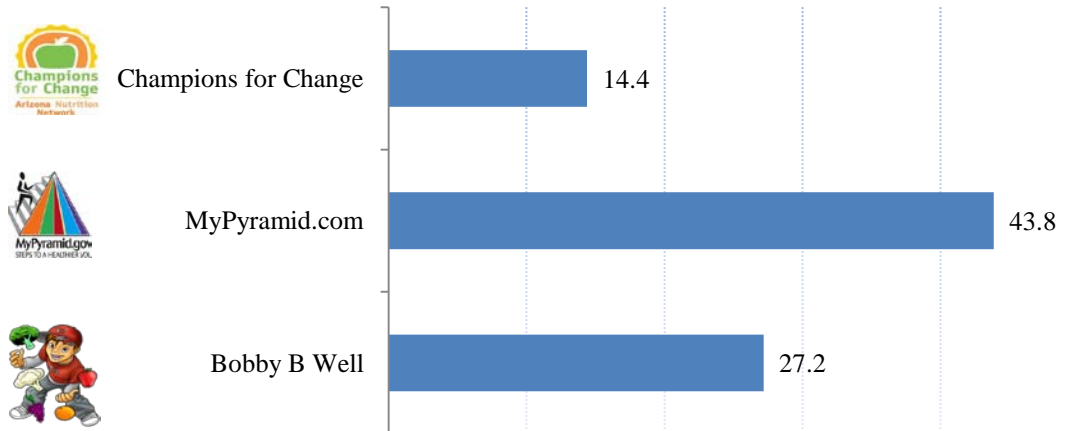
The US Department of Health and Human Services recommends that adults age 18 to 65 years old should do at least 150 minutes (2 hours and 30 minutes) of moderate-intensity physical activity per week. Additional health benefits can be achieved with 300 minutes (5 hours) or more of moderate-intensity physical activity per week, and a person who does 420 minutes (7 hours) or more a week has an even lowered risk of premature death than a person that does 150-300 minutes a week.³ Of the 1221 respondents who reported their physical activity, the mean number of minutes was 332 minutes* which is above the recommended amount. Over forty one percent (41.2%, n=503) of respondents did either no physical activity at all or did under the recommended amount of 150 minutes a week. Almost thirty percent (29.9%, n=395) of participants did 150-420 minutes of physical activity and over one-quarter (26.5%, n=323) of participants did over 420 minutes of physical activity per week.

*physical activity reporting may include occupational work on a regular job.

Logo Awareness

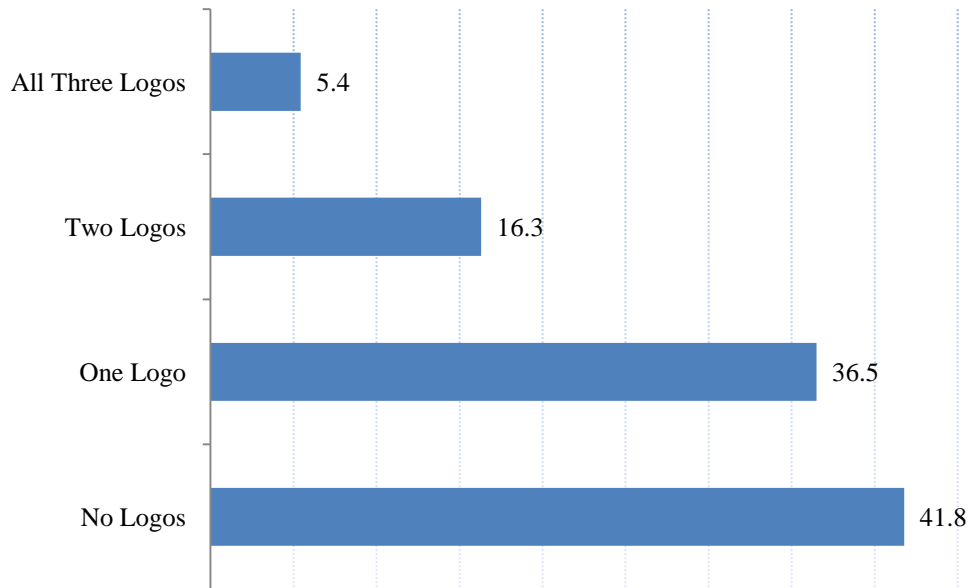
Respondents were shown seven logos frequently used by the Network, and were asked to circle the logos that they had seen before. Figure 17 shows the percentage of respondents who reported that they had seen each logo. Over forty-three percent (43.8%, n=573) of respondents reported seeing the MyPyramid.gov logo before, and one-third (27.2%, n=355) of respondents had seen the Bobby B Well logo before.

**Figure 17. Percentage of Respondents Who Reported Seeing Selected Logos
AzNN Evaluation, 2010**



Almost sixty percent of respondents (58.2%, n=761) reported that they had seen one or more of the selected logos. Almost thirty-seven percent (36.5%, n=477) had seen one logo and over sixteen percent (16.3%, n=213).

**Figure 18. Percentage of Response Who Reported Seeing Logos
AzNN Evaluation, 2010**



Conclusion

The purpose of the Network Evaluation Survey is to acquire comprehensive evaluation information for ongoing Network nutrition education efforts statewide. It is intended as a surveillance instrument to collect information on the consumption and behaviors of SNAP participants and eligible participants. Fiscal Year 2010 is the second year of data collection, and provides data for time trend analysis. This evaluation was designed to determine whether the Network is helping to shape healthy food consumption and promote healthy behaviors among Arizona's SNAP eligible participants.

The results of the evaluation will help direct program efforts and will allow network staff to help guide LIA Partners in order to maximize the effectiveness of community nutrition education efforts. State Health Department administrators and Network staff can utilize the findings to identify areas of the state where new LIA Partners and community nutrition education programs are needed.

The results of the second year of data collection show clear areas where Network staff and LIA Partners can focus nutrition education. These areas include:

- Teaching participants the importance of achieving and maintaining a healthy weight by eating more fruits and vegetables, low fat or fat free milk products and whole grains, and by participating in adequate physical activity. Over thirty-five percent (35.1%, n=458) of respondents had a BMI that classified them as either overweight or obese.
- Teaching participants how to incorporate more fruits and vegetables into their diets. Almost seventy percent (68.5%, n=895) of respondents reported eating less than two cups of vegetables per day, and over sixty percent (63.7%, n=832) of respondents reported eating one cup or less of fruit each day.
- Teaching participants how to utilize the Nutrition Facts Label every time they shop for food. One-third (36.9%, n=482) reported that they did not use the Nutrition Facts Label when shopping, which is similar to the 35% of respondents in FY 2009.
- Teaching participants the importance of limiting screen time for children. Over one-third (33.6%, n=288) of respondents reported that the oldest child in their household spent more than the recommended two or less hours per day in front of a screen, the percentage is lower than the 46% of respondents in FY 2009.
- Teaching participants the importance of including some physical activity each day. Over forty-one percent (41.2%, n=503) of respondents did either no physical activity at all or did under the recommended amount of 150 minutes a week.
- Teaching participants to seek out all possible sources of food assistance and support. Over three-quarters (76.2%, n=996) of respondents reported that they ran out of food before the end of the month, which is similar to the 77% of respondents in FY 2009.

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- ¹Centers for Disease Control and Prevention. BMI Calculation Guidance. http://www.cdc.gov/nccdphp/dnpa/healthyweight/assessing/bmi/adult_BMI/about_adult_BMI.htm#Interpreted
- ²United States Department of Agriculture. My Pyramid Dietary Guidelines. www.MyPyramid.gov
- ³United States Department of Health and Human Services. 2008 Physical Activity Guidelines for Americans. <http://www.health.gov/paguidelines/default.aspx>
- ⁴ Murphy S, Kaiser LL, Townsend MS, Allen L. *Evaluation of Validity of Items in a Food Behavior Checklist*. J Am Dietetic Assoc, 2001:101:751-756, 761.
- ⁵Videon T, Manning C. *Influences on Adolescent Eating Patterns: The Importance of Family Meals*. Journal of Adolescent Health, 2003: 32:365-373.
- ⁶American Academy of Pediatrics. Expert Committee Recommendations on the Assessment, Prevention, and Treatment of Child and Adolescent Overweight and Obesity June 6, 2007. http://www.aap.org/obesity/AMA_ped_obesity_recs.pdf
- ⁷Christakis D, Garrison M. *Preschool-Aged Children's Television Viewing in Child Care Settings*. Pediatrics, 2009: 0862

Appendix B
Behavior Model Research Report
Wave III



**Arizona Department of Health Services
(ADHS)/
Arizona Nutrition Network (AzNN)**

**Behavior Model Research Report
Wave III**

**Report Prepared for:
Arizona Department of Health Services / AzNN**

Date: August 2010

Table of Contents

I.	Background & Methodology	2
II.	Key Findings & Conclusions	7
III.	Current Eating Habits	13
	A. Description of Eating Habits	13
	B. Foods Consumed	15
	C. Eating Habits	18
IV.	Perceptions about Eating Healthy	20
	A. Healthy Eating	20
	B. Perceived Benefits of Eating Healthy	23
	C. Perceived Barriers to Eating Healthy	28
	D. Perceived Risks of Not Eating Healthy	31
	E. Self-efficacy	33
V.	Population Definition – Stages of Change	37
	A. Fruit Stages of Change	38
	B. Vegetable Stages of Change	49
	C. Milk Stages of Change	59
	D. Serving Healthy Meals Stages of Change	69
	E. Lean Proteins Stages of Change	79
	F. Whole Grains Stages of Change	88
VI.	Additional Respondent Information	98

Appendices:

A. Questionnaire

B. Data Tables

I. Background & Methodology

The Arizona Nutrition Network (AzNN), a public and private partnership led by the Arizona Department of Health Services' (ADHS) Bureau of Nutrition and Physical Activity, was developed to educate all Arizonans, especially lower income residents, on the importance of nutrition and physical activity. The Nutrition Network's mission is to shape food consumption in a positive way, promote health and reduce disease among all people living in Arizona.

In an effort to evaluate their target audience using two health behavior models (the Transtheoretical Model and the Health Belief Model) and further tailor their intervention messages, ADHS/AzNN commissioned WestGroup Research to conduct the third wave of the Behavior Model Research quantitative study. This research provides a framework for understanding individuals' psychological readiness or intention to take action related to specific health messages.

The subject of this report is Wave III of the quantitative research. The primary objective of this research is to measure changes in behavior or readiness relating to several health messages. In addition, similar to the first two waves, moms were identified as being in a particular *Stage of Change* with regard to eating fruits and vegetables, drinking 1% low fat or fat free milk, and preparing and providing healthy meals to their families. They were also asked to stage themselves with regard to eating whole grain foods and lean protein. Participants were assigned to a specific segment based on their perceptions about their dietary behaviors, and/or their actual behaviors.

In addition to staging individuals, participants were asked a series of questions related to the Health Belief Model, including identifying the perceived risks of not eating healthy as well as the perceived *risk of diseases* that may result from not eating healthy.

Intercept interviews with 805 women were conducted in four Arizona cities: Phoenix, Tucson, Flagstaff, and Yuma. The intercepts were conducted at DES offices in the four cities. Participants were given the option of completing the interview in English or Spanish.

All interviews were completed between June 21 and July 8, 2010.

The table on the following page lists the specific locations of the intercepts and the number of completed interviews at each location.

Location	Address	Sample Size	Interview Dates
Tucson	250 S. Toole Avenue 195 W. Irvington 5441 E. 22 nd Street	306	June 21 - 24
Metro Phoenix	8990 W. Peoria, Peoria 4323 W. Olive, Glendale 6010 N. 57 th Drive, Glendale	300	June 21 – July 1
Yuma	1220 S. 4 th Avenue	100	June 28 - 29
Flagstaff	397 Malpais Lane	99	July 6 - 8

All survey participants met the following screening criteria:

S1. Do you have any children between the ages of 2 and 11?

_____ Yes

_____ No (THANK & TERMINATE)

S2. Which of the following categories best describes your age?

_____ 18 to 25

_____ 26 to 35

_____ 36 to 45

_____ 45 to 49

_____ over 49 (THANK & TERMINATE)

S3. How many people are there living in your household?

_____ 2

_____ 3

_____ 4

_____ 5

_____ 6 or more

S4. What is your household income? You can give that to me as a weekly income, every 2 weeks, monthly, or yearly income. *(Must be under these to qualify.)*

Family Size	Weekly Income	2 Week Income	Monthly Income	Yearly Income
1	385	770	1,670	20,036
2	518	1,036	2,246	26,955
3	651	1,302	2,823	33,874
4	784	1,568	3,399	40,793
5	917	1,834	3,976	47,712
6	1,050	2,101	4,553	54,631

Respondents were given a \$5 bill as a “thank you” for their participation.

It is important to note that although this information is quantitative, it is not necessarily representative of all low-income women between 18 and 49 years old in Arizona. To be representative of that population, respondents would have to have been selected at random. That is, each person in the population would have had an equal chance of being included in the sample. These intercepts were conducted using a convenience sample (e.g., those who visited specific DES offices between June 21 and July 8, 2010). Though this sampling technique is appropriate to meet the study objectives (within the budget guidelines), it does introduce a sampling bias and should be considered when interpreting the findings.

Table 1a: 2010 Respondent Profile

Characteristic	Total n=805	Phoenix n=300	Tucson n=306	Yuma n=100	Flagstaff n=99
Age					
18-25	30%	30%	30%	33%	26%
26-35	39%	40%	40%	33%	43%
36-45	22%	21%	22%	22%	21%
45-49	9%	9%	8%	12%	10%
Total	100%	100%	100%	100%	100%
Ethnicity¹					
Hispanic	51%	34%	69%	77%	22%
Not Hispanic	44%	62%	27%	20%	68%
Refused	5%	4%	4%	3%	10%
Total	100%	100%	100%	100%	100%
Race					
Caucasian/White ¹	74%	79%	78%	81%	38%
Native American	8%	2%	4%	2%	43%
African American/Black	7%	8%	7%	7%	4%
African American and White	2%	4%	2%	2%	-
Native American and White	2%	1%	2%	2%	5%
Native American/ and Black/African American	1%	1%	.3%	2%	-
Asian or Asian and White	1%	1%	1%	-	-
Other	2%	2%	3%	3%	5%
Refused	3%	2%	3%	1%	5%
Total	100%	100%	100%	100%	100%
Language at Home					
English	63%	69%	59%	41%	78%
Spanish	7%	1%	9%	23%	2%
Both	28%	28%	31%	35%	11%
Other	2%	2%	1%	1%	9%
Total	100%	100%	100%	100%	100%
Education					
8 th Grade or less	4%	4%	3%	6%	2%
Some High School	21%	17%	24%	26%	20%
GED/HS Grad	42%	47%	39%	44%	37%
Some College+	33%	32%	34%	24%	41%
Total	100%	100%	100%	100%	100%

¹ The ethnicity and race categories used in this study are the same as those used by the Census Bureau and mandated by the Office of Management and Budget. This system treats race and ethnicity as separate and independent categories, and categorizes individuals into two ethnic groups - Hispanic or non-Hispanic. As illustrated in this table, the Hispanic population is predominantly White.

Table 1b: 2010 Respondent Profile

Characteristic	Total n=805	Phoenix n=300	Tucson n=306	Yuma n=100	Flagstaff n=99
Food Assistance					
Yes	82%	90%	75%	83%	76%
No	18%	10%	25%	17%	24%
Total	100%	100%	100%	100%	100%
Type of Assistance*					
Food Stamps/SNAP	93%	96%	91%	86%	93%
WIC	38%	32%	43%	41%	43%
School lunch/breakfast	23%	31%	17%	20%	16%
Summer Food Program	6%	10%	3%	--	14%
Other	2%	2%	1%	4%	--
Marital Status					
Single	36%	25%	49%	35%	32%
Married	38%	47%	29%	39%	38%
Divorced/widowed	12%	10%	14%	17%	10%
Living with significant other	14%	18%	8%	9%	20%
Total	100%	100%	100%	100%	100%
Children Ages					
0-2 years old	20%	11%	26%	24%	23%
2-5 years old	57%	49%	61%	53%	69%
6-11 years old	49%	31%	56%	70%	62%
12-17 years old	20%	11%	24%	30%	25%

* Among those receiving assistance

Note: The demographic profile of 2010 participants is very similar to the profile of 2009 participants. There were a few more women in the 36 to 45 age group (22% in 2010 compared to 18% in 2009), and slightly more who had some high school, had completed their GED, or had completed high school (63% vs. 57%). In addition, more moms reported being on Food Stamps/SNAP in 2010 than in 2009 – 93% compared to 86%.

II. Key Findings & Conclusions

Current Eating Habits

- Moms' perceptions of their households' eating habits have not changed much over the past two years. 2010 data is virtually the same as 2008. Nearly one in four describes her habits as "excellent" (7%) or "very good" (17%). Essentially the same portion (26%) rates the quality of their eating habits on the other end of the spectrum (4% "poor" + 22% "fair"). One half (50%) feel their eating habits are "good." (p. 13)
- Mothers are most likely to include chicken, cereal, cheese, eggs, and water in their diets. This is consistent with Wave I and Wave II findings. (p. 16)
- There was a decrease in consumption of fresh fruit between 2009 and 2010, however consumption of canned fruit is up slightly. While there was no change in the portion that report eating fresh vegetables, more moms said they eat canned and frozen vegetables.
- Nearly 7 in 10 (68%) moms say they eat whole grain bread compared to 48% who eat white bread. This reverses when asked about whole grain pasta – 30% report eating whole grain pasta compared to 63% who eat regular pasta, and rice – 34% eat brown/wild rice versus 68% who eat white rice. Consumption of flour and corn tortillas is the same – 66% report eating each type. Two-thirds (67%) of moms eat oatmeal, while 58% eat popcorn. (p. 15)
- When comparing their choice for milk, moms are most likely to include 2% milk (57%), followed by whole milk (44%), 1% low fat milk (29%), and fat free milk (12%). This is almost identical to past years. (Note: adds to more than 100% due to multiple responses.) (p. 16)
- Interestingly, the percentage of women who include pizza, fast food burgers, and soda in their diets has increased over 2009. (p. 16)
- Hispanic women are more likely than non-Hispanic women to report a number of healthy eating habits including starting their day with breakfast, eating fruit for breakfast, preferring whole grain bread, and other habits. (p. 19)

Implications:

- ✓ Moms may be getting the message that "all forms count," as there was an increase in the number of moms who include *canned* fruit in their diets, as well as an increase in consumption of canned and frozen vegetables.
- ✓ There has been no change in the types of milk moms include in their diets over the past two years. The Stages of Change *curve* is "u-shaped," with the same portion in

the Pre-contemplation Stage (“not thinking about”) as in the Maintenance Stage (“already drinking”).

- ✓ The data suggests that, in these tough economic times, moms are turning to *comfort food, value meals, fast food, and quick meals*. In addition to data from this study, data from some fast food restaurants (including McDonald’s) indicates an increase in same store sales over last year, despite a tough economy.

Perceptions about Eating Healthy

- Though there is still strong agreement with the three healthy eating statements relating to fruit, there was a statistically significant decrease in the portion of moms who strongly agree/agree with each. Interestingly, the statement relating to all forms being good for you showed the biggest decline. (p. 21)
 - *Eating a variety of fruits and vegetables is an important part of eating healthy (97% strongly agree/agree in 2008 and 2009; 90% in 2010).*
 - *I believe eating fruits and vegetables is important for my overall health. (97% strongly agree/agree in 2008 and 2009; 89% in 2010)*
 - *Eating any form of fruit or vegetable is good for you (95% in 2008, 94% in 2009 and 83% in 2010).*
- Most of the *benefits to healthy eating* statements had significantly lower levels of agreement from Arizona mothers this year compared to 2008 and 2009. Some of the most notable trends include the decrease in moms who believe it is *cheaper to eat a healthy meal than go to a fast food restaurant* – 73% in 2009 and 61% in 2010, with a similar decrease in those who believe *healthy food tastes better than “junk food”* – 81% in 2008, 69% in 2009, and just 55% in 2010. (pp. 26-27)
- Disappointingly, after showing slight increases between 2008 and 2009, there were decreases in agreement with the two milk statements – *I am helping my body by drinking 1% low fat or fat free milk* – and *Drinking 1% low fat and fat free milk is healthier than drinking whole and 2% milk*. (p. 27)
- There were decreases in several of the *barriers to healthy eating* statements including: *Whole or 2% milk tastes better to me than 1% low fat or fat free milk*, *I am too tired at the end of the day to prepare a healthy meal* and interestingly, *It is too expensive to eat fruits and vegetables*. All other *barrier* statements held fairly constant. (p. 30)
 - *Approximately 3 in 10 or more mothers maintain buying lean proteins is more expensive than what they usually buy and buying whole grains is more expensive than what they usually buy.* (p. 30)
- Consistent with last year, gaining weight and lower energy levels are perceived to be the biggest risks of not eating healthy, with 8 in 10 agreeing with these two

risk statements. However, there were decreases in agreement with both of these statements as well as a decrease in agreement with the statement *I am more likely to get sick if I don't eat healthy food.* (pp. 31-32)

- It is interesting to note that over three-quarters of moms believe they are more likely to get serious diseases as well as conditions such as high blood pressure due to genetics. Agreement with this has increased over 2008.
- Although moms still feel confident they can purchase, cook and serve healthy meals and snacks to their families, there has been a slight decline in the portion that feel they can *cook healthy meals for their family* as well as the number who believe they can *serve two or more vegetables at dinner.*
- Hispanics (and particularly moms who speak primarily Spanish) are more likely than non-Hispanics to believe many of the healthy eating statements as well as to agree with many of the benefits statements. (pp. 21, 25)

Implications:

- ✓ Moms still believe it's important to include fruits and veggies in their families diet. However, this year, with all of the stresses related to the economy and Arizona's immigration legislation, it appears that moms are resorting to comfort food as mentioned previously. The data in the attitudes and opinions sections of the study indicate that the strength of conviction regarding the benefits of eating healthy foods has faltered, as has the perceived risk of not doing so. In addition, one half of the moms surveyed agreed that it's *sometimes easier to eat fast food or frozen pizza than to prepare a healthy meal.* However, agreement with a couple of the perceived barrier statements relating to cost – *Healthy food costs more than "junk" or fast food,* *It is too expensive to eat fruits and vegetables* – were flat. This suggests that retreating to pizza, burgers, and fast food – food that for many tastes better and costs less – may relate as much to the emotional stress of the current environment as the financial stress.
- ✓ Moms may not understand that even though their likelihood of getting various diseases is higher if they are genetically predisposed, they can lessen their chance of disease by eating healthy foods and living a healthy lifestyle.
- ✓ Overall healthy eating, including eating more fruits, vegetables, and whole grains, seems to be more closely linked with traditional/less acculturated Hispanic women than more fully-acculturated Hispanics or American women.

Stages of Change

Consistent with past waves of the study, research participants were read five statements regarding their perceptions of their dietary behaviors related to fruits, vegetables, milk and serving healthy meals. In addition, statements relating to eating lean protein and eating whole grain foods were included in Wave III. For the purpose of this report, the statement selected for each of the six dietary categories determined their “Stage of Change” as explained in the Transtheoretical Model.

Pre-contemplation – *I am not thinking about . . .*

Contemplation – *I am thinking about . . . planning to start within 6 months.*

Preparation – *I am definitely planning . . . in the next month.*

Action – *I am trying to . . . now.*

Maintenance – *I am already . . .*

Table 2: Stages of Change

	Eating Fruit			Eating Vegetables			Changing to 1% Low fat or Fat free milk			Serving Healthy Meals		
	2008	2009	2010	2008	2009	2010	2008	2009	2010	2008	2009	2010
Pre-contemplation	2%	3%	8%	2%	3%	4%	33%	33%	31%	3%	2%	5%
Contemplation	8%	4%	11%	7%	5%	7%	10%	9%	11%	5%	5%	8%
Preparation	9%	11%	44%	8%	11%	17%	11%	8%	15%	9%	12%	20%
Action	51%	47%	20%	47%	44%	45%	11%	18%	14%	39%	44%	39%
Maintenance	30%	35%	17%	36%	37%	26%	35%	32%	29%	44%	37%	29%

Table 2 shows a comparison of the *Stages of Change* distribution in 2008, 2009, and 2010. As noted by the boxed data there have been statistically significant changes in all four healthy eating categories.

- **Fruit** – There has been a significant decrease in the portion of moms in the Maintenance and Action Stages over the past year, with a corresponding increase in Preparation Stage mothers. This indicates that moms have slipped in their efforts to change their eating behavior in this category. However, it is not

unusual to “recycle” many times before the Maintenance Stage is permanently achieved.

- **Vegetables** – There has also been some slippage in the portion of moms in the Maintenance Stage and a corresponding increase in Preparation Stage moms. As suggested in the previous section, the recession is also impacting vegetable consumption. However, mothers – especially Hispanics – are more likely to incorporate veggies into their daily menus. Many moms fix soups and stews that include veggies. In addition, traditional Mexican food (e.g., tacos, tostados, etc.) includes lettuce, tomatoes, and other veggies. The fact that moms seemed to have slipped into the Preparation Stage (*I am definitely planning . . . within the next month*) coupled with high agreement with the *benefits* statements, suggests they understand the importance of eating both fruits and veggies, but their behavior is not consistent with their knowledge.
- **1% Low Fat or Fat Free Milk** – There has been a slight change in the Milk Stages of Change continuum, with a few moms slipping from the Maintenance and Action Stages to the Preparation Stage. Because movement along this continuum seems more difficult for moms, it is not surprising to see moms move in and out of these stages. As noted earlier, it is not at all unusual to recycle many times before reaching permanent Maintenance.
- **Healthy Meals** – Based on behavior changes seen in the first three categories, it is not unexpected to see slippage in overall preparation and serving of healthy meals. Year-to-year comparisons show fewer moms in the Maintenance Stage and more in the Preparation Stage. Mothers appear to be retreating to old habits of eating more fast food and more convenience-type meals at home, while still planning to serve healthier meals “in the next month.”
- **Whole Grains** – The largest portion of moms – 31% - reports they are *already eating whole grains*, placing them in the Maintenance Stage. About one-quarter - 27% - place themselves in the Action Stage by claiming they are *trying to eat more whole grains instead of my usual grains now*. The remaining 42% include 9% in the Pre-contemplation Stage, 13% in the Contemplation Stage, and 20% in the Preparation Stage.
- **Lean Proteins** - The largest portion of moms – 36% - reports they are *already eating lean proteins*, placing them in the Maintenance Stage. About one-quarter - 27% - place themselves in the Action Stage by maintaining they are *trying to change to lean proteins now*. The 37% who are not already or not currently trying to eat more lean proteins include 6% in the Pre-contemplation Stage, 12% in the Contemplation Stage, and 19% in the Preparation Stage.
- There is a great deal of overlap in the fruit and vegetable stages of change segments. That is, if a mom is in the Action Stage with regard to eating fruit, there is a high probability she is in the Action Stage with regard to eating vegetables. The overlap is not quite as great when compared to serving healthy

meals, and is even less so with drinking 1% low fat or fat-free milk. For example, 72% of Fruit Action Stage moms are in the Veggie Action Stage, 59% are in the Serving Healthy Meals Action Stage, and only 23% are in the Milk Action Stage. If in the Milk Action Stage, there is a high probability they will be in the Action or Maintenance Stage for all other healthy eating behaviors.

Implications:

- ✓ Throughout this report, there is evidence that moms have indeed slipped in their efforts to eat healthy foods and/or are less convinced of the benefits of eating healthy. Though it is beyond the scope of this research, other research on the topic indicates that the recession is having a significant impact on fruit consumption, and to a lesser extent, vegetable consumption. Moms may need additional reinforcement of the benefits of healthy eating as well as more recipes that are fast and easy to prepare . . . and taste good.

Correlation Analyses

A correlation analysis was performed to identify those attitude and belief statements that most influence the Stage of Change moms are in for each of the eating behaviors. Based on this analysis, it was determined that marketing programs focused on the following would be most effective in moving moms along the Stages of Change continuum.

Fruits	Veggies	Milk	Serving Healthy Meals	Lean Protein	Whole Grains
Risks	Barriers	Self- Efficacy	Benefits	Benefits	Benefits
Barriers	Healthy Eating	Benefits	Barriers	Healthy Eating	Healthy Eating
			Risks	Barriers	
			Healthy Eating	Risks	

III. Current Eating Habits

A. Description of Eating Habits

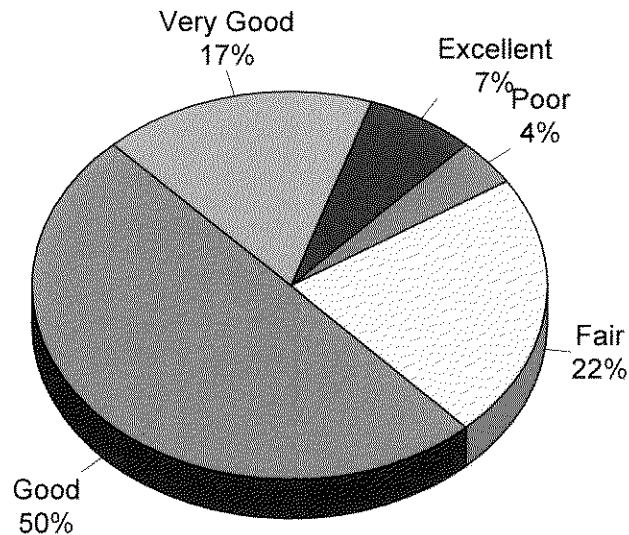
Nearly one in four mothers describes her eating habits as “excellent” (7%) or “very good” (17%). Essentially the same portion of moms (26%) rates the quality of their eating habits on the other end of the spectrum (4% “poor” + 22% “fair”). One-half (50%) feel their eating habits are “good.”

Yuma and Tucson moms report having the best eating habits, with three in ten (30% and 28%) rating them “excellent” or “very good.” This compares to 20% of Phoenix mothers and 22% of Flagstaff moms who maintain their eating habits are “excellent” or “very good.” Conversely, moms in Phoenix are more likely to admit having “poor” eating habits (6%) than are moms in the smaller communities (1% in Yuma, 3% in Tucson and Flagstaff).

Note: In Wave III the question was changed from “How would you describe your diet?” to “How would you describe your eating habits?”

Description of Eating Habits

How would you describe your eating habits?



n=797

Demographic Differences:

Moms with some college or more are more likely to say their eating habits are “excellent” or “very good” than are moms with less education.

On the other end of the scale, non-Hispanic women are significantly more likely to say their eating habits are “poor” than are Hispanic women. Similarly, those who primarily speak English are more likely to report having “poor” eating habits than are bilingual moms.

Tracking Comparison

Moms’ perceptions of their households’ eating habits have not changed much over the past two years. 2010 data is virtually the same as in 2008, with the 2009 bump in the percentage rating their eating habits as “poor” returning to the level previously measured. Those stating their eating habits are “excellent” or “very good” remains consistent, with 25% “excellent” and “very good” ratings in 2008, 22% in 2009 and 24% in 2010.

Table 3: Description of Eating Habits

Rating	2008 Total (n=800)	2009 Total (n=791)	2010 Total (n=797)
Excellent	7%	7%	7%
Very Good	18%	15%	17%
Good	49%	44%	50%
Fair	22%	24%	22%
Poor	4%	10%	4%

B. Foods Consumed

Mothers are most likely to include chicken, cereal, cheese, eggs, and water in their diets (93% to 86%). This is consistent with Wave I and Wave II findings. However, there are several notable differences this year:

- There was a decrease in consumption of fresh fruit between 2009 and 2010 (82% to 76%), however consumption of canned fruit is up slightly (43% to 48%).
- This year, more moms said they eat canned vegetables (63%, up from 56%), and frozen vegetables (59%, up from 53%), while there was no change in the portion who reported eating fresh vegetables (79% in 2010 and 77% in 2009).

This year, a number of whole grain and lean protein food items were added to the list of foods. Interestingly, nearly 7 in 10 moms (68%) say they eat whole grain bread compared to 48% who say they eat white bread. However that reverses when asked about whole grain pasta – 30% report eating whole grain pasta compared to 63% who eat regular pasta, and rice – 34% eat brown/wild rice versus 68% who eat white rice. Consumption of flour and corn tortillas is the same – 66% report eating each type. Two-thirds (67%) of moms eat oatmeal, while 58% eat popcorn.

Nearly all moms eat chicken (93%) and eggs (88%), with slightly fewer saying they eat beans (80%). In terms of other lean protein, nearly six in ten include fish (57%), lean beef (57%), and turkey in their eating habits, while fewer eat nuts (46%) and lean pork (42%). In contrast (to lean protein), 7 in 10 moms (72%) say they eat bacon.

Also of interest, consumption of pizza, fast food burgers, and soda have all increased over 2009 numbers (51% to 70%, 41% to 51%, and 56% to 63%, respectively).

Table 4: Foods Consumed

Foods	2008 (n=800)	2009 (n=795)	2010 (n=805)	Foods	2008 (n=800)	2009 (n=795)	2010 (n=805)
Chicken	89%	89%	93%	Frozen vegetables	51%	<u>53%</u>	59%
Cereal	91%	90%	92%	Popcorn	na	na	58%
Cheese	88%	86%	89%	2% milk	53%	57%	57%
Eggs	91%	89%	<u>88%</u>	Fish	na	na	57%
Water	88%	91%	<u>86%</u>	Lean beef	na	na	57%
Beans	na	na	80%	Turkey	na	na	56%
Fresh vegetables	85%	<u>77%</u>	<u>79%</u>	Fast-food burgers	<u>43%</u>	<u>41%</u>	51%
Fruit juice	80%	79%	78%	Canned fruit	35%	43%	48%
Fresh fruit	79%	82%	76%	White bread	<u>37%</u>	<u>42%</u>	48%
Yogurt	68%	75%	72%	Nuts	na	na	46%
Bacon	53%	49%	72%	Whole milk	45%	43%	44%
Pizza	<u>47%</u>	<u>51%</u>	70%	Lean pork	na	na	42%
White rice	na	na	68%	Stew	25%	44%	40%
Whole grain bread	76%	72%	<u>68%</u>	Brown or wild rice	na	na	34%
Oat meal	na	na	67%	Whole grain pasta	na	na	30%
Corn tortillas	na	na	66%	1% low fat milk	30%	31%	29%
Flour tortillas	42%	46%	66%	Frozen fruit	20%	28%	29%
Pasta	<u>64%</u>	76%	<u>63%</u>	Dried fruit	16%	27%	26%
Soda	53%	56%	63%	Fat free milk	13%	14%	12%
Canned vegetables	<u>43%</u>	56%	63%	Tofu	na	na	7%

Table Q2: Which of the following foods do you eat?

Bold indicates a significantly higher percentage than the underlined comparative group.

Demographic Differences:

The table below lists the foods eaten significantly more by one group compared to the other. For example, Hispanic moms are significantly more likely than non-Hispanic moms to eat eggs, beans, white rice, corn tortillas, and flour tortillas.

Table 5: Description of Eating Habits

Ethnicity		Age		Education	
Hispanic	Non-Hispanic	≤ 35 years	> 35 years	< High School	Some college +
Eggs	Pizza	Pizza	Eggs	Beans	Yogurt
Beans	Soda	Soda	Oatmeal	Bacon	Fish
White Rice	Canned vegetables	Fast food Burgers*	Whole grain bread	Flour tortillas	Whole grain bread
Corn tortillas	Frozen vegetables	Canned fruit*	Fish	Fast food burgers	Frozen vegetables
Flour tortillas	Canned fruit	Frozen fruit*		White bread	Lean beef
	White bread	Whole milk*		Whole milk	Turkey
	Turkey	Yogurt		Oatmeal	Nuts
					Stew
					Brown rice
					Dried fruit
					Fat free milk

* 18 to 25 year-olds are significantly more likely than those over 35 to eat these foods

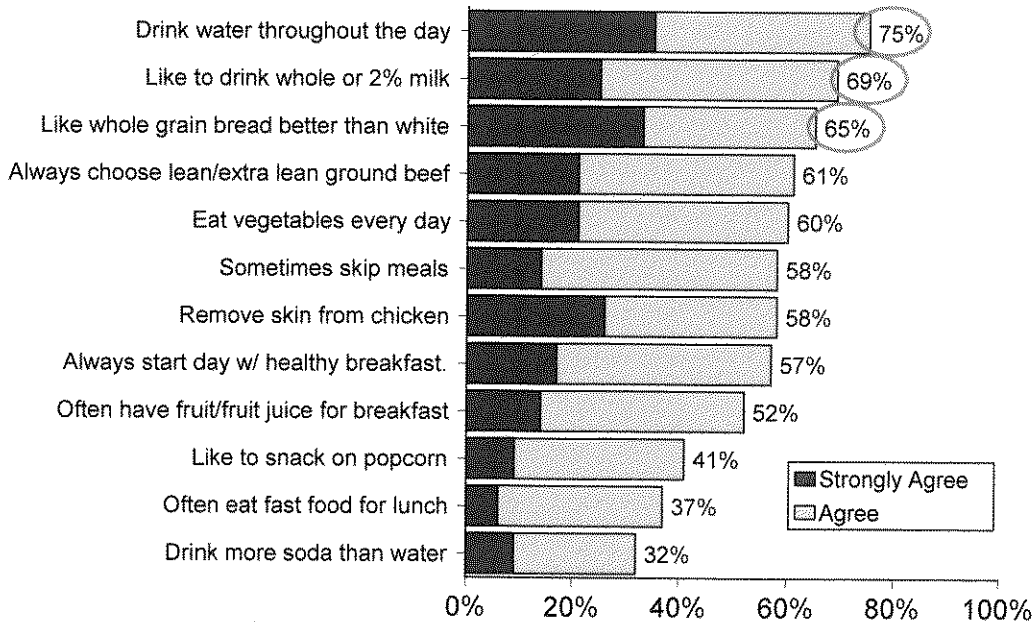
C. Eating Habits

More than one-half of moms agree with all of the positive general eating habit statements, with the statement with the highest agreement being, *Most days, I drink water throughout the day*. Three in four (75%) say they strongly agree/agree with this statement. Two-thirds indicate they prefer *whole grain to white bread* and approximately 6 in 10 maintain they *always choose lean or extra lean ground beef* (61%), *eat vegetables every day* (60%), and/or *remove the skin from chicken before eating it* (58%). Additionally, 41% report they *like to snack on popcorn*, which can be a healthy snack if prepared properly.

Regarding poor eating habits, nearly 7 in 10 (69%) say that *when they drink milk, they like to drink whole or 2% milk*. In addition, 58% indicate they *sometimes skip meals because they do not have enough time to eat*.

Approximately 3 in 10 moms say they often *eat fast food for lunch* (37%), with a similar portion saying they *drink more soda than water* (32% strongly agree/agree ratings).

Current Eating Habits Combined Strongly Agree and Agree Ratings



n=783 to 801; Tables Q3a-Q3i:

Please indicate your level of agreement or disagreement with each statement.

Demographic Differences:

Hispanic women are significantly more likely than non-Hispanic women to:

- drink water throughout the day,
- start the day with a healthy breakfast,
- have fruit juice or a piece of fruit for breakfast,
- like whole grain bread better than wheat bread,
- always choose lean or extra lean ground beef,
- remove the skin from chicken before eating it.

Women with some college or more are significantly more likely than those with less education to:

- like whole grain bread better than white bread,
- always choose lean or extra lean ground beef.

Tracking Comparison

The table below indicates several significant trends over the past year/two years:

- fewer moms are drinking water throughout the day,
- fewer moms are eating vegetables every day,
- fewer moms have fruit juice or a piece of fruit for breakfast,
- fewer women said they skip meals.

Table 6: Current Eating Habits Tracking Data
Combined Strongly Agree and Agree Ratings

	2008 Total (n=800)	2009 Total (n=795)	2010 Total (n=805)
Most days, I drink water throughout the day.	86%	83%	75%
When I drink milk, I like to drink whole or 2% milk.	n/a	72%	69%
I sometimes skip meals because I don't have time to eat.	55%	64%	58%
I eat vegetables every day.	78%	64%	60%
I often have fruit juice or a piece of fruit for breakfast.	60%	63%	52%
I always start my day with a healthy breakfast.	61%	61%	57%
*I like to snack on popcorn.	56%	50%	41%
I like whole grain bread better than white bread.	n/a	n/a	65%
I remove the skin from chicken before eating it.	n/a	n/a	58%
I often eat fast food for lunch.	30%	37%	37%
I drink more soda than water.	31%	30%	32%
I always choose lean or extra lean ground beef.	n/a	n/a	61%

*Wording Change; 2008/2009: "I like to snack on popcorn or chips."

Note: Throughout this report, increases and decreases in the portion of women who agree with behavior statements directly related to the three health messages are highlighted with upward arrows indicating improvements in desired behavior, and downward arrows indicating decreases in desired behavior (or increases in less desired behavior).

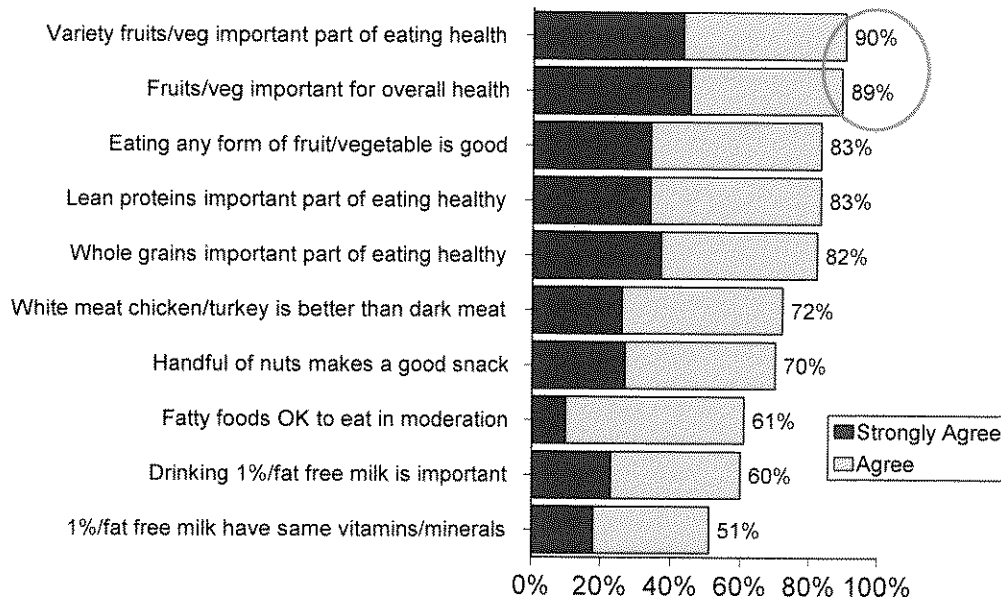
IV. Perceptions about Eating Healthy

A. Healthy Eating

Nine in ten mothers interviewed strongly agree or agree with two of the three positive statements about fruits and vegetables - 90% feel eating *a variety of fruits and vegetables is an important part of eating healthy* and 89% think *eating fruits and vegetables is important for overall health*. A strong majority (83%) also agree that eating *any form of fruit or vegetable is good for you*. The same percentage feels *eating lean proteins (83%)* and/or *eating whole grains (82%)* is an important part of eating healthy. On the other hand, moms were least likely to agree that *1% low fat and fat free milk have the same amount of vitamins and minerals as whole milk (51% strongly agree/agree ratings)*.

Healthy Eating Opinions

Combined Strongly Agree and Agree Ratings



n=774 to 803; Tables Q4a- Q4j; Please indicate your level of agreement or disagreement with each of the following statements.

Demographic Differences:

Hispanic women are significantly more likely than non-Hispanic women to agree with all of the *Healthy Eating* belief statements, with the percentage who strongly agree/agree approximately 8% to 10% higher overall. Statements with a larger than 8% to 10% “gap” between Hispanic and non-Hispanic moms include:

- Eating whole grains is an important part of healthy eating.
- Fatty foods are OK to eat once in awhile.
- Drinking 1% low fat or fat free milk is an important part of eating healthy.

Moms who primarily speak Spanish at home are more likely than those who speak English or speak both Spanish and English to believe:

- Eating a variety of fruits and vegetables is an important part of eating healthy.
- Eating fruits and vegetables is important for their overall health.
- Eating lean proteins (e.g., lean beef, lean pork, chicken, etc.) is an important part of eating healthy.
- Drinking 1% low fat or fat free milk is an important part of eating healthy.

Mothers who have some college or more education are significantly more likely than those with less education to believe:

- Eating fruits and vegetables is important for their overall health.
- Eating lean proteins (e.g., lean beef, lean pork, chicken, etc.) is an important part of eating healthy.
- A handful of nuts makes a good snack.

Tracking Comparison

The three statements relating to fruit all showed significant decreases from the 2008 and 2009 data, with the statement about any form of fruit or vegetable being good for you suffering the biggest decline. Also of interest, there was a significant decrease in the portion of moms agreeing with the statement that *drinking 1% low fat or fat free milk is an important part of eating healthy*.

Several new statements relating to whole grain foods and lean protein were added to the survey in 2010. From these we learned that over 8 in 10 moms strongly agree/agree that *eating lean proteins and eating whole grains are important to eating healthy*. Slightly fewer strongly agree/agree that *white meat chicken and turkey is better for you than dark meat chicken or turkey* (72%) and that *a handful of nuts makes a good snack* (70%).

Table 7: Healthy Eating Opinions Tracking Data
Combined Strongly Agree and Agree Ratings

	2008 Total (n=800)	2009 Total (n=791)	2010 Total (n=805)
Eating a variety of fruits and vegetables is an important part of eating healthy.	97%	97%	90%
I believe eating fruits and vegetables is important for my overall health.	97%	97%	89%
Eating any form of fruit or vegetable is good for you. That includes fresh, frozen, dried, canned and 100% juice.	95%	94%	83%
Eating lean proteins (like lean beef, lean pork, chicken, fish and beans) is an important part of eating healthy.	n/a	n/a	83%
Eating whole grains is an important part of eating healthy.	n/a	n/a	82%
White meat chicken and turkey is better for you than	n/a	n/a	72%

dark meat chicken and turkey.			
A handful of nuts makes a good snack.	n/a	n/a	70%
*Fatty foods are OK to eat once in awhile.	75%	<u>59%</u>	<u>61%</u>
Drinking <u>1% low fat or fat free milk</u> is an important part of eating healthy.	<u>64%</u>	73%	<u>60%</u>
1% low fat and fat free milk have the same amount of vitamins and minerals as whole milk.	54%	53%	51%

*Wording Change; 2008/2009: "*Fatty foods are OK to eat in moderation.*"

B. Perceived Benefits of Eating Healthy

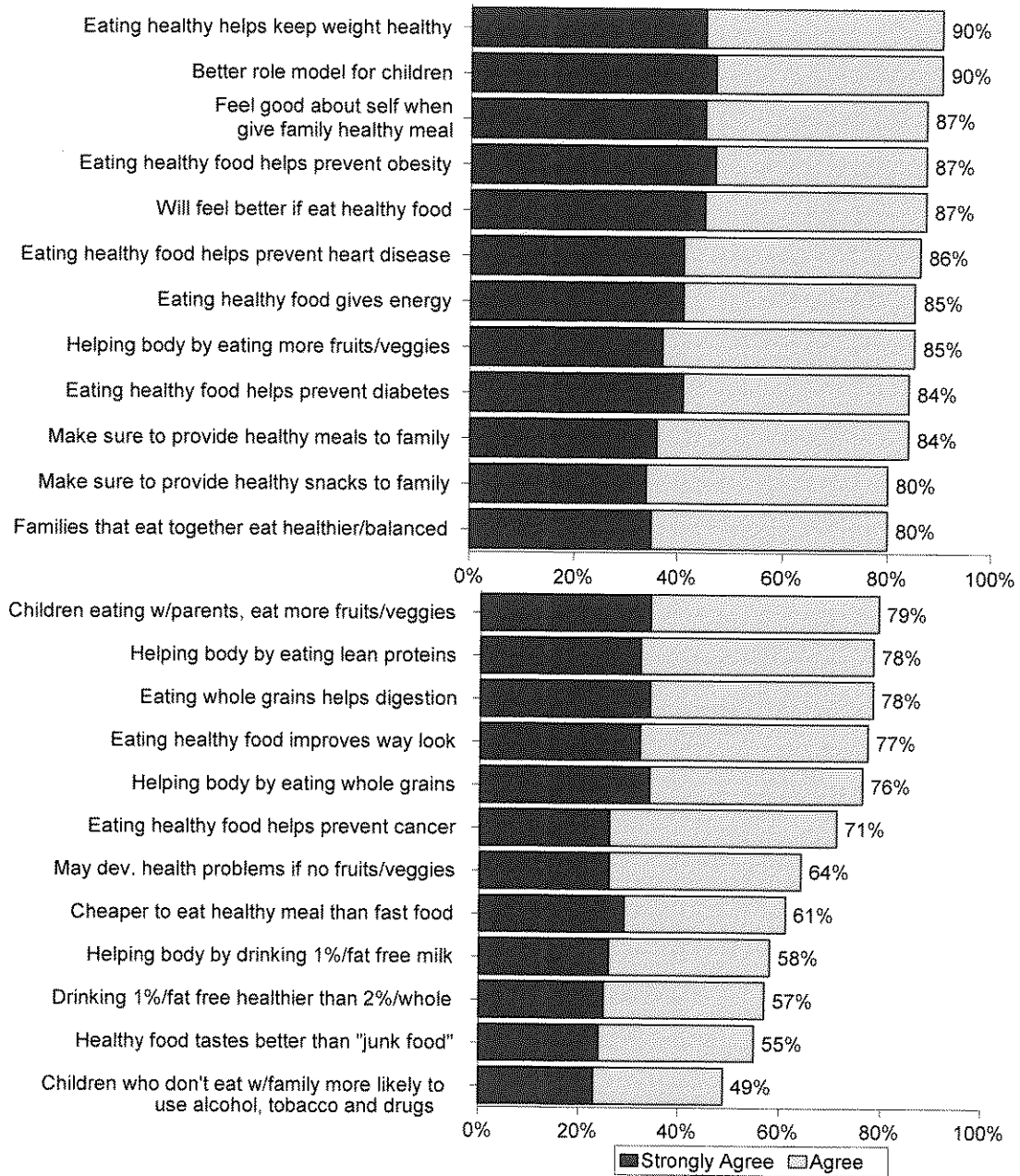
There is a high level of agreement with statements measuring the perceived benefits of healthy eating. More than half of Arizona mothers agreed or strongly agreed with all but one of the 24 statements presented (the exception was at a 49% level of agreement). Eight in ten (or higher) moms agreed with half of the statements. The statements garnering the highest level of agreement were *eating healthy foods will help me keep a healthy weight* and *I will be a better role model for my children if I eat healthy food* (each at 90% strongly agree/agree ratings). This was followed by several statements with 79% to 87% agreement, including statements related to preventing serious diseases, statements about feeling good emotionally, better physically, and about the various ways families eating together is healthier for children.

A somewhat smaller portion strongly agree/agree with the two milk statements: *I feel that I am helping my body by drinking 1% low fat or fat free milk* (58% strongly agree/agree) and *drinking 1% low fat and fat free milk is healthier than drinking whole and 2% milk* (57% strongly agree/agree).

The statement with the lowest level of agreement is, *children who do not eat dinner with their families are more likely to use alcohol, tobacco, or illegal drugs* (49% strongly agree/agree).

Perceived Benefits of Eating Healthy

Combined Strongly Agree and Agree Ratings



n=751-800; Tables Q5a-Q5x: Please indicate your level of agreement or disagreement with each of the following statements.

Demographic Differences:

Hispanic women are significantly more likely than non-Hispanic women to agree with all of the *benefits* statements, with the percentage who strongly agree/agree approximately 10% to 12% higher overall. Statements with a larger than 10% to 12% “gap” between Hispanic and non-Hispanic moms include:

- I am helping my body by drinking 1% low fat or fat free milk.
- Drinking 1% low fat milk is healthier than drinking whole and 2% milk.
- I am helping my body by eating whole grains.
- Eating whole grains helps improve digestion.
- It is cheaper to eat a healthy meal than to go to a fast food restaurant.

Moms who primarily speak Spanish at home are more likely than those who speak English or speak both Spanish and English to agree with all of the *benefits* statements. The statements with the biggest “gaps” in agreement between primarily Spanish and primarily English include:

- I am helping my body by drinking 1% low fat or fat free milk.
- Healthy food tastes better than “junk food.”
- It is cheaper to eat a healthy meal than to go to a fast food restaurant.
- I am helping my body by eating whole grains.
- I may develop health problems if I do not eat fruit and vegetables.

Mothers who have some college or more education are significantly more likely than those with less education to believe:

- Eating whole grains helps improve digestion.
- Children who do not eat dinner with their families are more likely to use alcohol, tobacco, or illegal drugs.

Women between 45 and 49 are significantly more likely than younger women to believe:

- Eating whole grains helps improve digestion.
- Eating healthy food is helpful in preventing cancer.
- It is cheaper to eat a healthy meal than to go to a fast food restaurant.

Tracking Comparison

Although 9 in 10 moms agree that *eating healthy helps them keep a healthy weight* and that they are *better role models for their children if they eat healthy*, these scores are down from the past two years. In fact, as seen in the following table, most of the statements had significantly lower levels of agreement from Arizona mothers this year compared to 2008 and 2009.

Some of the most notable trends include the decrease in moms who believe it is *cheaper to eat a healthy meal than go to a fast food restaurant* – 73% in 2009 and 61% in 2010, with a similar decrease in those who believe *healthy food tastes better than “junk food”* – 81% in 2008, 69% in 2009, and just 55% in 2010.

Disappointingly, after showing slight increases between 2008 and 2009, there were decreases in agreement with the two milk statements – *I am helping my body by drinking 1% low fat or fat free milk* – and *Drinking 1% low fat and fat free milk is healthier than drinking whole and 2% milk*.

The gain/loss pattern in several of the disease-related statements may reflect uncertainty or lack of knowledge about the relationship between healthy eating and specific diseases. For example, the statement relating healthy eating to preventing heart disease started at 78%, increased to 94%, then dropped to 86%. Similarly, the statement linking healthy eating to diabetes started at 81%, increased to 93%, then dropped to 84%. The pattern was the same for cancer.

Table 8: Perceived Benefits to Healthy Eating Tracking Data
Combined Strongly Agree and Agree Ratings

	2008 Total (n=800)	2009 Total (n=795)	2010 Total (n=805)
Eating healthy helps keep weight healthy	96%	96%	90%
Better role model for children	97%	95%	90%
Will feel better if eat healthy food	96%	96%	87%
Eating healthy food helps prevent obesity	95%	95%	87%
Feel good about self when give family healthy meal	98%	96%	87%
Eating healthy food helps prevent heart disease	78%	94%	86%
Eating healthy food gives energy	94%	95%	85%
Helping body by eating more fruits/veggies	96%	96%	85%
Eating healthy food helps prevent diabetes	81%	93%	84%
Make sure to provide healthy meals to family	93%	93%	84%
Make sure to provide healthy snacks to family	90%	90%	80%
Families that eat together eat healthier/balanced	74%	86%	80%
Children eating w/parents, eat more fruits/veggies	73%	86%	79%

Helping my body by eating lean proteins	n/a	n/a	78%
Eating whole grains helps improve digestion	n/a	n/a	78%
Eating healthy food improves way look	81%	91%	77%
Helping my body by eating whole grains	n/a	n/a	76%
Eating healthy food helps prevent cancer	70%	83%	71%
May develop health problems if no fruits/veggies	68%	72%	64%
Cheaper to eat healthy meal than fast food	66%	73%	61%
Helping body by drinking 1%/fat free milk	64%	74%	58%
Drinking 1%/fat free healthier than 2%/whole	62%	66%	57%
Healthy food tastes better than "junk food"	81%	69%	55%
Children who do not eat w/family more likely to use alcohol, tobacco or illegal drugs	40%	58%	49%

C. Perceived Barriers to Eating Healthy

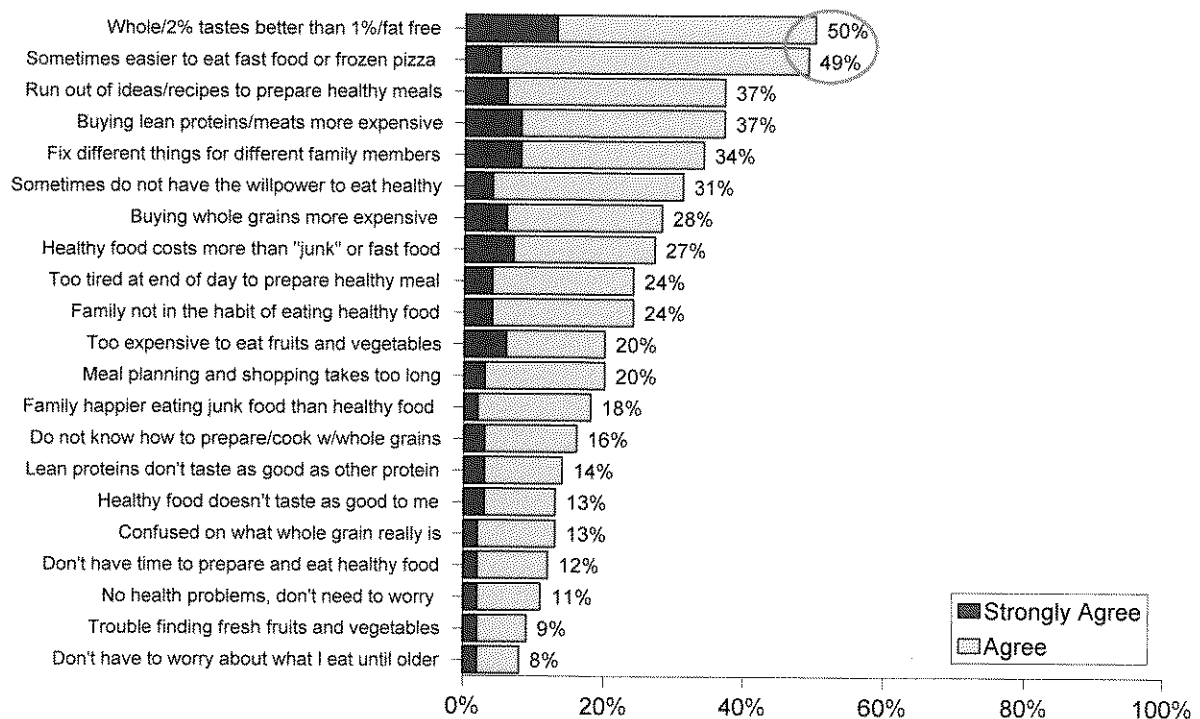
Taste and convenience are the two major barriers to eating healthy with one-half of moms saying they strongly agree/agree that *whole or 2% milk tastes better than 1% low fat or fat free milk* and *that sometimes it is easier to eat fast food or frozen pizza than to prepare a healthy meal* (each at 50% agreement).

Other predominant barriers include *running out of ideas/recipes for preparing healthy meals* (37%), *buying lean proteins and meats is more expensive* (37%), *having to fix different things for different members of their family* (34%) and/or *feeling like sometimes they do not have the willpower to eat healthy* (31%).

The two barriers Arizona moms were least likely to agree with were *don't have to worry about what I eat until I am older* (8% strongly agree/agree ratings) and *have trouble finding fresh fruits and vegetables* (9%).

Perceived Barriers to Eating Healthy

Combined Strongly Agree and Agree Ratings



n=777-798 Tables Q6a-Q6u: Please indicate your level of agreement or disagreement with each of the following statements.

Demographic Differences:

Hispanic women are significantly more likely than non-Hispanic women to believe the statement *Buying lean proteins and lean meats are more expensive than what I usually buy*, while non-Hispanic moms are more likely than Hispanic moms to agree that *Sometimes it is easier to eat fast food or frozen pizza than to prepare a healthy meal* and that *Sometimes I do not have the willpower to eat healthy*.

Mothers with less than a high school education/GED are more likely than those with at least a high school education to believe:

- My family is not in the habit of eating healthy food.
- I don't know how to prepare or cook with whole grains.
- Lean proteins (e.g., lean beef, lean pork, chicken, fish, etc.) don't taste as good as other proteins.
- Healthy food doesn't taste as good to me.

Interestingly, cost seems to be less of a barrier to moms 35 or under than to those over 35, as they are significantly less likely to agree with the following statements:

- Buying lean proteins and lean meats are more expensive than what I usually buy.
- Buying whole grains is more expensive than what I usually buy.
- It is too expensive to eat fruits and vegetables.

Tracking Comparison

There was a decrease in the portion of moms who agree with the statement *whole or 2% milk tastes better to me than 1% low fat or fat free milk*, with 50% indicating agreement this year compared to 60% in 2009. In addition, fewer moms said they are *too tired at the end of the day to prepare a healthy meal* (30% in 2009 and 24% in 2010), and fewer agree that it is *too expensive to eat fruits and vegetables*. Finally, fewer moms say they *fix different things for different family members* – 44% in 2009 and 34% in 2010. All other *barrier* statements held fairly constant compared to last year.

In new statements related to whole grains and lean protein, approximately 3 in 10 or more maintain *buying lean proteins/meats is more expensive than what they usually buy* (37%) and that *buying whole grains is more expensive than what they usually buy* (28%).

Table 9: Perceived Barriers to Eating Healthy
 Combined Strongly Agree and Agree Ratings

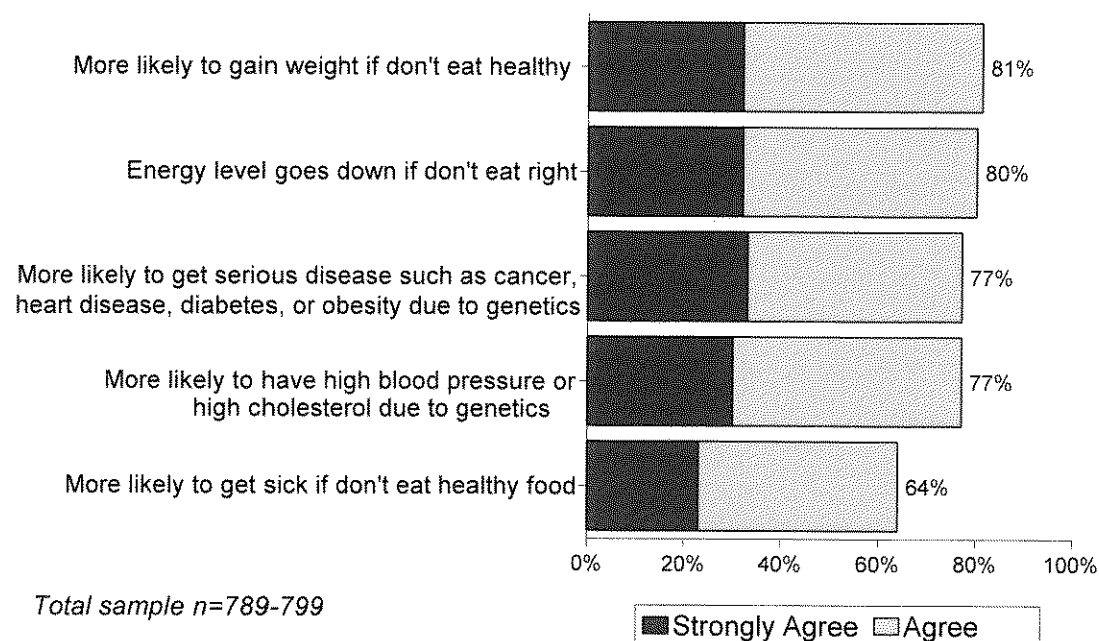
	2008 Total (n=800)	2009 Total (n=795)	2010 Total (n=805)
Whole or 2% milk tastes better to me than 1% low fat or fat free milk.	n/a	60%	<u>50%</u>
Sometimes easier to eat fast food or frozen pizza	51%	48%	49%
Run out of ideas/recipes for preparing healthy meals	<u>26%</u>	39%	37%
Buying lean proteins/meats is more expensive than what I usually buy.	n/a	n/a	37%
Fix different things for different family members	<u>29%</u>	44%	34%
Sometimes do not have the willpower to eat healthy	<u>26%</u>	30%	31%
Buying whole grains is more expensive than what I usually buy.	n/a	n/a	28%
Healthy food costs more than "junk" or fast food	34%	<u>27%</u>	<u>27%</u>
Too tired at end of day to prepare healthy meal	<u>20%</u>	30%	<u>24%</u>
Family not in the habit of eating healthy food	<u>16%</u>	23%	24%
Too expensive to eat fruits and vegetables	53%	25%	<u>20%</u>
Meal planning and shopping takes too long	19%	20%	20%
Family happier eating junk food than healthy food	<u>12%</u>	17%	18%
Don't know how to prepare or cook with whole grains.	n/a	n/a	17%
Lean proteins (like lean beef, lean pork, poultry and fish) don't taste as good as other proteins.	n/a	n/a	14%
Healthy food doesn't taste as good to me	12%	15%	13%
Confused on what whole grain really is.	n/a	n/a	13%
Don't have time to prepare and eat healthy food	13%	14%	12%
No health problems, don't need to worry	10%	11%	11%
Trouble finding fresh fruits and vegetables	10%	12%	9%
Don't have to worry about what I eat until older	8%	10%	8%

D. Perceived Risks of Not Eating Healthy

Eight in ten moms interviewed agree they are *more likely to gain weight if they do not eat healthy food* and that their *energy level goes down if they do not eat properly* (81% and 80% strongly agree/agree). Just over three-quarters (77%) agree they are more likely to get a *serious disease* or suffer from *high blood pressure or high cholesterol* if they do not eat healthy because someone else in their family has this/these problem(s). Just under two-thirds (64%) agree or strongly agree they are *more likely to get sick if they don't eat healthy*.

Perceived Risks of Not Eating Healthy

Combined Strongly Agree and Agree Ratings



Demographic Differences:

Hispanic moms are significantly more likely than non-Hispanic moms to believe:

- their energy level goes down if they don't eat right,
- they are more likely to get sick if they don't eat healthy food.

Tracking Comparison

Moms are significantly less likely to agree they will *gain weight* and that their *energy level goes down if they don't eat right* than they were in 2008 and 2009. They are also less likely to agree they *will get sick if they don't eat healthy food*.

Table 10: Perceived Risks to Eating Health Tracking Data
 Combined Strongly Agree and Agree Ratings

	2008 Total (n=800)	2009 Total (n=795)	2010 Total (n=805)
More likely to gain weight if don't eat healthy	90%	89%	81%
Energy level goes down if don't eat right	87%	91%	80%
More likely to get serious disease such as cancer, heart disease, diabetes, or obesity due to genetics	66%	79%	77%
More likely to have high blood pressure or high cholesterol due to genetics	68%	78%	77%
More likely to get sick if don't eat healthy food	67%	79%	64%

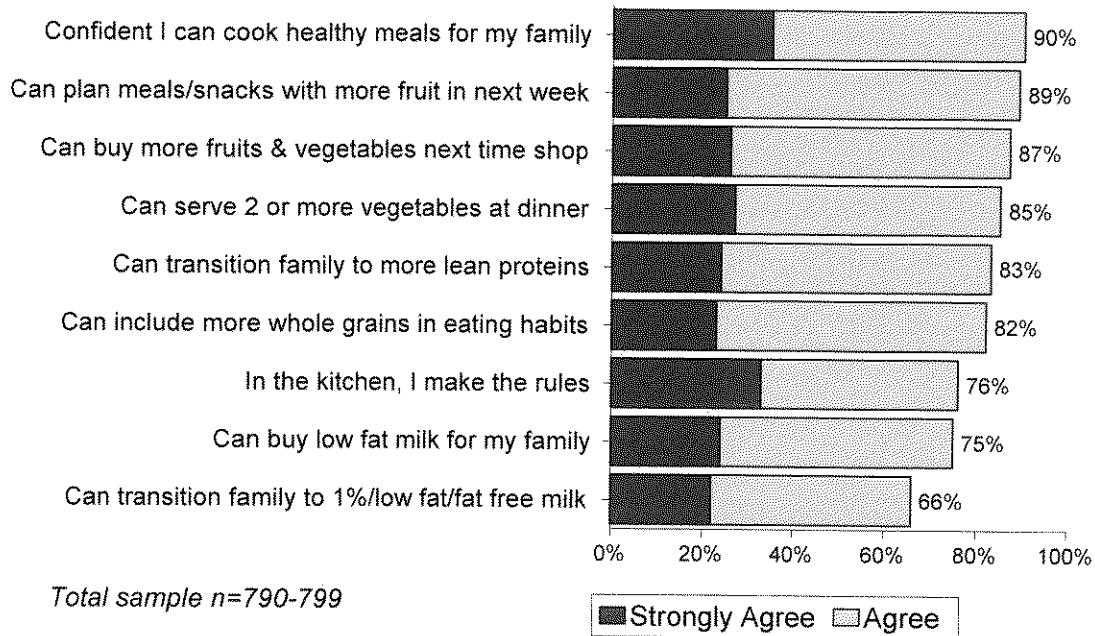
E. Self-Efficacy**1. Agreement with Statements**

Two-thirds or more of mothers agree with all of the statements related to their empowerment to help themselves and their families eat healthier. A strong majority of mothers indicate they feel confident about being able to *cook healthy meals for their families*, to *plan meals or snacks with more fruit during the next week*, and to *buy more fruits and vegetables the next time they shop* (90%, 89% and 87% strongly agree/agree).

Three-quarters or more also agree with five of the remaining nine empowerment statements (75% to 85%) including the two new statements: *I can transition my family to more lean proteins* (83%) and *I can include more whole grains in my eating habits* (82%). Mothers are least likely to feel they have control over their family's choice of milk with two-thirds (66%) believing they *can transition their family to 1% low fat or fat free milk*.

Self Efficacy

Combined Strongly Agree and Agree Ratings



Demographic Differences:

Hispanic women are significantly more likely than non-Hispanic women to strongly agree/agree:

- they can serve two or more servings of vegetables at dinner,
- they can transition their families to lean proteins,
- they can include more whole grains in their eating habits,
- they can buy low fat milk for their families.

Women who speak primarily Spanish are significantly more likely than those who speak English and those who speak both languages to strongly agree/agree with all of the self-efficacy statements, with the average strongly agree/agree scores being about 8% to 10% higher.

Those with at least some college are significantly more likely than those with less education to strongly agree/agree *they can transition their families to more lean proteins and include more whole grains in their eating habits.*

Tracking Comparison

As was true in the past two waves, moms feel most confident they can *cook and serve healthy meals and snacks* and that they can *buy more fruits and veggies next time they shop*. However, there has been a slight decline in the portion that feel they can cook

healthy meals for their family as well as the number who believe they can serve two or more vegetables at dinner.

Table 11: Self-Efficacy
Combined Strongly Agree and Agree Ratings

	2008 Total (n=800)	2009 Total (n=795)	2010 Total (n=805)
I am confident I can cook healthy meals for my family	95%	94%	90%
I can plan meals/snacks with more fruit in next week	86%	88%	89%
I can buy more fruits & vegetables next time shop	85%	87%	87%
I can serve 2 or more vegetables at dinner	87%	89%	85%
I can transition family to more lean proteins	n/a	n/a	83%
I can include more whole grains in my eating habits	n/a	n/a	82%
In the kitchen, I make the rules	83%	78%	76%
I can buy low fat milk for my family	67%	75%	75%
I can transition family to low fat/fat free milk	n/a	n/a	66%

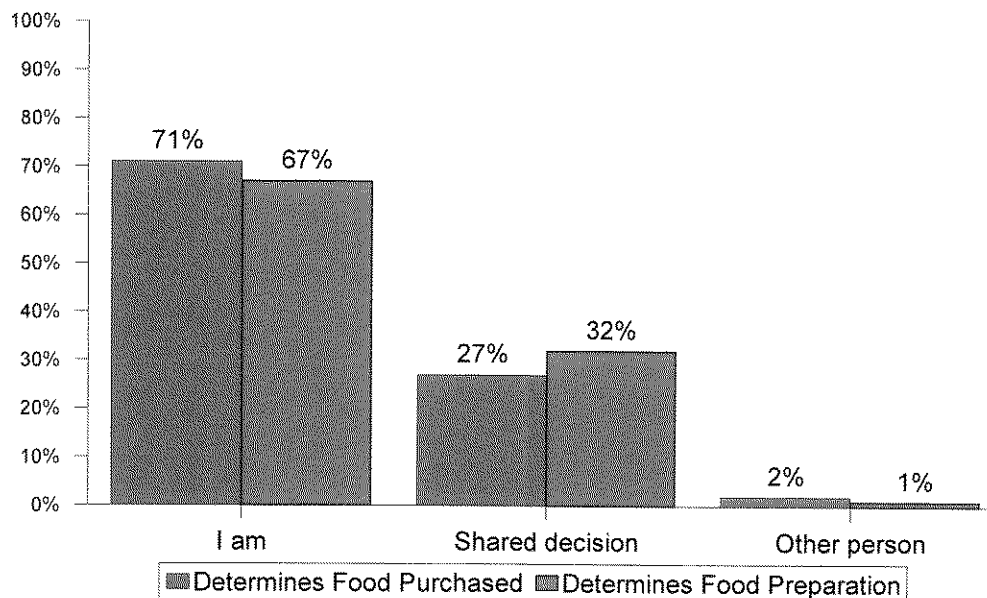
Note: There was a wording change in several of the self-efficacy statements between 2009 and 2010. In 2008 and 2009, the statements included the phrase "I feel that" prior to the rest of the question. In 2010, we dropped that phrase. For example, in 2008 and 2009, one question read, "I feel that I can buy more fruits and vegetables the next time I shop." In 2010, that question read, "I can buy more fruits and vegetables the next time I shop."

2. Household Food Determination

Seven in ten mothers say they are in charge of what foods to buy (71%) and two-thirds control how to prepare the food (67%). While one-third (32%) report food preparation is a shared activity, slightly fewer (27%) say the purchase decision is shared. Only a few report that someone else in the household drives food purchase and preparation decisions.

Household Food Determination

*In your household, who is in charge of what foods to buy?
In your household, who is in charge of how to prepare the food?*



Tracking Comparison

There were no significant changes in who purchases or prepares food between 2009 and 2010.

Table 12: Household Food Determination Tracking Data

Determines Food Purchased:	2008 Total (n=800)	2009 Total (n=795)	2010 Total (n=805)
I am (<i>mom's perspective</i>)	76%	69%	71%
Shared decision	23%	29%	27%
Other person	1%	2%	2%
Determines Food Preparation:	2008 Total (n=800)	2009 Total (n=795)	2010 Total (n=805)
I am (<i>mom's perspective</i>)	78%	69%	67%
Shared decision	22%	29%	32%
Other person	<.5%	2%	1%

V. Population Definition – Stages of Change

Research participants were read five statements regarding their perceptions of their dietary behaviors related to fruits, vegetables, milk, serving healthy meals, lean proteins, and whole grain foods. For the purpose of this report, the statement selected for each of the six dietary categories determined their “Stage of Change” as explained in the Transtheoretical Model.

“Stages of Change” Definitions

Pre-contemplation – At this stage, individuals are not aware of, or not interested in, a behavior or practice that might enhance their own health. This may be because they are uninformed about the impacts of such behavior. Those who have tried and failed to make the behavior change are also included in this category.

I am not thinking about . . .

Contemplation – Individuals in this stage are considering making a change sometime in the near future, usually defined as within the next six months. They struggle between thinking about the positive outcomes of the behavior and the amount of time, energy, and other resources that will be needed to change.

I am thinking about . . . planning to start within 6 months.

Preparation – In this stage, individuals intend to make a change in the immediate future and may have already taken steps in that direction.

I am definitely planning . . . in the next month.

Action – Individuals have started to engage in the new behavior or practice. They may adopt the practice on a small scale or try out alternative practices to find one at which they can be successful and that fits into their usual routine.

I am trying to . . . now.

Maintenance – Refers to the period in which people have performed the new behavior for longer than six months, incorporating it as part of their way of life.

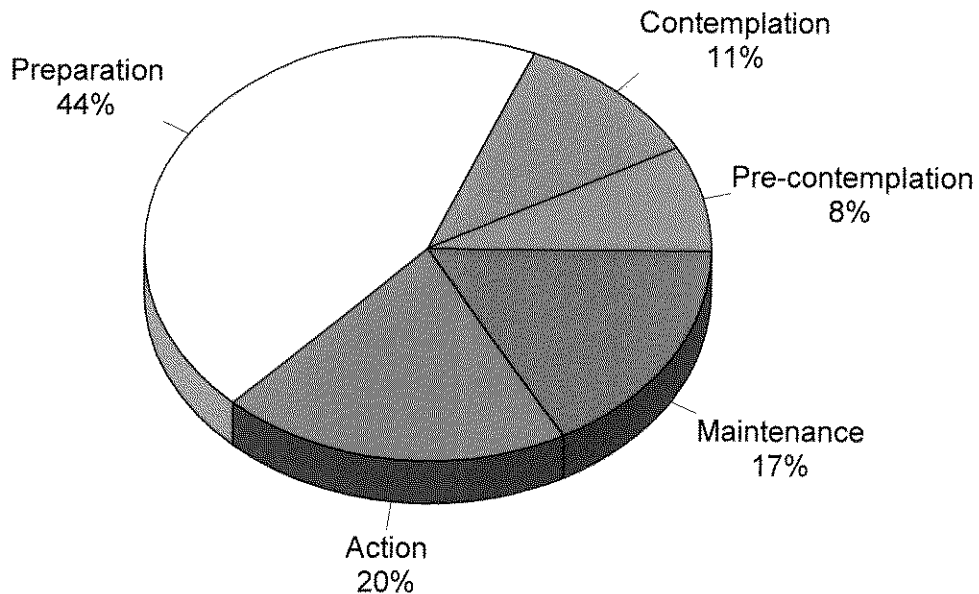
I am already . . .

A. Fruit Stages of Change

Just over one-third of moms consider themselves to be in the Maintenance (17%) or Action (20%) Stages on the Fruit Stages of Change continuum. This is down significantly from both 2009 and 2008. The largest portion of moms – 44% - consider themselves in the Preparation Stage, indicating they are definitely planning to eat more fruit in the next month. This is a significantly jump from the past two years (11% in 2009 and 9% in 2008). There has also been an increase in the number of moms in the Contemplation and Pre-contemplation Stages over the last year.

Hispanic moms who primarily speak Spanish at home are significantly more likely to be in the Maintenance Stage for fruits than those who speak English suggesting that fruits are more regularly incorporated into the meals of more traditional and less acculturated Hispanic women. This finding is supported throughout the *Current Eating, Healthy Eating, Perceived Benefits, and Self Efficacy* statements related to fruit.

Fruit: Stages of Change



Tracking Comparison

The drop in the portion of moms in the more “advanced” stages of the continuum is supported by the declines seen in fresh fruit consumption, the portion of women who say they have fruit juice or a piece of fruit at breakfast as well as the decline in agreement with three important *Healthy Eating* statements - *eating a variety of fruits and vegetables is an important part of eating healthy, I believe eating fruits and vegetables is important for my overall health, and eating any form of fruit or vegetable is good for you*. In addition, there has been a decline in two related *Benefits* statements – *I am helping my body by eating more fruits and vegetables* and *I may develop health problems if I do not eat fruits and vegetables*.

Those who occupied the Maintenance and Action Stages in the past have apparently pulled back on the amount of fruit they are currently eating, and in fact, to some degree have pulled back on their efforts to eat more fruit. That said, moms still understand the need to eat more fruit as demonstrated by the large portion (44%) who say they are *definitely planning to eat more fruit in the next month*, and the additional 11% who are *planning to start eating more fruit in the next 6 months*.

**Table 13: Fruit Stages of Change
Tracking Comparison**

	2008 Total (n=780)	2009 Total (n=792)	2010 Total (n=805)
I am not thinking about eating more fruit	2%	3%	8%
I am thinking about eating more fruit...planning to start within 6 months	8%	4%	11%
I am definitely planning to eat more fruit in the next month	9%	11%	44%
I am trying to eat more fruit now	51%	47%	20%
I am already eating 3 or more servings of fruit a day	30%	35%	17%

1. Fruit Stages of Change by Key Demographics-

Action Stage moms are significantly more likely than those in the Pre-contemplation/Contemplation/Preparation Stages to participate in “other” food assistance programs, i.e., school lunch/breakfast and summer food programs.

**Table 14: Fruit Stages of Change
by Key Demographics**

Demographics	Pre-contempl. Contemplation Preparation (n=504)	Action (n=158)	Maintncc. (n=139)
Participate in Food Assistance Program	81%	82%	81%
Food Stamps	94%	89%	95%
WIC	35%	44%	42%
Other	<u>21%</u>	39%	37%
Primary language spoken at home			
English	66%	61%	57%
Both English and Spanish	27%	29%	28%
Spanish	<u>5%</u>	7%	13%
Other	2%	3%	2%
Ethnicity			
Hispanic	53%	53%	56%
Non-Hispanic	47%	47%	44%
Age			
18-25	32%	26%	28%
26-35	40%	38%	39%
36-45	<u>19%</u>	26%	24%
45-49	9%	9%	9%
Education			
<HS/GED completed	27%	20%	23%
High School	42%	43%	34%
Some college or more	31%	37%	32%

Bold denotes a significantly higher percentage than the underlined comparative group.
A percentage may be both in bold and underlined because there are more than two categories.

2. *Fruit Stages of Change*

a. *Current Eating Habits*

Action Stage moms are ...

- Significantly more likely than those in the Pre-contemplation/Contemplation/Preparation Stage to *start their day with a healthy breakfast and have juice or have a piece of fruit for breakfast.*

Hispanic moms who speak primarily Spanish are ...

- Significantly more likely than their English-speaking counterparts to *always start their day with a healthy breakfast and to have fruit juice or a piece of fruit for breakfast.*

**Table 15: Fruit Stages of Change
by Key Current Eating Habits**

Summary of Agreement (Strongly Agree/Agree)	Pre-contempl. Contemplation Preparation (n=504)	Action (n=158)	Maintnce. (n=139)
Current Eating Habits			
How would you describe your eating habits? (Excellent / Very Good)	<u>21%</u>	<u>24%</u>	37%
I always start my day with a healthy breakfast.	<u>49%</u>	<u>62%</u>	78%
I often have fruit juice or a piece of fruit for breakfast.	<u>45%</u>	<u>55%</u>	76%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

*b. Healthy Eating**Action (and Maintenance) Stage moms are...*

- Significantly more likely than those in the Pre-contemplation/Contemplation/Preparation Stages to agree with all of the healthy eating statements relating to fruit (and vegetables).

Hispanic moms who speak primarily Spanish are ...

- Significantly more likely than their English-speaking counterparts to believe eating fruits and vegetables is important for my overall health.

**Table 16: Fruit Stages of Change
by Key Healthy Eating Statements**

Summary of Agreement (Strongly Agree/Agree)	Pre-contempl. Contemplation Preparation (n=504)	Action (n=158)	Maintnce. (n=139)
Healthy Eating			
Eating a variety of fruits and vegetables is an important part of eating healthy.	<u>84%</u>	98%	99%
I believe eating fruits and vegetables is important for my overall health.	<u>84%</u>	96%	96%
Eating any form of fruit or vegetable is good for you. That includes fresh, frozen, dried, canned and 100% juice.	<u>79%</u>	91%	91%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

c. *Perceived Benefits to Healthy Eating*

Action (and Maintenance) Stage moms are ...

- Significantly more likely than those in the Pre-contemplation/Contemplation/Preparation group to understand the positive implications of eating healthy, specifically, *preventing obesity, heart disease, cancer, and developing other health problems*. They are also more likely to *provide healthy snacks to their families* and to agree that *children who eat meals with their parents regularly, tend to eat more fruits and vegetables and it is cheaper to eat a healthy meal than go to a fast food restaurant*.

Hispanic moms who speak primarily Spanish are ...

- Significantly more likely than their English-speaking counterparts to believe they may develop health problems if they do not eat fruit and vegetables.

Table 17: Fruit Stages of Change
by Key Perceived Benefits to Healthy Eating Statements

Summary of Agreement (Strongly Agree/Agree)	Pre-contempl. Contemplation Preparation (n=504)	Action (n=158)	Maintnce. (n=139)
Perceived Benefits to Healthy Eating			
Eating healthy food is helpful in preventing obesity.	<u>83%</u>	95%	95%
I make sure to provide healthy snacks to my family.	<u>72%</u>	92%	96%
Eating healthy food is helpful in preventing diabetes.	<u>81%</u>	86%	92%
Eating healthy food is helpful in preventing heart disease.	<u>82%</u>	90%	94%
Children who eat meals with their parents regularly, tend to eat more fruits and vegetables.	<u>73%</u>	90%	91%
Eating healthy food is helpful in preventing cancer.	<u>66%</u>	80%	77%
I may develop health problems if I do not eat fruit and vegetables.	<u>59%</u>	70%	73%
It is cheaper to eat a healthy meal than to go to a fast food restaurant.	<u>57%</u>	67%	70%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

d. *Perceived Barriers to Healthy Eating*

Action (and Maintenance) Stage moms are ...

Significantly less likely than those in the Pre-contemplation/Contemplation/Preparation Stages to agree with several of the barriers to healthy eating statements, including: *I often run out of ideas for healthy meals, Sometimes I do not have the willpower to eat healthy, I am too tired at the end of the day to prepare a healthy meal, and My family is not in the habit of eating healthy food.*

Hispanic moms who speak Spanish primarily at home are...

- Significantly less likely than their English and Bilingual counterparts to agree *healthy food costs more than “junk” or fast food.*

Hispanic moms who speak primarily English at home are...

- Significantly more likely than their Spanish-speaking counterparts to agree *sometimes it is easier to eat fast food or frozen pizza than to prepare a healthy meal and sometimes I do not have the willpower to eat healthy.*

Table 18: Fruit Stages of Change
by Key Perceived Barriers to Healthy Eating Statements

Summary of Agreement (Strongly Agree/Agree)	Pre-contempl. Contemplation Preparation (n=504)	Action (n=158)	Maintnce. (n=139)
Perceived Barriers to Healthy Eating			
It is too expensive to eat fruits and vegetables.	25%	<u>14%</u>	<u>10%</u>
Sometimes it is easier to eat fast food or frozen pizza than to prepare a healthy meal.	51%	50%	<u>40%</u>
Healthy food costs more than “junk” food	34%	<u>18%</u>	<u>16%</u>
I often run out of ideas and recipes for preparing healthy meals.	41%	35%	<u>26%</u>
Sometimes I do not have the willpower to eat healthy.	36%	<u>27%</u>	<u>19%</u>
I am too tired at the end of the day to prepare a healthy meal.	31%	<u>17%</u>	9%
Meal planning and shopping takes too long.	25%	15%	<u>7%</u>
My family is happier eating “junk” food.	22%	13%	10%
My family is not in the habit of eating healthy food.	29%	<u>17%</u>	<u>13%</u>

Bold denotes a significantly higher percentage than the underlined comparative group.
A percentage may be both in bold and underlined because there are more than two categories.

e. *Perceived Risks of Not Eating Healthy*

Action (and Maintenance) Stage moms are...

- Significantly more likely than Pre-contemplation/Contemplation/Preparation moms to agree: *I am more likely to have high blood pressure or high cholesterol because someone in my family has this condition, I am more likely to get sick if I don't eat healthy food, and I am more likely to get a serious disease such as cancer, heart disease, diabetes, or obesity because someone in my family has this disease.*

Hispanic moms who speak Spanish primarily at home are...

- Significantly more likely than their English counterparts to agree *I am more likely to get sick if I don't eat healthy food.*

Table 19: Fruit Stages of Change
by Key Perceived Risks of Not Eating Healthy Statements

Summary of Agreement (Strongly Agree/Agree)	Pre-contempl. Contemplation Preparation (n=504)	Action (n=158)	Maintnce. (n=139)
Perceived Risks of Not Eating Healthy			
I am more likely to have high blood pressure or high cholesterol because someone in my family has this condition.	<u>74%</u>	82%	83%
I am more likely to get sick if I don't eat healthy food.	<u>55%</u>	77%	80%
I am more likely to get a serious disease such as cancer, heart disease, diabetes, or obesity because someone in my family has this disease.	<u>73%</u>	83%	82%

Bold denotes a significantly higher percentage than the underlined comparative group.
A percentage may be both in bold and underlined because there are more than two categories.

f. Key Self-Efficacy Statements

Action (and Maintenance) Stage moms are ...

- Significantly more likely than those in the Pre-contemplation/Contemplation/Preparation Stages to provide higher ratings for all of the self-efficacy statements: *I am confident I can cook healthy meals for my family, In the kitchen, I make the rules, I can buy more fruits and vegetables the next time I shop and I can plan meals or snacks with more fruits during the next week.*

Moms who speak primarily Spanish at home are....

- Significantly more likely than their English and Bilingual counterparts to agree *they can buy more fruits and vegetables the next time they shop.*

**Table 20: Fruit Stages of Change
by Key Self-Efficacy Statements**

Summary of Agreement Statements (Strongly Agree/Agree)	Pre-contempl. Contemplation Preparation (n=504)	Action (n=158)	Maintnce. (n=139)
Self-Efficacy			
I am confident I can cook healthy meals for my family	<u>88%</u>	94%	96%
I can plan meals or snacks with more fruit during the next week.	<u>86%</u>	94%	93%
I can buy more fruits and vegetables the next time I shop.	<u>85%</u>	93%	87%
In the kitchen, I make the rules.	<u>72%</u>	80%	85%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

3. Correlation Analysis

Factor analysis – The agree/disagree questions were factored together to determine which questions resulted in similar responses. This step was used to reduce the entire list of agree/disagree statements into groups of factors. For example, the 24 agree/disagree benefits statements were reduced into six factored groups – i.e., they provided the same insights as the 24 agree/disagree statements, but combined similar/duplicative responses. This step helps reduce the duplication that naturally occurs when evaluating large numbers of statements.

Correlation analyses were conducted with each of the factored groups to determine the strength of the relationship between the group and Stage of Change. For example, one of the strongest correlations was between likelihood of eating vegetables and barriers related to time (e.g., don't have time to make healthy food) and taste (healthy food does not taste good).

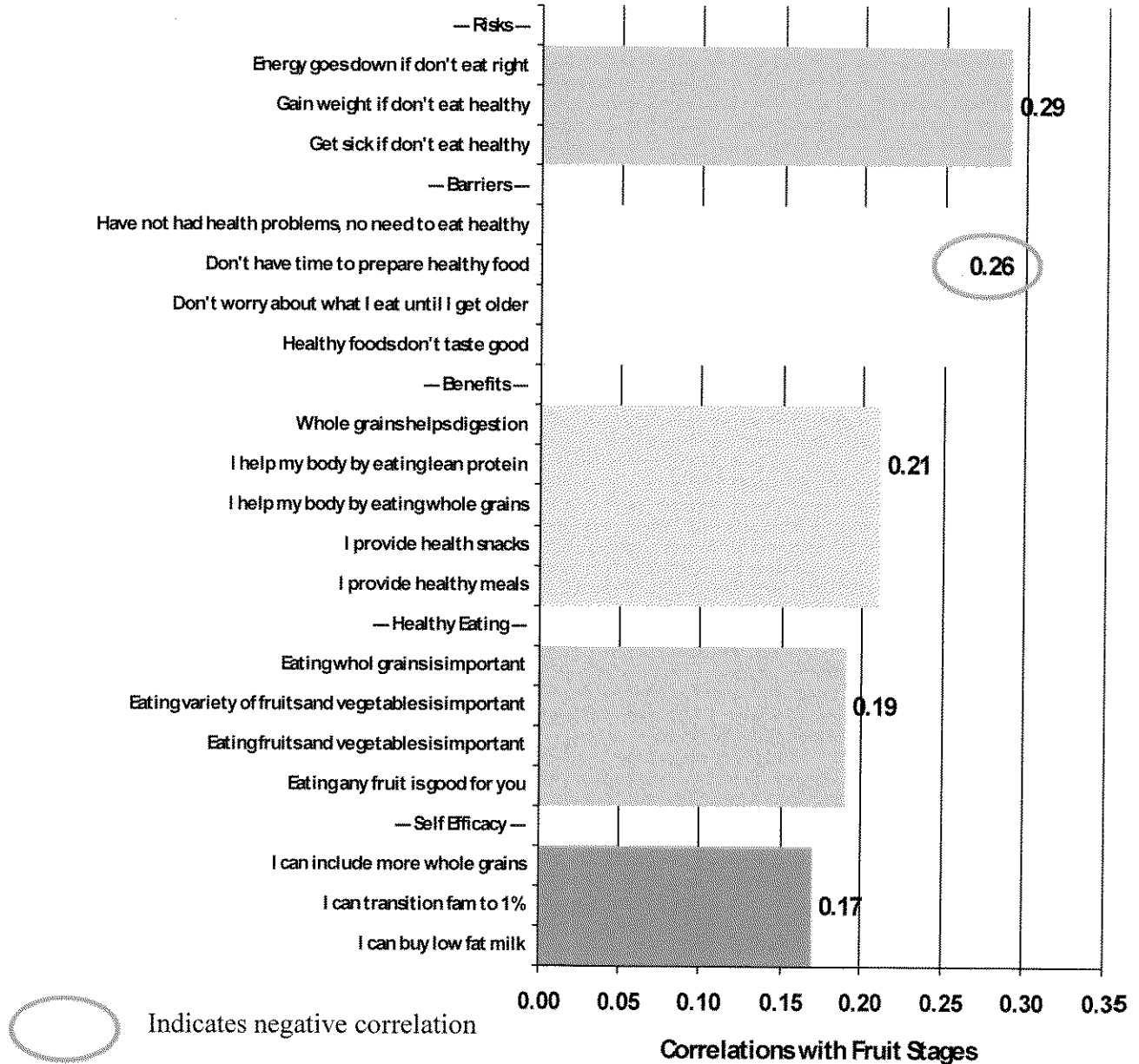
Each section includes a chart illustrating how strongly specific statements or groups of statements 'correlate' to the Stage of Change a mom is in. The higher the number, the stronger the correlation. For example, .33 indicates a stronger correlation than .22. This suggests that this group of statements (the ones with a .33 correlation) is more likely to influence the Stage of Change in which mom falls.

In some cases, statements are negatively or inversely correlated with the Stage of Change a mom is in. For example, the barrier statements are the second most highly correlated group with which Stage of Change a mom is in with regard to eating fruit. This is a negative or inverse correlation. That is, the more likely a mom is to disagree with the statement 'I have not had health problems, so I don't need to worry about eating healthy,' the more likely she is to be in the 'Action' or 'Maintenance' Stage of Change.

The key findings of each correlation analysis identify the factors of the Health Belief Model that have the most influence on a mom being further along in the Stages of Change continuum. The implication is that the best way to move moms from 'lower' stages to 'higher' stages is to address these factors in the advertising. The chart on the following page suggests that advertising the risks of not eating fruit as well as the barriers to eating fruit would be the most effective ways to move moms along the continuum.

Key Finding: Risks and barriers had the strongest correlation with the Fruit Stages of Change.

Fruits Stages of Change
Correlation Analysis by Factored Groups



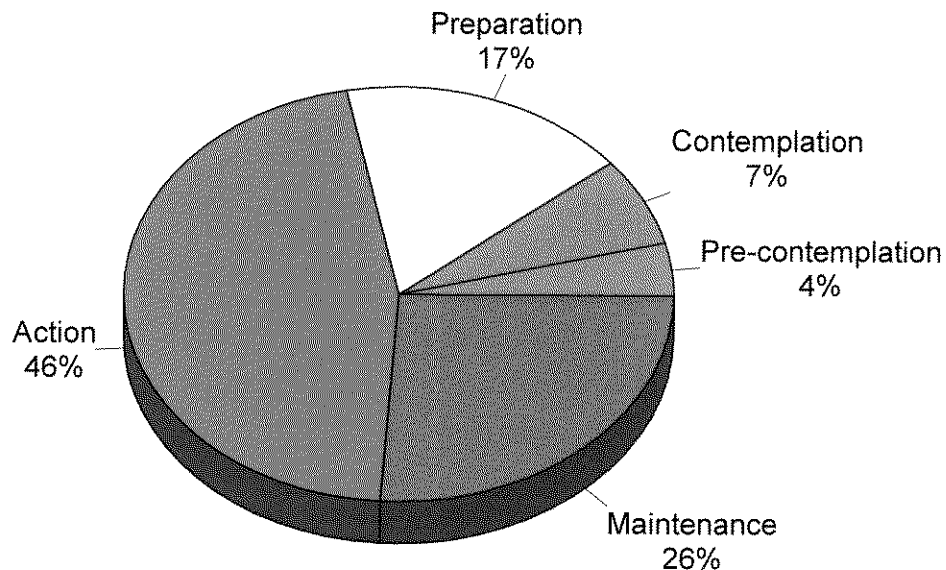
B. Vegetable Stages of Change

The largest portion of moms – 46% - report they are *trying to eat more vegetables now*, placing them in the Action Stage for vegetable consumption. About one-quarter - 26% - place themselves in the Maintenance Stage by stating they are already eating three or more servings of vegetables a day.

The 28% who are not already or not currently trying to eat more vegetables include 4% in the Pre-contemplation Stage (indicating they are *not considering eating more vegetables at this time*), 7% in the Contemplation Stage (indicating they are *thinking about eating more veggies/planning to start in the next six months*), and 17% in the Preparation Stage (indicating they are *definitely planning to eat more veggies in the next month*).

Hispanic moms who primarily speak Spanish at home are significantly more likely than their English and bilingual speaking counterparts to be in the Maintenance Stage (reporting they eat three or more servings of vegetables a day). This finding concurs with Spanish speaking moms' attitudes toward the *Health Eating, Perceived Benefits, and Self Efficacy* statements related to vegetables – *Eating a variety of fruits and vegetables is an important part of eating healthy, I can serve two or more servings of vegetables at dinner and I can buy more fruits and vegetables the next time I shop.*

Vegetable: Stages of Change



Tracking Comparison

There was a statistically significant decline in the portion of moms in the Maintenance Stage as fewer report eating three or more servings of vegetables a day compared to 2009. The other statistically significant change registered was an increase among moms in the Preparation Stage indicating women are slipping out of the Maintenance Stage into the Preparation Stage.

Those who occupied the Maintenance Stage in the past are eating fewer vegetables. In fact the percentage of moms who say they eat vegetables on a daily basis and who feel empowered to serve two more vegetables at dinner have declined significantly from 2009.

Table 21: Vegetable Stages of Change
2008 / 2009 Comparison

	2008 Total (n=800)	2009 Total (n=795)	2010 Total (n=805)
I am not thinking about eating more vegetables	2%	3%	4%
I am thinking about eating more vegetables ...planning to start within 6 months	7%	5%	7%
I am definitely planning to eat more vegetables in the next month	<u>8%</u>	<u>11%</u>	<u>17%</u>
I am trying to eat more vegetables now	47%	44%	46%
I am already eating 3 or more servings of vegetables a day	<u>36%</u>	<u>37%</u>	<u>26%</u>

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

1. Vegetable Stages of Change by Key Demographics

Action Stage moms are significantly more likely than those in the Pre-contemplation/Contemplation/Preparation Stages to be involved in the WIC program. They are also significantly more likely to be Hispanic than those in the Pre-contemplation/Contemplation/Preparation Stages.

**Table 22: Vegetable Stages of Change
by Key Demographics**

Demographics	Pre-contempl. Contemplation Preparation (n=228)	Action (n=363)	Maintnce. (n=209)
Participate in Food Assistance Program	<u>77%</u>	84%	82%
Food Stamps	94%	93%	90%
WIC	<u>31%</u>	43%	39%
Other	<u>18%</u>	<u>27%</u>	36%
Language primarily spoken at home			
English	75%	<u>61%</u>	<u>55%</u>
Spanish	<u>2%</u>	<u>7%</u>	12%
Both English and Spanish	<u>22%</u>	29%	31%
Other	1%	3%	2%
Ethnicity			
Hispanic	<u>43%</u>	58%	57%
Non-Hispanic	57%	<u>42%</u>	<u>43%</u>
Age			
18-25	35%	30%	26%
26-35	40%	<u>36%</u>	44%
36-45	<u>18%</u>	24%	21%
45-49	7%	10%	9%
Education			
<HS/GED completed	21%	27%	26%
High School	51%	<u>38%</u>	<u>40%</u>
Some college or more	28%	35%	34%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

2. Vegetable Stages of Change

a. Current Eating Habits

Action Stage moms are ...

- Significantly less likely than those in the Maintenance Stage to describe their eating habits as very good or excellent. In addition, they are less likely to agree *they eat vegetables every day and often have fruit juice or a piece of fruit for breakfast.*
- Similar to those in the Pre-contemplation/Contemplation/Preparation groups in regard to diet rating and *snacking on popcorn*, but are significantly more likely to indicate *they eat vegetables every day and often have fruit juice or a piece of fruit for breakfast.*

**Table 23: Vegetable Stages of Change
by Key Current Eating Habits**

	Pre-contempl. Contemplation Preparation (n=228)	Action (n=363)	Maintnce. (n=209)
Current Eating Habits			
How would you describe your eating habits? (Excellent / Very Good)	<u>17%</u>	<u>22%</u>	37%
I eat vegetables every day.	<u>35%</u>	60%	84%
I like to snack on popcorn.	41%	42%	40%
I often have fruit juice or a piece of fruit for breakfast.	<u>32%</u>	53%	74%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

b. Healthy Eating**Action and Maintenance Stage moms are ...**

- Significantly more likely than those in the Pre-contemplation/Contemplation/Preparation Stages to believe eating fruits and vegetables is an important ingredient for health, specifically:
 - Eating a variety of fruits and vegetables is an important part of eating healthy.
 - I believe eating fruits and vegetables is important for my overall health.
 - Eating any form of fruit or vegetable is good for you including fresh, frozen, dried, canned or 100% juice.

Hispanic moms who speak primarily Spanish are ...

- Significantly more likely than their English-speaking counterparts to agree *eating a variety of fruits and vegetables is an important part of being healthy* and *eating fruits and vegetables is important for my overall health*.

Moms with some college education are ...

- Significantly more likely than moms with a high school education or less to agree *eating fruits and vegetables is important for my overall health*.

**Table 24: Vegetable Stages of Change
by Key Healthy Eating Statements**

Summary of Agreement (Strongly Agree/Agree)	Pre-contempl. Contemplation Preparation (n=228)	Action (n=363)	Maintnce. (n=209)
Healthy Eating			
Eating a variety of fruits and vegetables is an important part of eating healthy.	<u>69%</u>	97%	99%
I believe eating fruits and vegetables is important for my overall health.	<u>70%</u>	95%	99%
Eating any form of fruit or vegetable is good for you. That includes fresh, frozen, dried, canned and 100% juice.	65%	91%	90%

Bold denotes a significantly higher percentage than the underlined comparative group.
A percentage may be both in bold and underlined because there are more than two categories.

c. *Perceived Benefits to Healthy Eating*

Action and Maintenance Stage moms are ...

- Significantly more likely than those in the Pre-contemplation/Contemplation/Preparation groups to strongly agree/agree with all of the *Benefits* statements.
- Maintenance Stage moms are more likely than those in the Action Stage to make sure they provide *healthy snacks to their families*, to believe *that eating healthy will improve the way they look*, and that *eating healthy food is helpful in preventing diabetes*.

Hispanic moms who speak primarily Spanish are ...

- Significantly more likely than their English-speaking counterparts to agree *they may develop health problems if they do not eat enough fruit and vegetables*.

Table 25: Vegetable Stages of Change
by Key Perceived Benefits to Healthy Eating Statements

Summary of Agreement (Strongly Agree/Agree)	Pre-contempl. Contemplation Preparation (n=228)	Action (n=363)	Maintnce. (n=209)
Perceived Benefits to Healthy Eating			
Eating healthy food is helpful in preventing obesity.	<u>73%</u>	93%	95%
I make sure to provide healthy snacks to my family.	<u>51%</u>	89%	96%
Eating healthy food will improve the way I look.	<u>55%</u>	84%	90%
Eating healthy food is helpful in preventing diabetes.	<u>71%</u>	86%	94%
Eating healthy food is helpful in preventing heart disease.	<u>82%</u>	90%	94%
Eating healthy food is helpful in preventing cancer.	<u>57%</u>	74%	79%
I may develop health problems if I do not eat fruit and vegetables.	<u>47%</u>	68%	74%
It is cheaper to eat a healthy meal than to go to a fast food restaurant.	<u>41%</u>	67%	71%
Children who eat meals with their parents regularly, tend to eat more fruits and vegetables.	<u>55%</u>	87%	91%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

d. *Perceived Barriers to Healthy Eating*

Action Stage moms are ...

- Significantly less likely than those in the Pre-contemplation/Contemplation/Preparation Stages to agree: *healthy food costs more than “junk” or fast food, my family is not in the habit of eating healthy food, sometimes I do not have the willpower to eat healthy, and meal planning and shopping takes too long.*
- Significantly more likely than those in the Maintenance Stage to agree with most of the barriers to healthy eating statements, however the biggest “gaps” between Action and Maintenance Stage moms are with the following two statements: *I often run out of ideas and recipes for preparing healthy meals and sometimes it is easier to eat fast food or frozen pizza than to prepare a healthy meal.*

Hispanic moms who speak primarily English at home are....

- Significantly more likely than their Spanish-speaking counterparts to agree *Sometimes it is easier to eat fast food or frozen pizza than to prepare a healthy meal and Sometimes I do not have the willpower to eat healthy.*

Table 26: Vegetable Stages of Change
by Key Perceived Barriers to Healthy Eating Statements

Summary of Agreement (Strongly Agree/Agree)	Pre-contempl. Contemplation Preparation (n=228)	Action (n=363)	Maintnce. (n=209)
Perceived Barriers to Healthy Eating			
Sometimes it is easier to eat fast food or frozen pizza than to prepare a healthy meal.	56%	52%	<u>37%</u>
It is too expensive to eat fruits and vegetables.	26%	20%	<u>14%</u>
Healthy food costs more than “junk” or fast food.	43%	<u>24%</u>	<u>18%</u>
My family is not in the habit of eating healthy food.	44%	<u>20%</u>	<u>10%</u>
Sometimes I do not have the willpower to eat healthy.	48%	<u>29%</u>	<u>18%</u>
Meal planning and shopping takes too long.	41%	<u>14%</u>	<u>8%</u>
I often run out of ideas and recipes for preparing healthy meals.	47%	41%	<u>20%</u>

Bold denotes a significantly higher percentage than the underlined comparative group.
A percentage may be both in bold and underlined because there are more than two categories.

e. *Perceived Risks of Not Eating Healthy*

- Action and Maintenance Stage moms are significantly more likely to agree *I am more likely to get sick if I don't eat healthy food* than those in the first three Stages. This belief increases as the stages progress.
- No differences exist among the Stages regarding attitudes toward genetic predisposition to diseases. Approximately three-quarters in each stage agree:
 - *I am more likely to have high blood pressure or high cholesterol because someone in my family has this condition, and;*
 - *I am more likely to get a serious disease such as cancer, heart disease, diabetes, or obesity because someone in my family has the disease.*

Hispanic moms who speak Spanish primarily at home are....

- Significantly more likely than their English-speaking counterparts to agree *I am more likely to get sick if I don't eat healthy food.*

**Table 27: Vegetable Stages of Change
by Key Perceived Risks of Not Eating Healthy Statements**

Summary of Agreement (Strongly Agree/Agree)	Pre-contempl. Contemplation Preparation (n=228)	Action (n=363)	Maintnce. (n=209)
Perceived Risks of Not Eating Healthy			
I am more likely to have high blood pressure or high cholesterol because someone in my family has this condition.	74%	78%	78%
I am more likely to get sick if I don't eat healthy food.	<u>43%</u>	68%	77%
I am more likely to get a serious disease such as cancer, heart disease, diabetes, or obesity because someone in my family has this disease.	77%	75%	79%

Bold denotes a significantly higher percentage than the underlined comparative group.
A percentage may be both in bold and underlined because there are more than two categories.

f. Key Self-Efficacy Statements

Action Stage moms are ...

- Significantly more likely than those in the Pre-contemplation/Contemplation/Preparation Stages to agree with all of the Self-Efficacy statements.
- Significantly less likely than those in the Maintenance Stage to agree that when *in the kitchen, they make the rules*, and that *they can serve two or more servings of vegetables at dinner*.

Hispanic Moms who speak Spanish primarily at home are...

- Significantly more likely than their English-speaking and bilingual counterparts to agree *they can buy more fruits and vegetables the next time they shop* and *they can serve two or more servings of vegetables at dinner*.

**Table 28: Vegetable Stages of Change
by Key Self-Efficacy Statements**

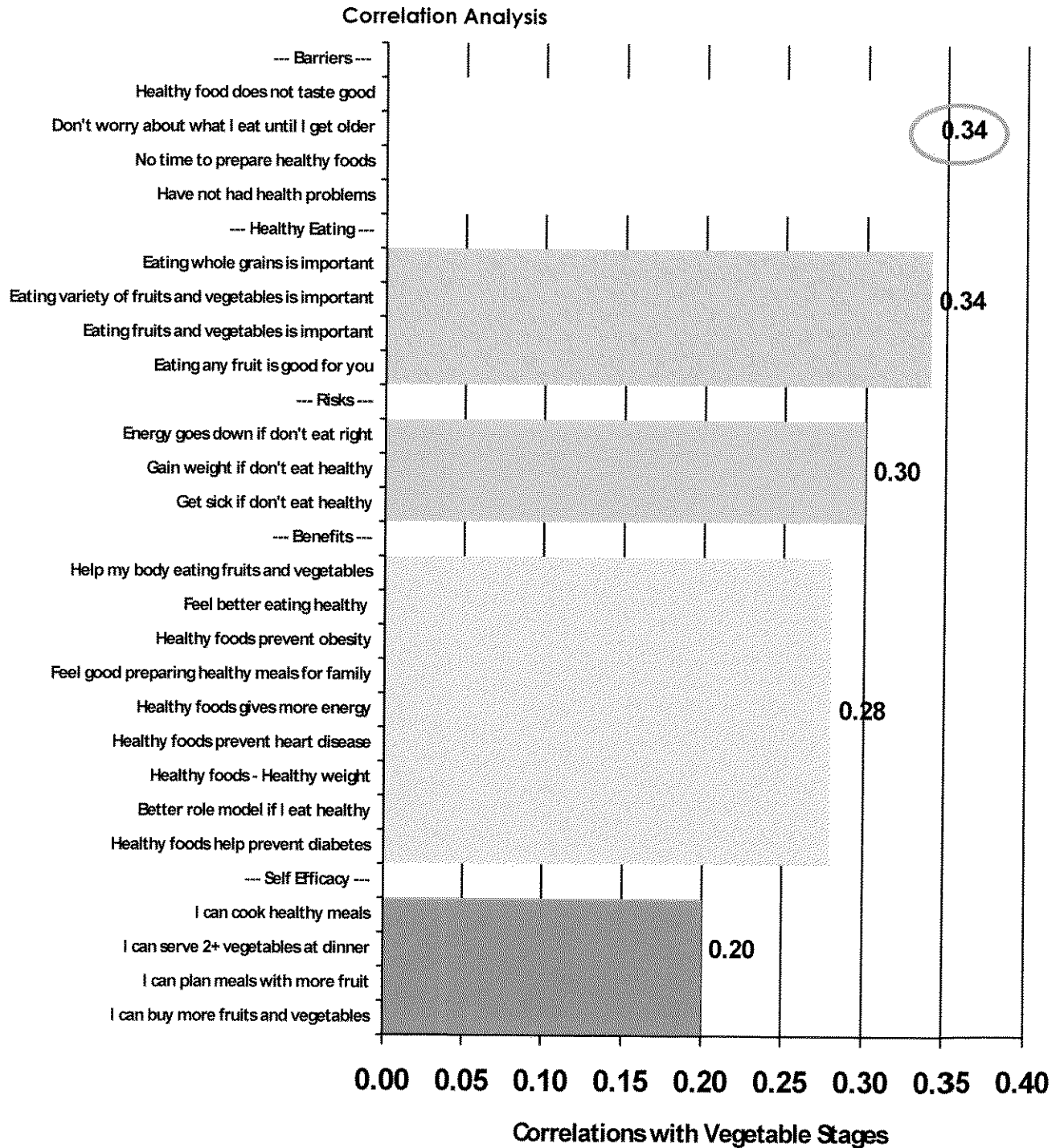
Summary of Agreement (Strongly Agree/Agree)	Pre-contempl. Contemplation Preparation (n=228)	Action (n=363)	Maintnce. (n=209)
Self-Efficacy			
I can buy more fruits and vegetables the next time I shop.	<u>80%</u>	90%	89%
In the kitchen, I make the rules.	<u>67%</u>	76%	85%
I can serve two or more servings of vegetables at dinner.	<u>73%</u>	86%	94%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

3. *Correlation Analysis*

Key Finding: Barriers and healthy eating statements had the strongest correlation with the Vegetables Stages of Change.

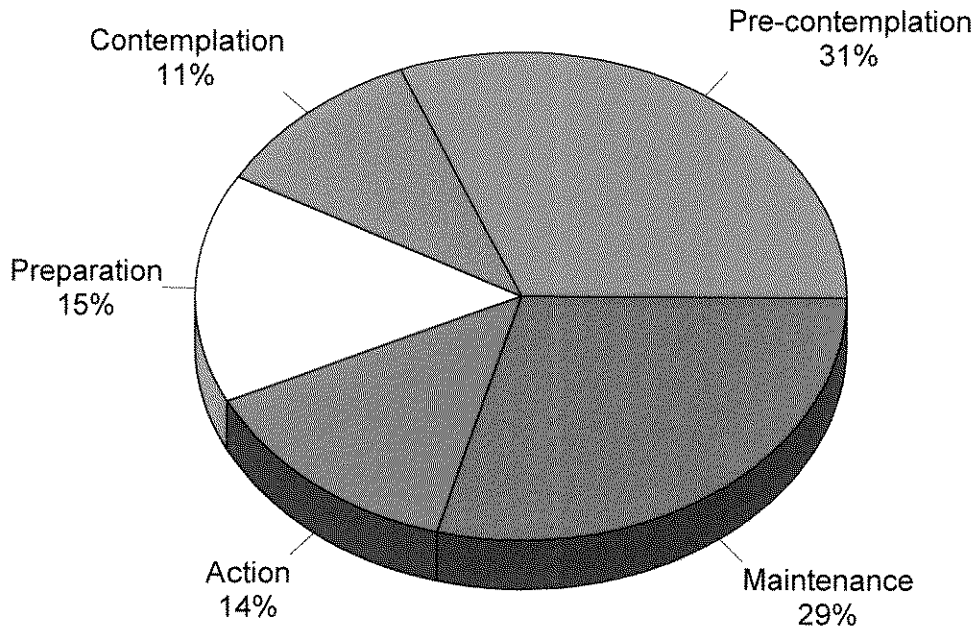


C. Milk Stages of Change

While three in ten moms (29%) are already drinking 1% low fat or fat free milk (Maintenance Stage), nearly the same percentage (31%) is not considering making a change to 1% low fat or fat free milk (Pre-contemplation Stage). Fourteen percent (14%) fall into the Action Stage (trying to switch), 15% are in the Preparation Stage (definitely planning to change in the next month), and 11% are in the Contemplation Stage (thinking about changing to 1% low fat or fat free milk in the next six months).

Moms with at least some college are significantly more likely to report being in the Maintenance Stage (already drinking 1% low fat or fat free milk) than moms with a high school diploma or less. Moms with some college or more also agree with the statement – *I can transition my family to 1% low fat or fat free milk significantly more than moms with no exposure to college.*

Milk: Stages of Change



Tracking Comparison

There has been a statistically significant decline in moms in the Action Stage over the past year as well as a significant decrease in the portion of moms who report being in the Maintenance Stage compared to 2008. Conversely, there has been a significant increase in moms in the Preparation Stage. This shift is consistent with the significant decrease in those who believe *drinking 1% low fat or fat free milk is an important part of eating healthy*.

Table 29: Milk Stages of Change
Tracking Comparison

	2008 Total (n=800)	2009 Total (n=795)	2010 Total (n=798)
I am not thinking about changing to 1% low fat or fat free milk	33%	33%	31%
I am thinking about changing to 1% low fat or fat free milk ...planning to start within 6 months	10%	9%	11%
I am definitely planning to change to 1% low fat or fat free milk to in the next month	<u>11%</u>	<u>9%</u>	15%
I am trying to change to 1% low fat or fat free milk now	<u>11%</u>	18%	<u>14%</u>
I am already drinking 1% low fat or fat free milk	35%	32%	<u>29%</u>

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

1. *Milk Stages of Change by Key Demographics*

- Moms who participate in the WIC program are significantly more likely to be in the Action and Maintenance Stages of the Milk Stages of Change than they are to be in the earlier stages.
- Action Stage moms are significantly more likely to be Hispanic and more likely to speak primarily Spanish or to be bilingual than are those in other stages.

**Table 30: Milk Stages of Change
by Key Demographics**

Demographics	Pre-contemp Contemplation Preparation (n=460)	Action (n=110)	Maintnce. (n=228)
Participate in Food Assistance Program	80%	82%	85%
Food Stamps	96%	<u>89%</u>	<u>88%</u>
WIC	<u>31%</u>	44%	50%
Other	26%	25%	29%
Language primarily spoken at home			
English	66%	<u>46%</u>	63%
Spanish	<u>5%</u>	12%	<u>8%</u>
Both English and Spanish	<u>26%</u>	39%	<u>26%</u>
Other	1%	3%	2%
Ethnicity			
Hispanic	<u>51%</u>	64%	<u>54%</u>
Non-Hispanic	49%	<u>36%</u>	46%
Age			
18-25	30%	27%	32%
26-35	39%	39%	40%
36-45	22%	21%	20%
45-49	9%	13%	8%
Education			
<HS/GED completed	<u>24%</u>	36%	<u>22%</u>
High School	47%	<u>34%</u>	<u>37%</u>
Some college or more	<u>29%</u>	<u>30%</u>	41%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

2. Milk Stages of Change

Note: Pre-contemplation/Contemplation/Preparation Stage moms are analyzed separately in the Milk Stages of Change section because there are many statistically significant differences among the three stages.

a. Current Eating Habits

Pre-contemplation/Contemplation/Preparation moms are ...

- Significantly less likely than those in the Action and Maintenance Stages to *start their day with a healthy breakfast and to drink water throughout the day.*
- Significantly more likely than those in the Action and Maintenance Stages to say they *drink more soda than water and when they drink milk, they like to drink whole or 2% milk.* Interestingly, Action Stage mothers' preference to drink whole or 2% milk is more similar to Pre-contemplation/Contemplation/Preparation Stage moms than Maintenance moms.

Hispanic moms who speak primarily Spanish are ...

- Significantly more likely than their English-speaking counterparts to *always start their day with a healthy breakfast.*

**Table 32: Milk Stages of Change
by Key Current Eating Habits**

Summary of Agreement (Strongly Agree/Agree)	Pre- contem- plation (n=246)	Contem- plation (n=91)	Prepar- ation (n=123)	Action (n=110)	Maintnce. (n=228)
Current Eating Habits					
How would you describe your eating habits? (Excellent / Very Good)	<u>22%</u>	27%	<u>16%</u>	27%	30%
Most days, I drink water throughout the day.	<u>75%</u>	<u>66%</u>	<u>52%</u>	84%	87%
I always start my day with a healthy breakfast.	<u>49%</u>	<u>46%</u>	<u>37%</u>	70%	74%
I drink more soda than water.	37%	36%	46%	<u>19%</u>	<u>23%</u>
When I drink milk, I like to drink whole or 2% milk	80%	81%	79%	<u>69%</u>	<u>45%</u>

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

b. Healthy Eating

- Pre-contemplation, Contemplation and Preparation Stage moms are significantly less likely than those in the Action and Maintenance Stages to agree with the two statements about 1% low fat or fat free milk.

**Table 33: Milk Stages of Change
by Key Healthy Eating Statements**

Summary of Agreement (Strongly Agree/Agree)	Pre- contem- plation (n=246)	Contem- plation (n=91)	Prepar- ation (n=123)	Action (n=110)	Maintnce. (n=228)
Healthy Eating					
Drinking <u>1% low fat or fat free milk</u> is an important part of eating healthy.	<u>43%</u>	<u>39%</u>	<u>39%</u>	<u>73%</u>	91%
1% low fat and fat free milk have the same amount of vitamins and minerals as whole milk.	<u>39%</u>	<u>46%</u>	<u>44%</u>	<u>56%</u>	69%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

c. *Perceived Benefits to Healthy Eating*

- Pre-contemplation/Contemplation/Preparation Stage moms are significantly less likely to agree with all of the Benefits statements listed; however, the largest differences are seen in the milk statements where agreement levels are 20% to 30% lower.

Table 34: Milk Stages of Change
by Key Perceived Benefits to Healthy Eating Statements

Summary of Agreement (Strongly Agree/Agree)	Pre- contem- plation (n=246)	Contem- plation (n=91)	Prepar- ation (n=123)	Action (n=110)	Maintnce. (n=228)
Perceived Benefits to Healthy Eating					
I am sure to provide healthy meals to my family.	<u>83%</u>	<u>73%</u>	<u>61%</u>	92%	96%
It is cheaper to eat a healthy meal than to go to a fast food restaurant.	<u>58%</u>	<u>53%</u>	<u>43%</u>	75%	70%
Eating healthy food is helpful in preventing diabetes.	<u>81%</u>	<u>76%</u>	<u>73%</u>	<u>86%</u>	95%
Eating healthy food is helpful in preventing heart disease.	<u>82%</u>	<u>83%</u>	<u>77%</u>	89%	95%
Drinking 1% low fat and fat free milk is healthier than drinking whole and 2% milk.	<u>40%</u>	<u>39%</u>	<u>47%</u>	<u>67%</u>	83%
I am helping my body by drinking 1% low fat or fat free milk.	<u>38%</u>	<u>36%</u>	<u>39%</u>	<u>68%</u>	92%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

d. *Perceived Barriers to Healthy Eating*

Pre-contemplation, Contemplation and Preparation Stage moms are ...

- Significantly more likely than Action and Maintenance Stage moms to agree that *healthy food costs more than “junk” food, and sometimes I don’t have the willpower to eat healthy.*
- Significantly more likely than Action and Maintenance Stage moms to agree that *whole milk or 2% milk tastes better to them than 1% low fat or fat free milk.*

Table 35: Milk Stages of Change
by Key Perceived Barriers to Healthy Eating Statements

Summary of Agreement (Strongly Agree/Agree)	Pre- contem- plation (n=246)	Contem- plation (n=91)	Prepar- ation (n=123)	Action (n=110)	Maintnce. (n=228)
Perceived Barriers to Healthy Eating					
Sometimes it is easier to eat fast food or frozen pizza than to prepare a healthy meal.	58%	55%	<u>47%</u>	<u>34%</u>	<u>45%</u>
Healthy food costs more than “junk” or fast food.	32%	32%	35%	<u>18%</u>	<u>22%</u>
Sometimes I do not have the willpower to eat healthy.	32%	38%	46%	<u>23%</u>	<u>24%</u>
Whole or 2% milk tastes better to me than 1% low fat or fat free milk	68%	67%	63%	<u>40%</u>	<u>21%</u>

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

e. *Perceived Risks of Not Eating Healthy*

- Action and Maintenance moms are significantly more likely to agree *I am more likely to get sick if I don't eat healthy food* than Pre-contemplation/Contemplation/Preparation moms.

Hispanic moms who speak Spanish primarily at home are...

- Significantly more likely than their English counterparts to agree *I am more likely to get sick if I don't eat healthy food*.

**Table 36: Milk Stages of Change
by Key Perceived Risks of Not Eating Healthy Statements**

Summary of Agreement (Strongly Agree/Agree)	Pre- contem- plation (n=246)	Contem- plation (n=91)	Prepar- ation (n=123)	Action (n=110)	Maintnce. (n=228)
Perceived Risks of Not Eating Healthy					
I am more likely to get sick if I don't eat healthy food.	<u>59%</u>	<u>49%</u>	<u>50%</u>	76%	75%
I am more likely to get a serious disease such as cancer, heart disease, diabetes, or obesity because someone in my family has this disease.	72%	75%	81%	76%	80%
I am more likely to have high blood pressure or high cholesterol because someone in my family has this condition.	76%	74%	82%	75%	78%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

f. Key Self-Efficacy Statements

Pre-contemplation Stage moms are ...

- Significantly less likely than mothers in the other stages to feel they can make the transition to 1% low fat or fat free milk.

Note: There has been a shift in positive feelings of empowerment among Contemplation moms. Last year, agreement percentages for this group were closer to Pre-contemplation than Preparation moms. This year agreement percentages are closer to Preparation moms.

More educated moms (some college or more) are...

- Significantly more likely than less educated moms (HS diploma or less) to believe they can transition their family to 1% low fat or fat free milk.

**Table 37: Milk Stages of Change
by Key Self-Efficacy Statements**

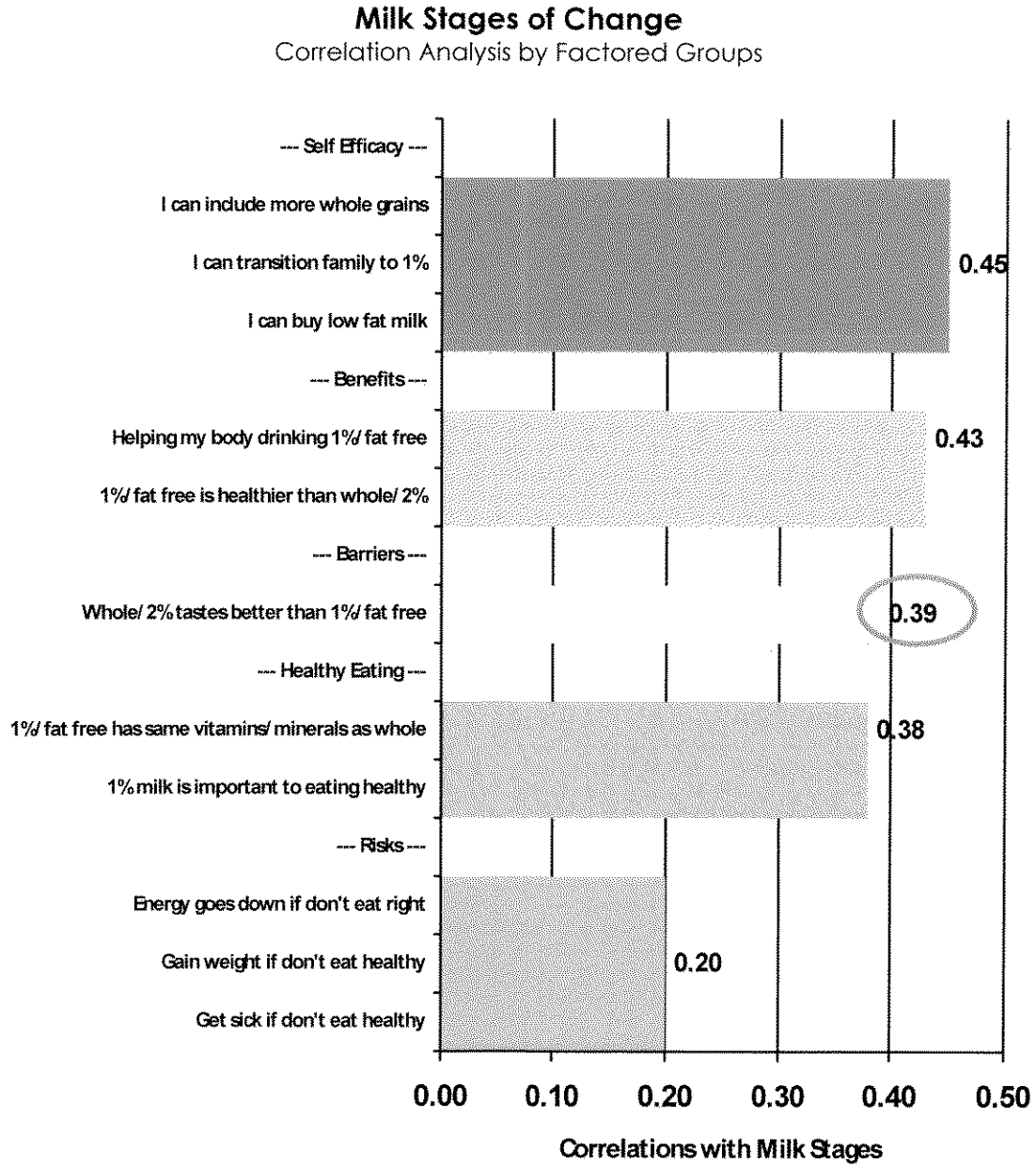
Summary of Agreement Statements (Strongly Agree/Agree)	Pre- contem- plation (n=246)	Contem- plation (n=91)	Prepar- ation (n=123)	Action (n=110)	Maintnce. (n=228)
Self-Efficacy					
I can buy low fat milk for my family.	<u>53%</u>	<u>72%</u>	<u>80%</u>	<u>84%</u>	94%
In the kitchen, I make the rules.	<u>63%</u>	<u>76%</u>	81%	88%	81%
I can transition my family to 1% low fat or fat free milk	<u>33%</u>	<u>74%</u>	<u>78%</u>	<u>75%</u>	87%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

3. Correlation Analysis

Key Finding: The self-efficacy and benefits statements had the strongest correlation with milk stages of change.



D. Serving Healthy Meals Stages of Change

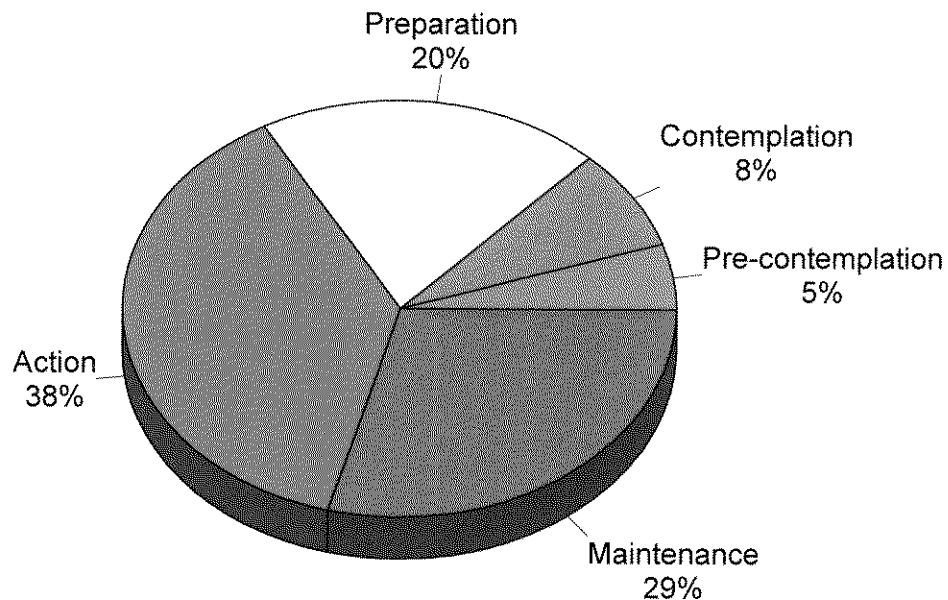
About four in ten (38%) moms say they are trying to serve more healthy meals to their families now, which means they are in the Action Stage. Approximately three in ten (29%) moms are in the Maintenance Stage, as they are already serving healthy meals to their families.

The remaining 30% are split as follows: 20% are in the Preparation Stage (definitely planning to serve more healthy meals next month), 8% are in the Contemplation Stage (thinking about serving more healthy meals in the next six months), and 5% fall into the Pre-contemplation Stage because they are not currently thinking about serving their families more healthy meals.

When looking at demographics and the five stages, the following differences occur:

- Moms who have had an exposure to college are significantly more likely to report being in the Maintenance Stage (already serving healthy meals to their families) than moms with a high school diploma or less.

Healthy Meals: Stages of Change



Tracking Comparison

There has been a decrease in the number of moms in the Maintenance Stage for the past two waves of interviewing (from 2008 to 2009 and from 2009 to 2010). Additionally, there is some decline in the number of Action Stage moms over the past year. As seen below, moms moving out of the Maintenance and Action Stages are moving into the Pre-contemplation/Contemplation/Preparation Stages as these groups have increased significantly since 2009.

Table 38: Healthy Meals Stages of Change
Tracking Comparison

	2008 Total (n=800)	2009 Total (n=795)	2010 Total (n=805)
I am not thinking about serving more healthy meals to my family	<u>3%</u>	<u>2%</u>	<u>5%</u>
I am thinking about serving more healthy meals to my family...planning to start within 6 months	<u>5%</u>	<u>5%</u>	<u>8%</u>
I am definitely planning to serve more healthy meals to my family in the next month	<u>9%</u>	<u>13%</u>	<u>20%</u>
I am trying to serve more healthy meals to my family now	39%	<u>44%</u>	<u>38%</u>
I am already serving healthy meals to my family	<u>44%</u>	<u>37%</u>	<u>29%</u>

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

1. *Serving Healthy Meals Stages of Change by Key Demographics*

- Moms who participate in the WIC program are significantly more likely to be in the Action and Maintenance Stages of the Healthy Meals continuum than they are to be in the earlier stages.
- Action Stage moms are more likely to be Hispanic while those in the Pre-contemplation/Contemplation/Preparation Stages are more likely to be non-Hispanic.

**Table 39: Serving Healthy Meals Stages of Change
by Key Demographics**

Demographics	Pre-contemp Contemp/Prep (n=258)	Action (n=310)	Maintnce. (n=232)
Participate in Food Assistance Program	80%	83%	81%
Food Stamps	97%	<u>92%</u>	<u>89%</u>
WIC	<u>30%</u>	44%	40%
Other	24%	28%	29%
Language primarily spoken at home			
English	71%	<u>57%</u>	<u>63%</u>
Spanish	<u>2%</u>	9%	9%
Both English and Spanish	25%	31%	26%
Other	2%	3%	2%
Ethnicity			
Hispanic	<u>46%</u>	58%	56%
Non-Hispanic	54%	<u>42%</u>	<u>44%</u>
Age			
18-25	34%	<u>25%</u>	32%
26-35	37%	42%	39%
36-45	21%	24%	20%
45-49	8%	9%	9%
Education			
<HS/GED completed	28%	25%	22%
High School	47%	40%	<u>40%</u>
Some college or more	<u>25%</u>	35%	38%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

2. *Serving Healthy Meals Stages of Change*

a. *Current Eating Habits*

Action Stage moms are ...

- Significantly less likely than those in the Maintenance Stage to describe their eating habits as very good or excellent or to *start their day with a healthy breakfast*.
- Significantly more likely than Pre-contemplation/Contemplation/Preparation Stage mothers to *start their day with a healthy breakfast*.
- Significantly more likely than those in the Maintenance Stage to *skip a meal because they don't have time to eat or to eat fast food for lunch*.

**Table 40: Serving Healthy Meals Stages of Change
by Key Current Eating Habits**

Summary of Agreement (Strongly Agree/Agree)	Pre-contemp Contemp/Prep (n=258)	Action (n=310)	Maintnce. (n=232)
Current Eating Habits			
How would you describe your eating habits? (Excellent /Very Good)	<u>18%</u>	<u>21%</u>	37%
I always start my day with a healthy breakfast.	<u>36%</u>	55%	82%
I sometimes skip meals because I don't have time to eat.	60%	65%	<u>44%</u>
I often eat fast food for lunch.	50%	40%	<u>18%</u>

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

b. Healthy Eating

Action Stage moms are...

- Significantly more likely than those in the Pre-contemplation/Contemplation/Preparation Stages to agree *drinking 1% low fat or fat free milk is an important part of healthy eating* and *eating a variety of fruits and vegetables is an important part of eating healthy*.

Hispanic moms who speak primarily Spanish are ...

- Significantly more likely than their English speaking counterparts to agree *eating a variety of fruits and vegetables is an important part of eating healthy*.

**Table 41: Serving Healthy Meals Stages of Change
by Key Healthy Eating Statements**

Summary of Agreement (Strongly Agree/Agree)	Pre-contemp Contemp/Prep (n=258)	Action (n=310)	Maintnce. (n=232)
Healthy Eating			
Fatty foods are OK to eat once in awhile.	59%	63%	60%
Drinking <u>1% low fat or fat free milk</u> is an important part of eating healthy.	<u>43%</u>	<u>64%</u>	73%
Eating a variety of fruits and vegetables is an important part of eating healthy.	<u>72%</u>	<u>97%</u>	100%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

c. *Perceived Benefits to Healthy Eating*

Action Stage moms are...

- Significantly more likely than those in the Pre-contemplation/Contemplation/Preparation Stages to agree with all of the benefits of healthy eating statements, but significantly less likely to agree with these statements than are those in the Maintenance Stage.

Moms who have some college education or more are...

- Significantly more likely to agree with the following statements: *Families that eat together eat healthy food and more balanced meals, Children who eat meals with their parents regularly, tend to eat more fruits and vegetables, and Children who do not eat dinner with their families are more likely to use alcohol, tobacco or illegal drugs.*

Table 42: Serving Healthy Meals Stages of Change by Key Perceived Benefits to Healthy Eating Statements

Summary of Agreement (Strongly Agree/Agree)	Pre-contemp Contemp/Prep (n=258)	Action (n=310)	Maintnce. (n=232)
Perceived Benefits to Healthy Eating			
Eating healthy food is helpful in preventing obesity.	<u>72%</u>	<u>93%</u>	97%
I make sure to provide healthy meals to my family.	<u>57%</u>	<u>94%</u>	99%
I make sure to provide healthy snacks to my family.	<u>52%</u>	<u>90%</u>	99%
Eating healthy food is helpful in preventing diabetes.	<u>71%</u>	<u>86%</u>	94%
Eating healthy food is helpful in preventing heart disease.	<u>73%</u>	<u>91%</u>	94%
Families that eat together eat healthier food and more balanced meals.	<u>61%</u>	<u>86%</u>	91%
Children who eat meals with their parents regularly, tend to eat more fruits and vegetables.	<u>59%</u>	88%	90%
It is cheaper to eat a healthy meal than to go to a fast food restaurant.	<u>43%</u>	67%	72%
Children who do not eat dinner with their families are more likely to use alcohol, tobacco, or illegal drugs.	<u>35%</u>	<u>50%</u>	62%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

d. Perceived Barriers to Healthy Eating

Action Stage moms are...

- Significantly less likely than those in the Pre-contemplation/Contemplation/Preparation Stages to agree that:
 - *Healthy food costs more than “junk” or fast food.*
 - *Sometimes I do not have the willpower to eat healthy.*
 - *I am too tired at the end of the day to prepare a healthy meal.*
 - *Meal Planning and shopping take too long.*
 - *My family is not in the habit of eating healthy food.*

- However, they are equally as likely as Pre-contemplation/Contemplation/Preparation moms to *run out of ideas and recipes for preparing healthy meals.*

Table 43: Serving Healthy Meals Stages of Change by Key Perceived Barriers to Healthy Eating Statements

Summary of Agreement (Strongly Agree/Agree)	Pre-contemp Contemp/Prep (n=258)	Action (n=310)	Maintnce. (n=232)
Perceived Barriers to Healthy Eating			
Sometimes it is easier to eat fast food or frozen pizza than to prepare a healthy meal.	56%	54%	<u>34%</u>
Healthy food costs more than “junk” or fast food.	42%	<u>25%</u>	<u>15%</u>
I often run out of ideas and recipes for preparing healthy meals.	47%	42%	<u>19%</u>
Sometimes I do not have the willpower to eat healthy.	48%	<u>31%</u>	<u>13%</u>
I am too tired at the end of the day to prepare a healthy meal.	39%	<u>25%</u>	<u>7%</u>
Meal planning and shopping takes too long.	37%	<u>15%</u>	<u>9%</u>
My family is not in the habit of eating healthy.	48%	<u>18%</u>	<u>6%</u>

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

e. *Perceived Risks of Not Eating Healthy*

- Action and Maintenance Stage moms are significantly more likely to agree *I am more likely to get sick if I don't eat healthy food* than those in the first three Stages.

**Table 44: Serving Healthy Meals Stages of Change
by Key Perceived Risks of Not Eating Healthy**

Summary of Agreement (Strongly Agree/Agree)	Pre-contemp Contemp/Prep (n=258)	Action (n=310)	Maintnce. (n=232)
Perceived Risks of Not Eating Healthy			
I am more likely to have high blood pressure or high cholesterol because someone in my family has this condition.	74%	80%	76%
I am more likely to get sick if I don't eat healthy food.	<u>46%</u>	68%	76%
I am more likely to get a serious disease such as cancer, heart disease, diabetes, or obesity because someone in my family has this disease.	75%	77%	78%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

f. Key Self-Efficacy Statements

Action Stage moms are...

- Significantly less likely than moms in the Maintenance Stage to feel empowered to make the rules in their kitchen and to feel confident that they can cook healthy meals for their families.
- Significantly more likely than moms in the Pre-Contemplation/Contemplation/Preparation Stages to feel empowered to plan meals or snacks with fruits during the week, to make the rules in the kitchen and to cook healthy meals for their families.

**Table 45: Serving Healthy Meals Stages of Change
by Key Self-Efficacy Statements**

Summary of Agreement with Self-efficacy Statements (Strongly Agree/Agree)	Pre-contemp Contemp/Prep (n=258)	Action (n=310)	Maintnce. (n=232)
Self-Efficacy			
I can plan meals or snacks with more fruits during the next week.	<u>82%</u>	91%	92%
In the kitchen, I make the rules.	<u>67%</u>	<u>78%</u>	84%
I am confident I can cook healthy meals for my family.	<u>81%</u>	<u>93%</u>	97%

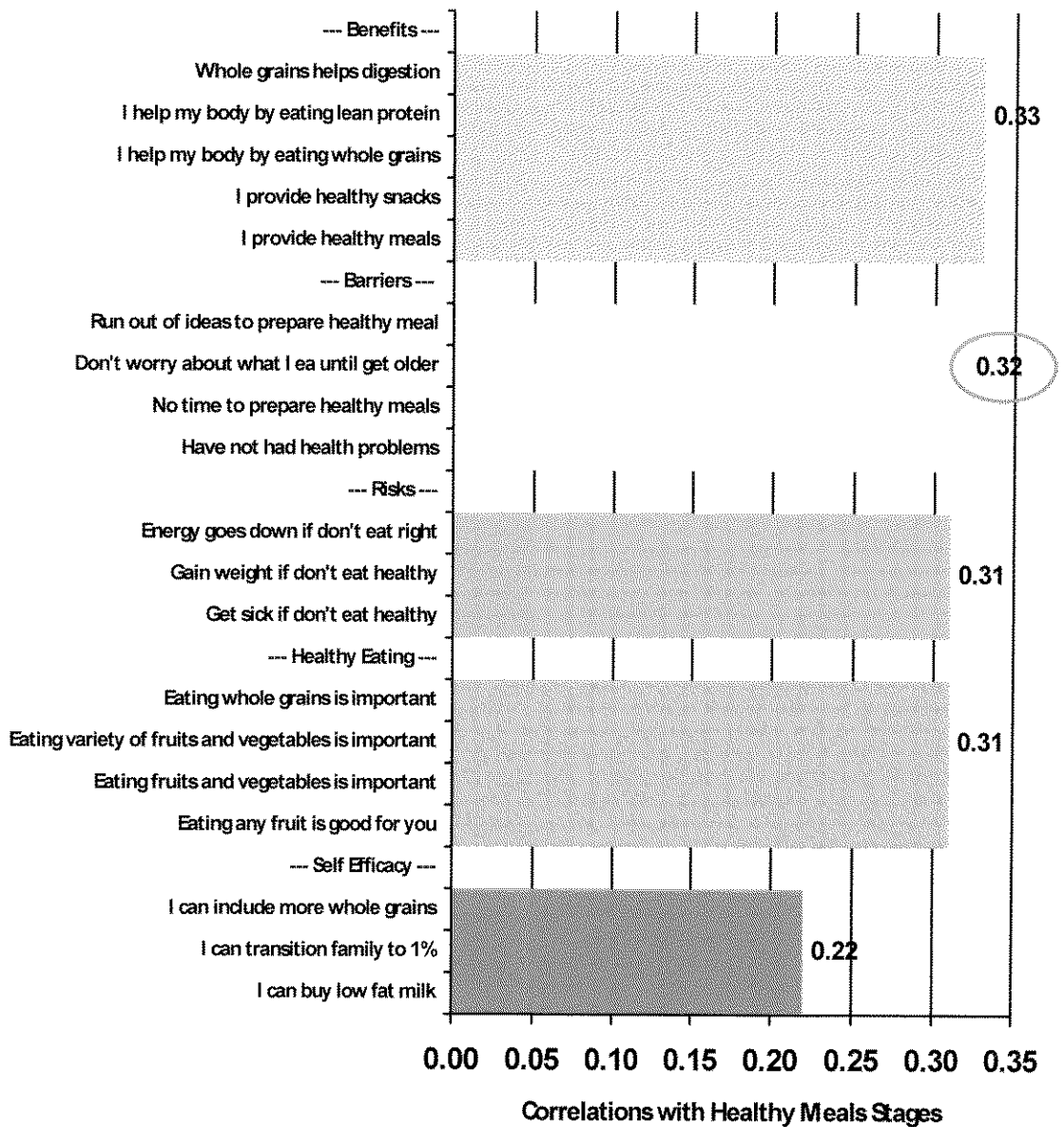
Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

3. Correlation Analysis

Key Finding: The benefits, barriers, risks and healthy eating statements had “equally strong” correlations with healthy meals stages of change.

Healthy Meals Stages of Change
Correlation Analysis by Factored Groups



E. Lean Proteins Stages of Change

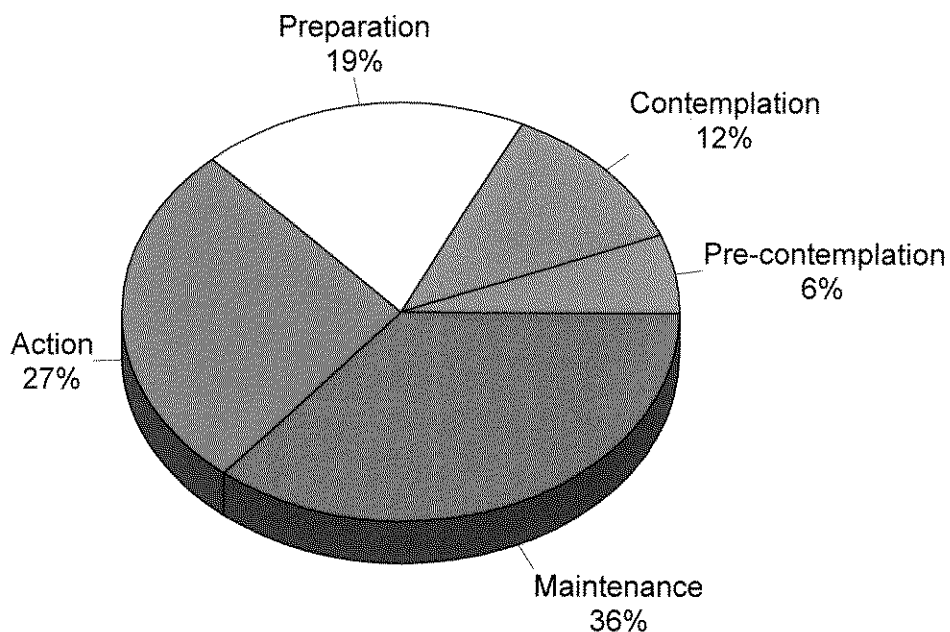
The largest portion of moms – 36% - report they are *already eating lean proteins*, placing them in the Maintenance Stage. About one-quarter - 27% - place themselves in the Action Stage by maintaining they are *trying to change to lean proteins now*.

The 37% who are not already or not currently trying to eat more lean proteins include 6% in the Pre-contemplation Stage, 12% in the Contemplation Stage, and 19% in the Preparation Stage.

The survey was revised this year to include questions regarding lean protein. Therefore, tracking data is not available. However, when comparing lean proteins to other categories, they are similar (in distribution along the continuum) to whole grains for all stages. More moms are in the lean protein Action and Maintenance Stages than are in these stages of the Milk Stages of Change. However, fewer are in the Action and Maintenance Stages for lean proteins than for veggies, the category in which there is the greatest number of Action and Maintenance Stage moms.

Moms who have had some college are significantly more likely to report being in the Maintenance Stage than moms with a high school diploma or less. Moms with some college or more also believe *they can help their bodies by eating lean proteins* and *they can transition their family to more lean proteins* significantly more than moms with no exposure to college.

Lean Proteins: Stages of Change



1. Lean Proteins Stages of Change by Key Demographics

- Action Stage moms are significantly more likely to speak Spanish and be Hispanic than Pre-contemplation/Contemplation/Preparation Stage moms.

**Table 46: Lean Proteins Stages of Change
by Key Demographics**

Demographics	Pre-contemp Contemp/Prep (n=299)	Action (n=217)	Maintnce. (n=281)
Participate in Food Assistance Program	78%	84%	83%
Food Stamps	95%	90%	93%
WIC	33%	42%	40%
Other	21%	29%	32%
Language primarily spoken at home			
English	70%	<u>46%</u>	69%
Spanish	<u>3%</u>	11%	8%
Both English and Spanish	<u>25%</u>	40%	<u>21%</u>
Other	2%	3%	2%
Ethnicity			
Hispanic	<u>47%</u>	64%	53%
Non-Hispanic	53%	<u>36%</u>	47%
Age			
18-25	33%	<u>23%</u>	32%
26-35	39%	40%	40%
36-45	<u>19%</u>	28%	<u>19%</u>
45-49	9%	9%	9%
Education			
<HS/GED completed	26%	29%	21%
High School	48%	40%	38%
Some college or more	26%	31%	41%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

2. *Lean Proteins Stages of Change*

a. *Key Current Eating Habits*

Action Stage moms are...

- Significantly less likely than Maintenance Stage moms to describe their eating habits as excellent/very good and significantly less likely to agree *they always choose lean or extra lean ground beef and start their day off with a healthy breakfast.*
- Significantly more likely to *choose lean or extra lean ground beef, remove the skin from the chicken before eating it, and always start their day with a healthy breakfast* than are Pre-contemplation/ Contemplation/Preparations Stage moms.

Hispanic moms who speak primarily Spanish are ...

- Significantly more likely than their English speaking counterparts to *always remove the skin from the chicken before eating it.*

**Table 47: Lean Proteins Stages of Change
by Key Current Eating Habits**

Summary of Agreement (Strongly Agree/Agree)	Pre-contemp Contemp/Prep (n=299)	Action (n=217)	Maintnce. (n=281)
Current Eating Habits			
How would you describe your eating habits? (Excellent /Very Good)	<u>17%</u>	<u>21%</u>	35%
I always choose lean or extra lean ground beef.	<u>36%</u>	68%	77%
I remove the skin from chicken before eating it.	<u>37%</u>	69%	72%
I always start my day with a healthy breakfast.	<u>40%</u>	60%	72%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

b. Healthy Eating

- Action Stage moms are significantly more likely than those in the Pre-contemplation/Contemplation/Preparation Stages to agree with all of the healthy eating statements relating to lean proteins, except *Fatty foods are OK to eat once in awhile*.

**Table 48: Lean Proteins Stages of Change
by Key Healthy Eating Statements**

Summary of Agreement (Strongly Agree/Agree)	Pre-contemp Contemp/Prep (n=299)	Action (n=217)	Maintnce. (n=281)
Healthy Eating			
Eating lean proteins (like lean beef, lean pork, chicken, fish, and beans) is an important part of eating healthy.	<u>66%</u>	90%	94%
White meat chicken and turkey is better for you than dark meat chicken and turkey.	<u>60%</u>	78%	81%
A handful of nuts makes a good snack.	<u>53%</u>	78%	81%
Fatty foods are OK to eat once in awhile.	60%	61%	61%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

c. *Perceived Benefits to Healthy Eating*

- Action and Maintenance Stage moms are significantly more likely to agree with all of the benefits to healthy eating statements than are moms in the Pre-Contemplation/Contemplation/Preparation Stages

Moms with some college education are ...

- Significantly more likely than moms with a high school education or less to agree *I am helping my body by eating lean proteins.*

Table 49: Lean Proteins Stages of Change
by Key Perceived Benefits to Healthy Eating Statements

Summary of Agreement (Strongly Agree/Agree)	Pre-contemp Contemp/Prep (n=299)	Action (n=217)	Maintnce. (n=281)
Perceived Benefits to Healthy Eating			
I am helping my body by eating lean proteins.	<u>59%</u>	86%	93%
Eating healthy food is helpful in preventing obesity.	<u>76%</u>	93%	95%
I make sure to provide healthy meals to my family.	<u>62%</u>	96%	97%
I make sure to provide healthy snacks to my family.	<u>56%</u>	95%	94%
Eating healthy food is helpful in preventing diabetes.	<u>73%</u>	87%	93%
Eating healthy food is helpful in preventing heart disease.	<u>76%</u>	90%	94%
Families that eat together eat healthier food and more balanced meals.	<u>64%</u>	88%	90%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

d. *Perceived Barriers to Healthy Eating*

- Action Stage moms are significantly less likely than moms in the Pre-contemplation/Contemplation/Preparation Stages to agree:
 - *Sometimes it is easier to eat fast food or frozen pizza than to prepare a healthy meal.*
 - *Healthy food costs more than “junk” or fast food.*
 - *Lean proteins don’t taste as good as other proteins.*

Moms with less than a high school diploma . . .

Are significantly more likely to agree that *lean proteins don’t taste as good as other proteins* than are moms with a higher level of education.

Table 50: Lean Proteins Stages of Change
by Key Perceived Barriers to Healthy Eating Statements

Summary of Agreement (Strongly Agree/Agree)	Pre-contemp Contemp/Prep (n=299)	Action (n=217)	Maintnce. (n=281)
Perceived Barriers to Healthy Eating			
Buying lean proteins and lean meats are more expensive than what I usually buy.	41%	42%	<u>27%</u>
Lean proteins (like lean beef, lean pork, poultry, and fish) don’t taste as good as other proteins.	23%	11%	<u>7%</u>
Sometimes it is easier to eat fast food or frozen pizza than to prepare a healthy meal.	55%	<u>46%</u>	<u>45%</u>
Healthy food costs more than “junk” or fast food.	37%	<u>22%</u>	<u>22%</u>
I often run out of ideas and recipes for preparing healthy meals.	44%	39%	<u>28%</u>

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

e. *Perceived Risks of Not Eating Healthy*

Action Stage moms are...

- Significantly more likely than Pre-contemplation/Contemplation/Preparation Stage moms to agree with all of the perceived risk statements.

**Table 51: Lean Proteins Stages of Change
by Key Perceived Risks of Not Eating Healthy**

Summary of Agreement (Strongly Agree/Agree)	Pre-contemp Contemp/Prep (n=299)	Action (n=217)	Maintnce. (n=281)
Perceived Risks of Not Eating Healthy			
I am more likely to have high blood pressure or high cholesterol because someone in my family has this condition.	<u>72%</u>	82%	78%
I am more likely to get sick if I don't eat healthy food.	<u>48%</u>	71%	74%
I am more likely to get a serious disease such as cancer, heart disease, diabetes, or obesity because someone in my family has this disease.	<u>72%</u>	80%	79%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

f. Key Self-Efficacy Statements

Pre-contemplation/Contemplation/Preparation moms are ...

- Significantly less likely than mothers in the Action and Maintenance Stages to feel empowered to make healthy changes; specifically, fewer believe they can:
 - *Transition their families to more lean proteins.*
 - *Plan meals or snacks with more fruits during the week.*
 - *Make the rules in the kitchen.*
 - *Cook healthy meals for their families.*

Moms with some college education are ...

- Significantly more likely than moms with a high school education or less to agree *they can transition their families to more lean proteins.*

**Table 52: Lean Proteins Stages of Change
by Key Self-Efficacy Statements**

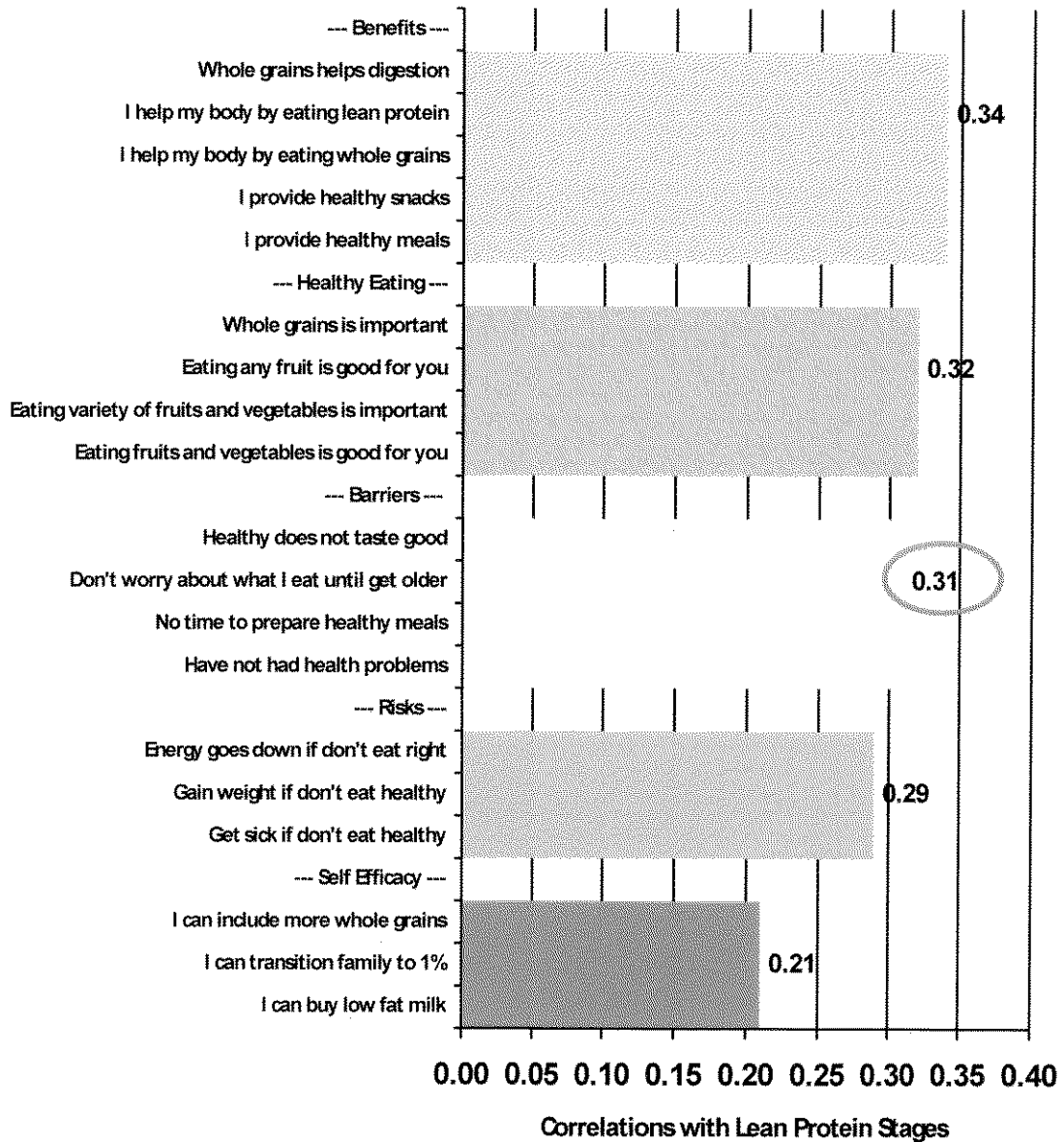
Summary of Agreement with Self-efficacy Statements (Strongly Agree/Agree)	Pre-contemp Contemp/Prep (n=299)	Action (n=217)	Maintnce. (n=281)
Self-Efficacy			
I can transition my family to more lean proteins.	<u>75%</u>	85%	89%
I can plan meals or snacks with more fruits during the next week.	<u>85%</u>	93%	89%
In the kitchen, I make the rules.	<u>66%</u>	81%	81%
I am confident I can cook healthy meals for my family.	<u>84%</u>	94%	95%

Bold denotes a significantly higher percentage than the underlined comparative group.
A percentage may be both in bold and underlined because there are three categories.

3. Correlation Analysis

Key Finding: The **benefits, healthy eating, barriers,** and **risks** approaches had “equally strong” correlations with lean protein stages of change.

Lean Protein Stages of Change
Correlation Analysis by Factored Groups



F. Whole Grains Stages of Change

The largest portion of moms – 31% - report they are *already eating whole grains*, placing them in the Maintenance Stage. About one-quarter - 27% - place themselves in the Action Stage by claiming they are *trying to eat more whole grains instead of my usual grains now*.

The remaining 42% include 9% in the Pre-contemplation Stage, 13% in the Contemplation Stage, and 20% in the Preparation Stage.

The survey was revised this year to include questions regarding whole grains. Therefore, tracking data is not available. However, when comparing whole grains to other categories, they are most similar to lean proteins for all stages. More moms are in the whole grains Action and Maintenance Stages than are in these stages of the Milk Stages of Change. However, fewer are in the Action and Maintenance Stages for whole grains than for veggies, the category in which there is the greatest number of Action and Maintenance Stage moms.

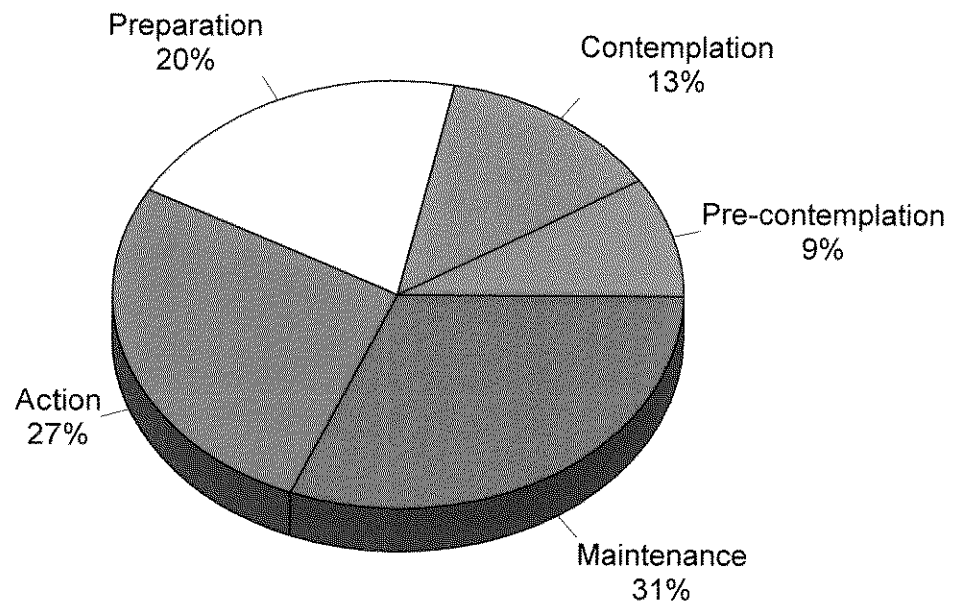
Hispanic Moms who speak Spanish primarily at home are...

- Significantly more likely than their English-speaking counterparts to be in the Maintenance Stage. Additionally, they are significantly more likely to *agree they like whole grain bread better than white bread, that eating whole grains is an important part of eating healthy, that eating whole grains helps improve digestion, and that they are helping their bodies by eating whole grains*. Lastly, they feel more empowered *to include whole grains in their eating habits*.

Moms with some college are ...

- Significantly more likely than moms with a high school education to report being in the Maintenance Stage. Additionally, they are significantly more likely to *agree they are helping their bodies by eating whole grains* and to feel empowered *to include more whole grains in their eating habits*.

Whole Grains: Stages of Change



1. Whole Grains Stages of Change by Key Demographics

- Moms who participate in the WIC program are significantly more likely to be in the Action and Maintenance Stages of the Whole Grains Stages of Change than they are to be in the earlier stages.
- Action and Maintenance Stage moms are more likely than those in the Pre-contemplation/Contemplation/Preparation Stages to speak Spanish at home.

**Table 53: Whole Grains Stages of Change
by Key Demographics**

Demographics	Pre-contemp Contemp/Prep (n=336)	Action (n=219)	Maintnce. (n=245)
Participate in Food Assistance Program	80%	84%	80%
Food Stamps	95%	91%	91%
WIC	<u>33%</u>	44%	41%
Other	<u>22%</u>	28%	32%
Language primarily spoken at home			
English	68%	<u>56%</u>	64%
Spanish	<u>2%</u>	11%	9%
Both English and Spanish	28%	32%	24%
Other	2%	1%	3%
Ethnicity			
Hispanic	<u>48%</u>	60%	55%
Non-Hispanic	52%	<u>40%</u>	<u>45%</u>
Age			
18-25	34%	<u>24%</u>	30%
26-35	36%	43%	41%
36-45	22%	26%	<u>17%</u>
45-49	<u>8%</u>	<u>7%</u>	12%
Education			
<HS/GED completed	30%	20%	24%
High School	44%	46%	36%
Some college or more	<u>26%</u>	34%	40%

Bold denotes a significantly higher percentage than the underlined comparative group. A percentage may be both in bold and underlined because there are three categories.

2. Whole Grains Stages of Change

a. Key Current Eating Habits

Action Stage moms are...

- Significantly less likely than their Maintenance Stage counterparts to *like whole grain bread better than white bread* and *always start their day with a healthy breakfast*.
- Agreement with the whole grain statement, *I like whole grain better than white bread*, increases significantly between stages.

Hispanic moms who speak primarily Spanish are ...

- Significantly more likely than their English-speaking counterparts to *like whole grain bread better than white bread*.

**Table 54: Whole Grains Stages of Change
by Key Current Eating Habits**

Summary of Agreement (Strongly Agree/Agree)	Pre-contemp Contemp/Prep (n=336)	Action (n=219)	Maintnce. (n=245)
Current Eating Habits			
How would you describe your eating habits? (Excellent /Very Good)	<u>17%</u>	26%	33%
I like whole grain bread better than white bread.	<u>40%</u>	<u>77%</u>	90%
I always start my day with a healthy breakfast.	<u>42%</u>	<u>61%</u>	74%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

b. Healthy Eating

Action and Maintenance Stage moms are significantly more likely than moms in the Pre-contemplation/Contemplation/Preparation Stages to agree with the statement *eating whole grains is an important part of eating healthy*.

Hispanic moms who speak primarily Spanish are ...

- Significantly more likely than their English-speaking counterparts to agree *eating whole grains is an important part of eating healthy*.

**Table 55: Whole Grains Stages of Change
by Key Healthy Eating Statements**

Summary of Agreement (Strongly Agree/Agree)	Pre-contemp Contemp/Prep (n=336)	Action (n=219)	Maintnce. (n=245)
Healthy Eating			
Eating whole grains is an important part of eating healthy.	<u>61%</u>	96%	97%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

c. *Perceived Benefits to Healthy Eating*

- Action and Maintenance Stage moms are significantly more likely than Pre-contemplation/Contemplation/Preparation moms to agree with all of the benefits to healthy eating statements.
- Two of the largest “gaps” in agreement among Action and Maintenance Stage moms and those in the Pre-contemplation/Contemplation/Preparation Stages include those specifically relating to whole grains: *eating whole grains helps improve digestion* and *I am helping my body by eating whole grains*.

Hispanic Moms who speak Spanish primarily at home are...

- Significantly more likely than their English-speaking counterparts to agree *eating whole grains helps improve digestion* and *I am helping my body by eating whole grains*.

Moms with some college are ...

- Significantly more likely than moms with a high school education to *agree they are helping their body be eating whole grains*.

Table 56: Whole Grains Stages of Change
by Key Perceived Benefits to Healthy Eating Statements

Summary of Agreement (Strongly Agree/Agree)	Pre-contemp Contemp/Prep (n=336)	Action (n=219)	Maintnce. (n=245)
Perceived Benefits to Healthy Eating			
Eating whole grains helps improve digestion.	<u>59%</u>	91%	92%
I am helping my body by eating whole grains.	<u>52%</u>	92%	95%
Eating healthy food is helpful in preventing obesity.	<u>78%</u>	94%	95%
I make sure to provide healthy meals to my family.	<u>66%</u>	95%	96%
I make sure to provide healthy snacks to my family.	<u>59%</u>	95%	96%
Eating healthy food is helpful in preventing diabetes.	<u>74%</u>	88%	93%
Eating healthy food is helpful in preventing heart disease.	<u>75%</u>	94%	93%
Families that eat together eat healthier food and more balanced meals.	<u>64%</u>	89%	93%

Bold denotes a significantly higher percentage than the underlined comparative group.
A percentage may be both in bold and underlined because there are more than two categories.

d. Perceived Barriers to Healthy Eating

- Pre-contemplation/Contemplation/Preparation Stage moms are significantly more likely than moms in the Action Stage to agree that:
 - *I'm confused on what whole grain really is.*
 - *Healthy food costs more than "junk" or fast food.*
 - *Sometimes I do not have the willpower to eat healthy.*
- The perception that whole grains are more expensive than what they usually buy decreases as moms move further along the continuum.

Moms without a high school diploma are...

Significantly more *confused on what whole grains are* than those with a high school diploma or some college exposure.

**Table 57: Whole Grains Stages of Change
by Key Perceived Barriers to Healthy Eating Statements**

Summary of Agreement (Strongly Agree/Agree)	Pre-contemp Contemp/Prep (n=336)	Action (n=219)	Maintnce. (n=245)
Perceived Barriers to Healthy Eating			
Buying whole grains are more expensive than what I usually buy.	35%	27%	<u>18%</u>
I'm confused on what whole grains really is.	20%	<u>10%</u>	<u>5%</u>
Sometimes it is easier to eat fast food or frozen pizza than to prepare a healthy meal.	56%	50%	<u>39%</u>
Healthy food costs more than "junk" or fast food.	35%	<u>25%</u>	<u>20%</u>
I often run out of ideas and recipes for preparing healthy meals.	45%	38%	<u>25%</u>

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

e. *Perceived Risks of Not Eating Healthy*

- Action Stage moms are significantly more likely to agree with the statements - *I am more likely to get sick if I don't eat healthy food and I am more likely to have high blood pressure or high cholesterol because someone in my family has this condition* than moms in the lower three stages.

**Table 58: Whole Grains Stages of Change
by Key Perceived Risks of Not Eating Healthy**

Summary of Agreement (Strongly Agree/Agree)	Pre-contemp Contemp/Prep (n=336)	Action (n=219)	Maintnce. (n=245)
Perceived Risks of Not Eating Healthy			
I am more likely to have high blood pressure or high cholesterol because someone in my family has this condition.	<u>73%</u>	82%	77%
I am more likely to get sick if I don't eat healthy food.	<u>52%</u>	70%	73%
I am more likely to get a serious disease such as cancer, heart disease, diabetes, or obesity because someone in my family has this disease.	74%	78%	80%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than two categories.

*f. Key Self-Efficacy Statements**Pre-contemplation/Contemplation/Preparation Stage moms are ...*

- Significantly less likely than mothers in the Action and Maintenance Stages to feel empowered to make healthy changes, specifically, fewer believe they can:
 - *Include more whole grains in their eating habits*
 - *Plan meals or snacks with more fruits during the week*
 - *Make the rules in the kitchen*
 - *Cook healthy meals for their families*

Hispanic Moms who speak Spanish primarily at home are...

- Significantly more likely than their English-speaking and bilingual counterparts to agree *they can include whole grains in their eating habits.*

**Table 59: Whole Grains Stages of Change
by Key Self-Efficacy Statements**

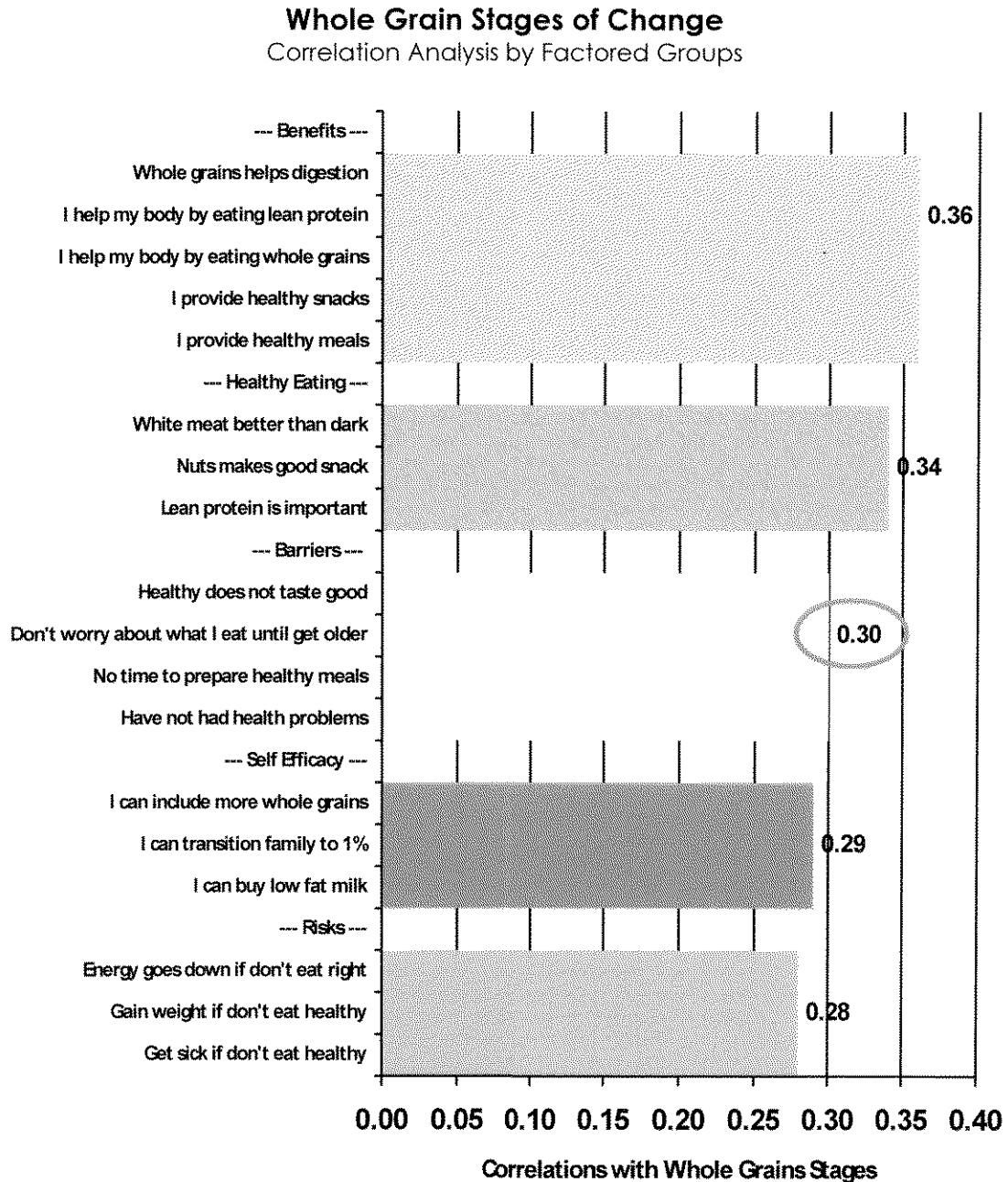
Summary of Agreement with Self-efficacy Statements (Strongly Agree/Agree)	Pre-contemp Contemp/Prep (n=336)	Action (n=219)	Maintnce. (n=245)
Self-Efficacy			
I can include more whole grains in my eating habits.	<u>69%</u>	91%	93%
I can plan meals or snacks with more fruits during the next week.	<u>84%</u>	93%	91%
In the kitchen, I make the rules.	<u>67%</u>	83%	82%
I am confident I can cook healthy meals for my family	<u>84%</u>	95%	95%

Bold denotes a significantly higher percentage than the underlined comparative group.

A percentage may be both in bold and underlined because there are more than three categories.

3. Correlation Analysis

Key Finding: The **benefits** and **healthy eating** statements had the strongest correlations with whole grain stages of change.



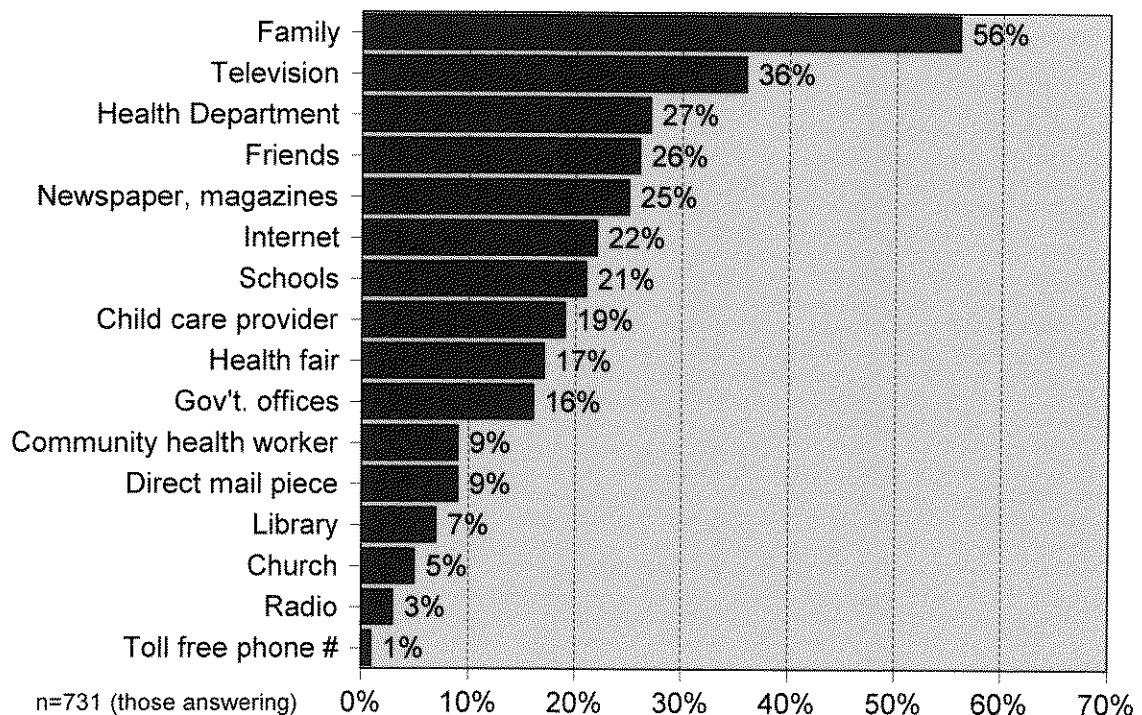
VI. Additional Respondent Information

A. Best Sources for Health and Nutrition Information

When asked to name the three best sources of health and nutrition information, moms gave a wide variety of responses. Overall, the most frequently cited information source was family (56%), followed by television (36%). Health Department, friends, and newspapers/magazines round out the top five “best sources” of information with approximately one in four citing these sources (27%, 26% and 25%, respectively).

Best Sources of Information

What are the 3 best sources for health and nutrition information?

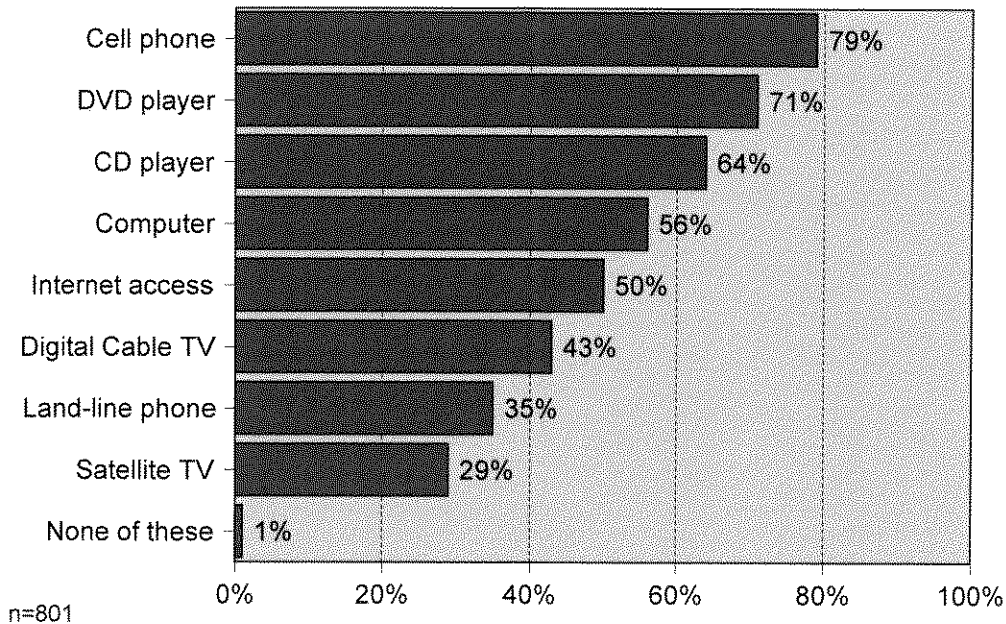


B. Technology in the Home

Cell phones and DVD players are the two technology items moms indicate they are most likely to have in their home (affirmed by 79% and 71%, respectively). A majority also report having a CD player (64%) and computer (56%) at home. One half of moms report having home Internet access. Less than one-half report subscribing to digital cable TV or having landline phone service. Fewer than three in ten (29%) have satellite TV.

Technology in the Home

Which of these do you have in your home?

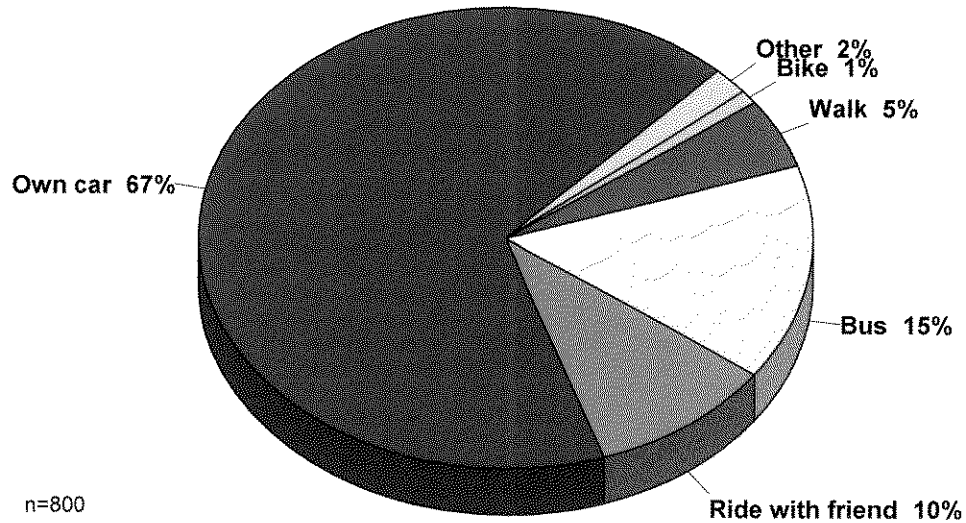


C. Getting from Place to Place

Two-thirds of mothers (67%) say they get to and from places by using their own car. Fewer report using the bus (15%) or riding with a friend (10%) in order to get to their destinations.

Getting From Place to Place

How do you usually get to and from places?

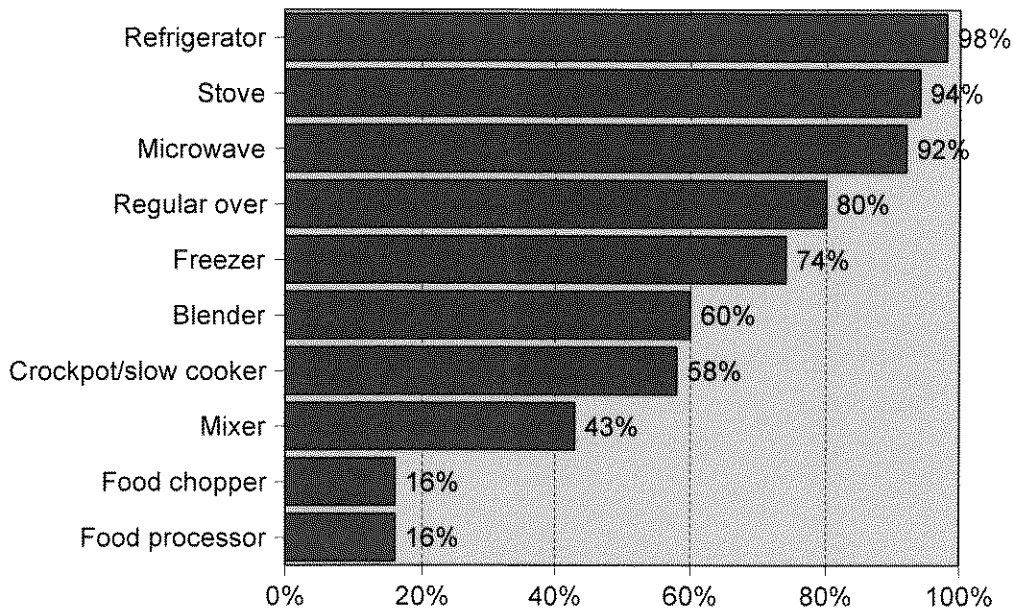


D. Kitchen Appliances in Home

Virtually all mothers (98%) indicate they currently have a refrigerator in their home. Stoves and microwave ovens are also almost universal (94% and 92%). Food choppers and processors are the two appliances least likely to be in homes (each owned by 16%).

Kitchen Appliances in Home

Which of these do you have in your kitchen?



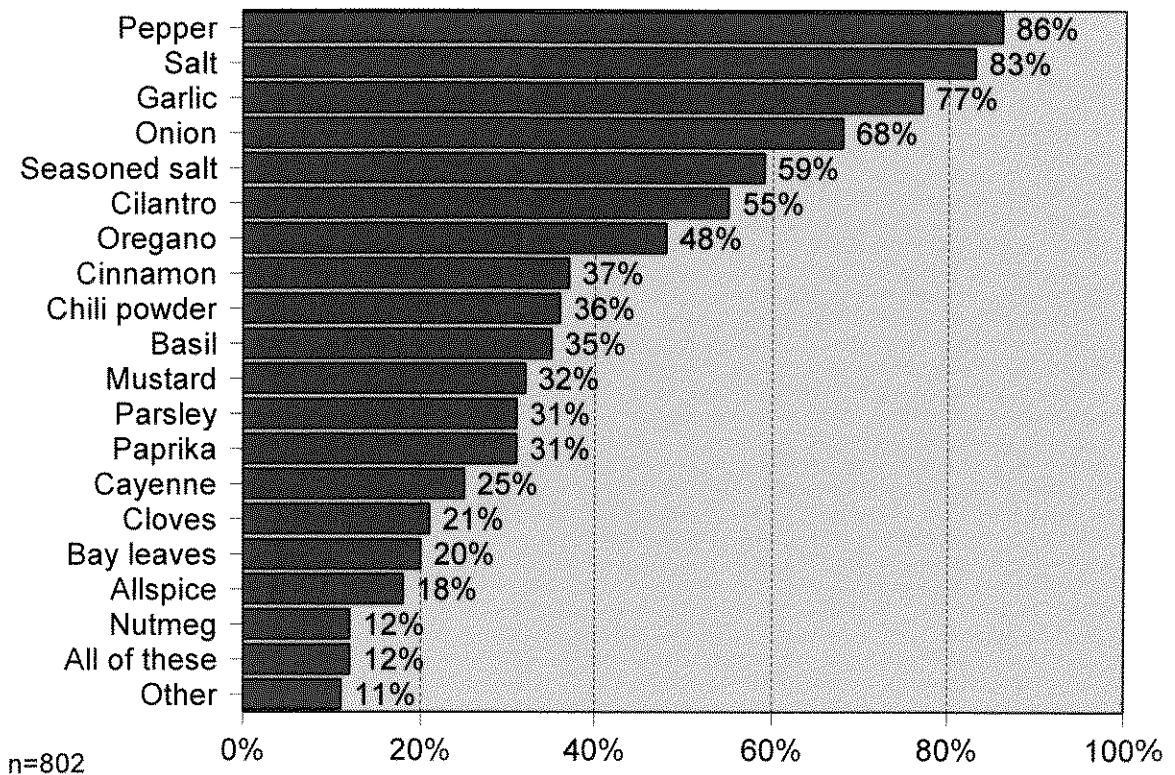
n=802

E. Spices Used in Preparing Foods

Outside of pepper (86% use) and salt (83% use), the top spices used to prepare foods in the home include garlic (77%), onion (68%), seasoned salt (59%) and cilantro (55%). No other spice is used by more than half of mothers, however one in ten (12%) say they use “all of them.”

Spices

What spices do you use when preparing food?



Appendix C
Building Better Bones
Program Evaluation



Arizona Building Better Bones Program Evaluation

2009-2010

Prepared by
Carmon Greene
Epidemiologist

October 2010

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Table of Contents

Executive Summary3

Introduction.....4

Methods.....5

Results5

Arizona.....5

Coconino County.....10

Maricopa County15

Mohave County20

Navajo County.....25

Yuma County30

Washington Elementary School District.....35

Conclusions.....40

Appendix A – Pre- and Post-Survey

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Executive Summary

- The overall goal of the Building Better Bones Program (BBB) is to increase awareness of osteoporosis as a preventable disease by practicing healthy lifestyles including consuming a healthy diet high in calcium and engaging in regular weight bearing physical activity.
- During the 2009-2010 school year, an estimated 4,686 students participated in the BBB Program
 - There was a 6.7% decrease in participation from the 2008-2009 school year.
 - The majority (87.3%) of participating schools were considered low income.
 - Most (97.5%) students were in fifth grade.
- All knowledge-related questions assessed in the tests showed a statistically significant increase between the pre and post tests.
 - Three of the nine questions showed a vast improvement between pre- and post-test:
 - Students were 30.3 times more likely to correctly answer the question “What percent Daily Value for calcium do students your age need?”
 - Students were 13.7 times more likely to correctly answer the question “Which activity does not build better bones?”
 - Students were 12.6 times more likely to correctly answer the question “What is osteoporosis?”
- Both of the behavior-related questions assessed in the tests showed a statistically significant increase between the pre and post tests.
 - Dairy Consumption
 - Almost half (45.0%) of students reported consuming three or more servings from the milk group the previous day on the post-test.
 - Students were 2.3 times more likely to have reported consuming three or more servings from the milk group on the previous day after completion of the BBB Program.
 - Two-thirds (68.3%) of students reported that they drank or ate more calcium foods after the BBB Program.
 - Physical Activity
 - Over one-third (36.6%) of students reported on the pre-test that they participated in 60 minutes or more of physical activity on the previous day on the pre-test, increasing to over half (55.6%) after completion of the BBB Program.
 - Students were 2.2 times more likely to have reported participating in 60 or more minutes of physical activity on the previous day after completion of the BBB Program.
 - Over three-quarters (78.6%) of students reported that the BBB Program has helped them become more physically active.

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Introduction

Building strong bones during adolescence and early adulthood is a key defense against the development of osteoporosis in later life. The overall goal of the Building Better Bones Program (BBB) is to increase awareness of osteoporosis as a preventable disease by practicing healthy lifestyles including consuming a healthy diet high in calcium and engaging in regular weight bearing physical activity.

Program Objectives

The BBB Program includes three interactive classroom lessons:

- Class 1: Identify appropriate dietary guidelines for maintenance of health.
- Class 2: Identify adequate amounts and sources of calcium.
- Class 3: Engage in daily weight bearing physical activity.

Arizona Nutrition Network Local Incentive Awards Projects were selected to develop and implement the three-class curriculum for the BBB Program. The BBB Program curriculum focuses on those behaviors that help to build and maintain bone mass.

This set of three classes is designed to deliver the osteoporosis prevention messages through interactive, age-appropriate methods. While some information is delivered through mini-lectures, other methods may include educational games, puzzles, word search, videos, and portable exhibits.

Upon completion of the curriculum the students will be able to:

1. Define osteoporosis.
2. Recognize 130% Daily Value as the goal for calcium intake.
3. Identify the Percent Daily Value for calcium on the Nutrition Facts Label.
4. Identify the number of daily servings to meet calcium needs.
5. Identify foods that contain calcium.
6. Identify the most important years for building denser, stronger bones.
7. Plan a meal that provides at least 40% Daily Value for calcium.
8. Recognize weight bearing and lifting activities as those that help build and preserve bone.
9. Participate in at least four activities that strengthen bone.
10. Prepare and keep a physical activity log for at least one week.
11. Identify the recommendation for physical activity: accumulate 60 minutes or more of physical activity at least five days per week, preferably every day of the week.
12. Evaluate the amount of calcium in a chosen meal.

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Methods

Each child who participated in the BBB Program was given a pre-test prior to the first session, and a post-test after completion of the third session. Pre-tests and post-tests were not matched as no identifying information regarding the respondent was collected on the test. The tests contain nine knowledge-related questions and two behavioral questions. The post-test contains two additional behavioral questions to assess if behaviors have changed after completion of the BBB Program. Odds ratios were calculated for each question in order to determine if there was a statistically significant increase in knowledge from pre-test to post-test. The odds ratios can be interpreted as the student was x times more likely to answer the question correctly on the post-test after attending the BBB lessons. Odds ratios less than one indicate that a student was less likely to have answered correctly on the post-test. For the purposes of this document, when discussing changes from pre- to post-test using odds ratios, a vast improvement is defined as an odds ratio of 10.0 or greater, and a large improvement is defined as an odds ratio of 5.0 or greater. P-values based on the odds ratios were calculated and were considered statistically significant at the <0.05 level. All tests were submitted to the Arizona Nutrition Network in the Bureau of USDA Nutrition Programs at the Arizona Department of Health Services. The tests were entered into Microsoft Access and analyzed using SAS 9.2.

Results

Table 1. Characteristics of Arizona Students Participating in the Building Better Bones Program, 2009-2010		
Characteristic	Number of Students	Percent of Total
Test		
Pre-tests	4,713	50.3
Post-tests	4,658	49.7
Participating Schools		
	71	
Income		
Schools with more than 50% of students receiving a free or reduced lunch	71	100
Grade*		
4 th grade	83	1.8
5 th grade	4,593	97.5
6 th grade	30	0.6
Undefined	7	0.1
Gender*		
Boy	2,369	50.3
Girl	2,336	49.6
Undefined	8	0.1
Total Pre-/Post-tests Received	9,371	

*Descriptive statistics are based on the highest number of students who took the pre- or post-test.

During the 2009-2010 school year, 9,371 pre and post tests were completed. This breaks down to 4,713 pre-tests and 4,658 post-tests. An estimated 4,686 students participated in the Building Better Bones lessons, reaching approximately 335 less students than the 2008-2009 school year. This translates into a 6.7% decrease in participation.**

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

The majority (87.3%) of participating schools had at least 50% of students receiving a free or reduced lunch through the National School Lunch Program. Most (97.5%) students were in fifth grade, but the curriculum was also provided to some fourth through sixth graders (2.4%)

**Pre and Post-tests submitted after the conclusion of the data analysis were not included. Please interpret the participation percentage with caution.

Knowledge

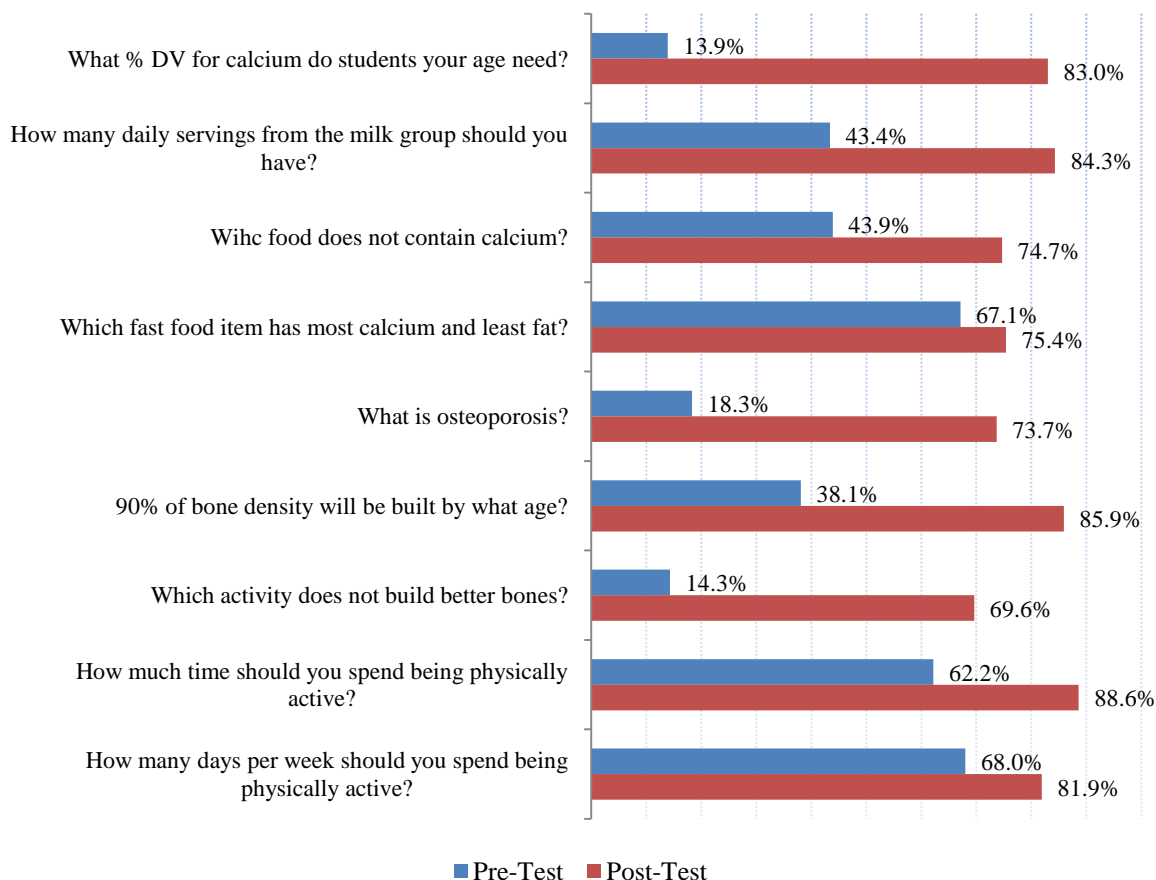
As Table 2 shows, all knowledge questions assessed in the tests showed a statistically significant increase between the pre and post tests. Three questions showed a vast improvement from pre- to post-test. Students were 30.3 times more likely to correctly answer the question “What percent Daily Value for calcium do students your age need?”, were 13.7 times more likely to correctly answer the question “Which activity does not build better bones?”, students were 12.6 times more likely to correctly answer the question “What is osteoporosis?” after completion of the BBB Program.

Table 2. Arizona Students’ Knowledge Before and After Participating in the Building Better Bones Program, 2009-2010						
Question	Answered Correctly/Affirmatively				Odds Ratio	P-value
	Pre-test n= 4,713 %		Post-test n=4,658 %			
What % DV for calcium do students your age need? (130%)	654	13.9	3,867	83.0	30.3	<0.0001
How many daily servings from the milk group should you have? (3 or more)	2,045	43.4	3,926	84.3	7.0	<0.0001
Which food does not contain calcium? (Chicken)	2,070	43.9	3,477	74.7	3.8	<0.0001
Which fast food item has most calcium and least fat? (Low fat chocolate milk)	3,160	67.1	3,510	75.4	1.5	<0.0001
What is osteoporosis? (Porous bones)	860	18.3	3,434	73.7	12.6	<0.0001
90% of bone density will be built by what age? (18 years)	1,797	38.1	3,999	85.9	9.8	<0.0001
Which activity does not build better bones? (Swimming)	673	14.3	3,242	69.6	13.7	<0.0001
How much time should you spend being physically active? (60 minutes or more)	2,930	62.2	4,129	88.6	4.8	<0.0001
How many days per week should you spend being physically active? (All or most days of the week)	3,204	68.0	3,816	81.9	2.1	<0.0001

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Figure 1 shows the percentage of students who correctly answered the knowledge questions from pre- to post-test. As the Figure demonstrates, the percentage of students who correctly answered each question increased from pre- to post-test.

Figure 1. Percentage of Students Who Answered Knowledge Questions Correctly From Pre to Post Test, Arizona BBB 2009-2010



Behavior

As Table 3 shows, all behavioral questions assessed showed a statistically significant increase between the pre and post tests.

Dairy Consumption

Just over one-quarter (26.0%) of students reported on the pre-test that they consumed three or more servings of milk products on the previous day, increasing to under half (45.0%) after completion of the BBB Program. Furthermore, students were 2.3 times more likely to have reported that they consumed the recommended amount of milk products after completion of the BBB Program. Although under half of students reported consuming three or more servings of dairy products the previous day on the post-test, over two-thirds (68.3%) reported that they drank or ate more calcium foods after the BBB Program.

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Physical Activity

The physical activity question has two answers that meet or exceed the minimum recommendations for physical activity: “60 minutes or more” and “2 hours or more”. Just over one-third (36.6%) of students reported on the pre-test that they participated in 60 minutes or more of physical activity on the previous day on the pre-test. This increased to over half (55.6%) after completion of the BBB Program. Furthermore, students were 2.2 times more likely to have reported participating in 60 minutes or more of physical activity on the previous day. When combining the students who answered that they participated in physical activity for “60 minutes or more” with those who answered “2 hours or more” on the previous day, over two-thirds (67.6%) of students reported on the pre-test that they participated in adequate physical activity, increasing to 79.5 percent after completion of the BBB Program. Furthermore, students were 1.9 times more likely to have participated in 60 minutes or more, or two hours or more of physical activity after completion of the BBB Program. Over three-quarters (78.6%) of students reported that the BBB Program has helped them become more physically active.

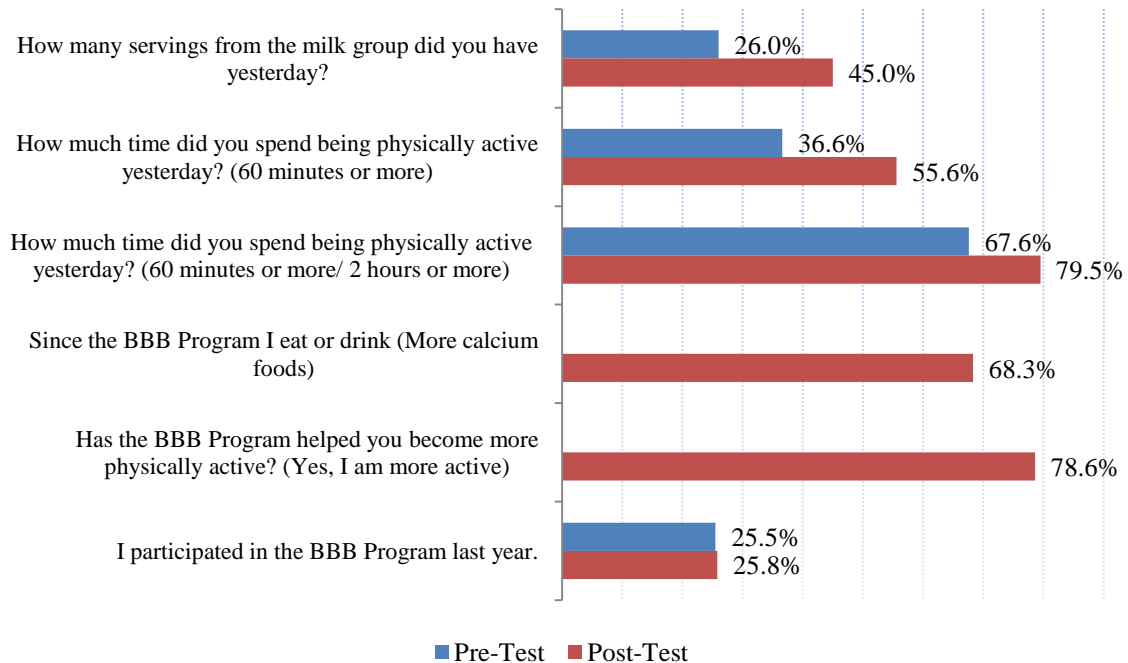
Table 3. Arizona Students’ Behavior Before and After Participating in the Building Better Bones Program, 2009-2010

Question	Answered Correctly/Affirmatively				Odds Ratio	P-value
	Pre-test n= 4,713 %		Post-test n=4,658 %			
How many servings from the milk group did you have yesterday? (3 or more)	1,224	26.0	2,096	45.0	2.3	<0.0001
How much time did you spend being physically active yesterday? (60 minutes or more)	1,727	36.6	2,590	55.6	2.2	<0.0001
How much time did you spend being physically active yesterday? (60 minutes or more / 2 hours or more)	3,187	67.6	3,701	79.5	1.9	<0.0001
Since the BBB Program I eat or drink: (More calcium foods)			3,133	68.3		
Has the BBB Program helped you become more physically active? (Yes, I am more active)			3,605	78.6		
Did you attend the BBB Program last year? (Yes)	1,187	25.5	1,192	25.8		

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Figure 2 shows the percentage of students who reported meeting the recommendations for dairy consumption and physical activity from pre- to post-test. As the Figure demonstrates, the percentage of students who answered each question appropriately increased from pre- to post-test. The questions “Since the BBB Program I eat or drink:” and “Has the BBB Program helped you become more physically active?” were only asked on the post-test.

Figure 2. Behavioral Change of Students from Pre to Post Test, Arizona BBB 2009-2010



Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Coconino County

Table 4. Characteristics of Coconino County Students Participating in the Building Better Bones Program, 2009-2010		
Characteristic	Number of Students	Percent of Total
Test		
Pre-tests	401	48.3
Post-tests	429	51.7
Participating Schools		
	8	
Income		
Schools with more than 50% of students receiving a free or reduced lunch	4	50.0
Grade*		
4 th grade	3	0.7
5 th grade	417	97.2
6 th grade	6	1.4
Undefined	2	0.7
Gender*		
Boy	197	46.6
Girl	226	53.4
Total Pre-/Post-tests Received	830	

*Descriptive statistics are based on the highest number of students who took the pre- or post-test.

During the 2009-2010 school year, 830 pre and post tests were completed in Coconino County. This breaks down to 401 pre-tests and 429 post-tests. An estimated 415 students participated in the Building Better Bones lessons, reaching approximately 167 less students than the 2008-2009 school year. This translates into a 28.7% decrease in participation. Half of the participating schools had at least 50% of students receiving a free or reduced lunch through the National School Lunch Program. Most (97.2%) students were in fifth grade, but the curriculum was also provided to some fourth and sixth graders (0.7% and 1.4%) respectively).

Knowledge

As Table 5 shows, all but one knowledge question assessed showed a statistically significant increase between the pre and post tests, and three questions showed a vast improvement between pre- and post-test. Students were 38.0 times more likely to correctly answer the question “What percent Daily Value for calcium do students your age need?”, were 18.2 times more likely to correctly answer the question “90% of bone density will be built by what age?” and were 16.2 times more likely to correctly answer the question “Which activity does not build better bones?” after completion of the BBB Program.

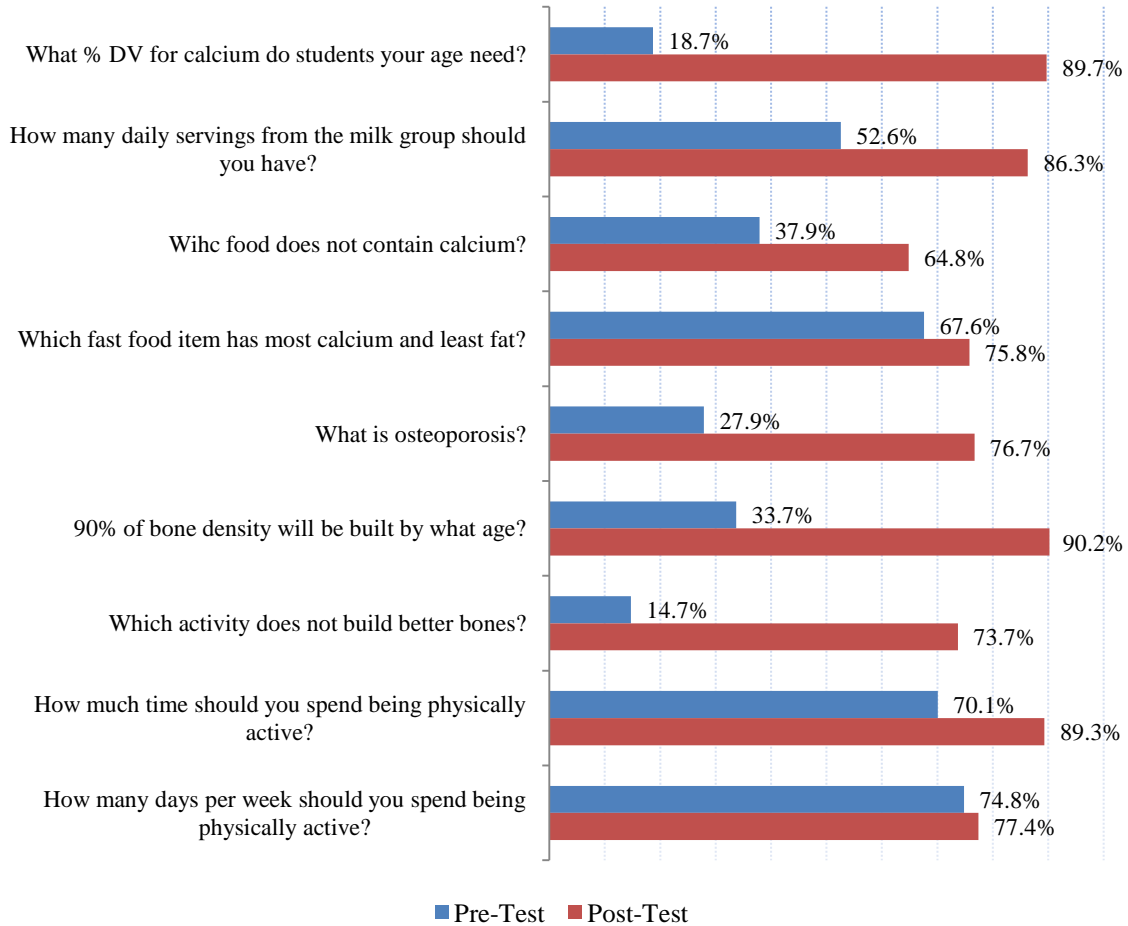
Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Question	Answered Correctly/Affirmatively				Odds Ratio	P-value
	Pre-test n=401		Post-test n=429			
	n	%	n	%		
What % DV for calcium do students your age need? (130%)	75	18.7	385	89.7	38.0	<0.0001
How many daily servings from the milk group should you have? (3 or more)	211	52.6	370	86.3	5.6	<0.0001
Which food does not contain calcium? (Chicken)	152	37.9	278	64.8	3.0	<0.0001
Which fast food item has most calcium and least fat? (Low fat chocolate milk)	271	67.6	325	75.8	1.5	0.0044
What is osteoporosis? (Porous bones)	112	27.9	329	76.7	8.5	<0.0001
90% of bone density will be built by what age? (18 years)	135	33.7	387	90.2	18.2	<0.0001
Which activity does not build better bones? (Swimming)	59	14.7	316	73.7	16.2	<0.0001
How much time should you spend being physically active? (60 minutes or more)	281	70.1	383	89.3	3.6	<0.0001
How many days per week should you spend being physically active? (All or most days of the week)	300	74.8	332	77.4	1.2	0.1921

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Figure 3 shows the percentage of students who correctly answered the knowledge questions from pre- to post-test. As the Figure demonstrates, the percentage of students who correctly answered each question increased from pre- to post-test.

Figure 3. Percentage of Students Who Answered Knowledge Questions Correctly From Pre to Post Test, Coconino County BBB 2009-2010



Behavior

As Table 6 shows, all of the behavioral questions assessed showed a statistically significant increase between the pre and post tests.

Dairy Consumption

Over one-quarter (28.4%) of students reported on the pre-test that they consumed three or more servings of milk products on the previous day, increasing to under half (46.2%) after completing the BBB Program. Furthermore, students were 2.2 times more likely to have consumed the recommended amount of milk products after completion of the BBB Program. Although under half (46.2%) of students reported on the post-test that they consumed three or more servings of dairy products on the previous day, over two-thirds (68.3%) of students reported that they drank or ate more calcium foods after the BBB Program.

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Physical Activity

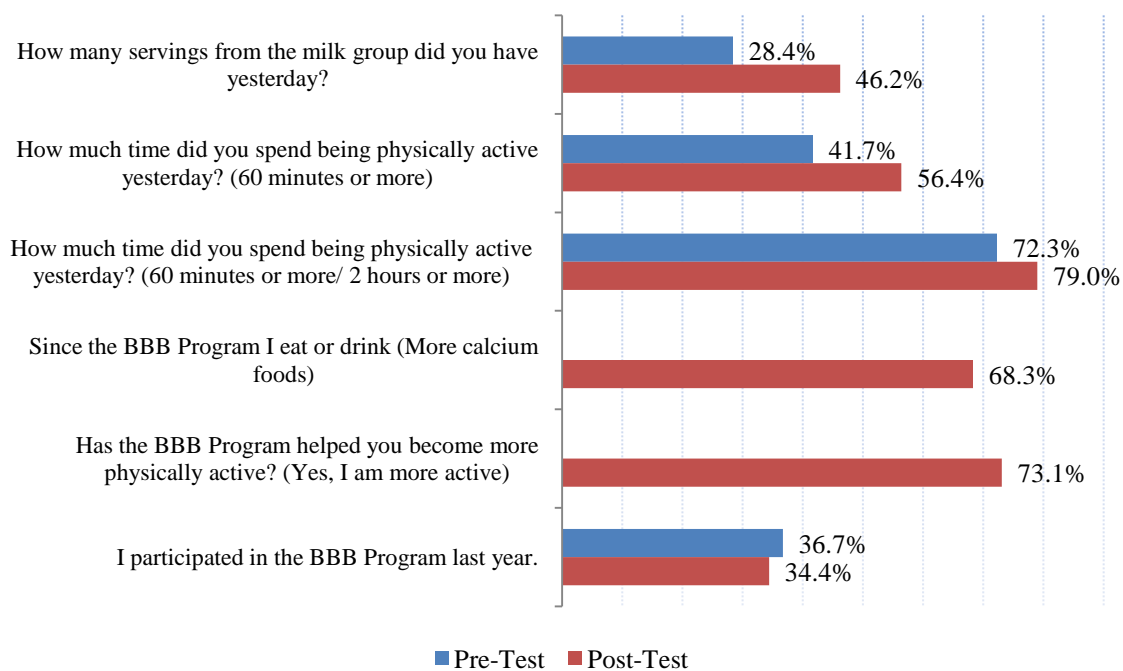
The physical activity question has two answers that meet or exceed the minimum recommendations for physical activity: “60 minutes or more” and “2 hours or more”. Over one-third (41.7%) of students reported on the pre-test that they participated in 60 minutes or more of physical activity on the previous day. This increased to over half (56.4%) after completing the BBB Program. Furthermore, students were 1.8 times more likely to have reported participating in 60 minutes or more of physical activity on the previous day. When combining the students who answered that they participated in physical activity for “60 minutes or more” with those who answered “2 hours or more” on the previous day, almost three-quarters (72.3%) of students reported on the pre-test that they participated in adequate physical activity at pre-test, increasing to 79.0 percent after completion of the BBB Program. Furthermore, students were 1.4 times more likely to have participated in 60 minutes or more, or two hours or more of physical activity after completion of the BBB Program. Additionally, over three-quarters (73.1%) of students reported that the BBB Program has helped them become more physically active.

Table 6. Coconino County Students’ Behavior Before and After Participating in the Building Better Bones Program, 2009-2010						
Question	Answered Correctly/Affirmatively				Odds Ratio	P-value
	Pre-test n=401		Post-test n=429			
	n	%	n	%		
How many servings from the milk group did you have yesterday? (3 or more)	114	28.4	198	46.2	2.2	<0.0001
How much time did you spend being physically active yesterday? (60 minutes or more)	167	41.7	242	56.4	1.8	0.00001
How much time did you spend being physically active yesterday? (60 minutes or more / 2 hours or more)	290	72.3	339	79.0	1.4	0.0122
Since the BBB Program I eat or drink: (More calcium foods)			287	68.3		
Has the BBB Program helped you become more physically active? (Yes, I am more active)			310	73.1		
Did you attend the BBB Program last year? (Yes)	146	36.7	146	34.4		

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Figure 4 shows the percentage of students who reported meeting the recommendations for dairy consumption and physical activity questions from pre- to post-test. As the Figure demonstrates, the percentage of students who answered each question appropriately increased from pre- to post-test. The questions “Since the BBB Program I eat or drink:” and “Has the BBB Program helped you become more physically active?” were only asked on the post-test.

Figure 4. Behavioral Change of Students from Pre to Post Test, Coconino County BBB 2009-2010



Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Maricopa County

Table 7. Characteristics of Maricopa County Students Participating in the Building Better Bones Program, 2009-2010		
Characteristic	Number of Students	Percent of Total
Test		
Pre-tests	256	51.2
Post-tests	244	48.8
Participating Schools	5	
Income		
Schools with more than 50% of students receiving a free or reduced lunch	5	100
Grade*		
4 th grade	9	3.5
5 th grade	245	95.7
6 th grade	1	0.4
Undefined	1	0.4
Gender*		
Boy	147	57.4
Girl	109	42.6
Total Pre-/Post-tests Received	500	

*Descriptive statistics are based on the highest number of students who took the pre- or post-test.

During the 2009-2010 school year, 500 pre and post tests were completed in Maricopa County. This breaks down to 256 pre-tests and 244 post-tests. An estimated 250 students participated in the Building Better Bones lessons, reaching approximately 49 less students than the 2008-2009 school year. This translates into a 16.4% decrease in participation. All participating schools had at least 50% of students receiving a free or reduced lunch through the National School Lunch Program. Most (95.7%) students were in fifth grade, but the curriculum was also provided to some fourth and sixth graders (0.4% and 0.4% respectively).

Knowledge

As Table 8 shows, all of the knowledge questions assessed showed a statistically significant increase between the pre and post tests. Four questions showing a vast improvement between pre- and post-test. Students were 22.8 times more likely to correctly answer the question “What percent Daily Value for calcium do students your age need?”, were 20.9 times more likely to correctly answer the question “Which activity does not build better bones?”, were 12.2 times more likely to correctly answer the question “What is osteoporosis?” and were 10.7 times more likely to correctly answer the question “90% of bone density will be built by what age?”, after completion of the BBB Program.

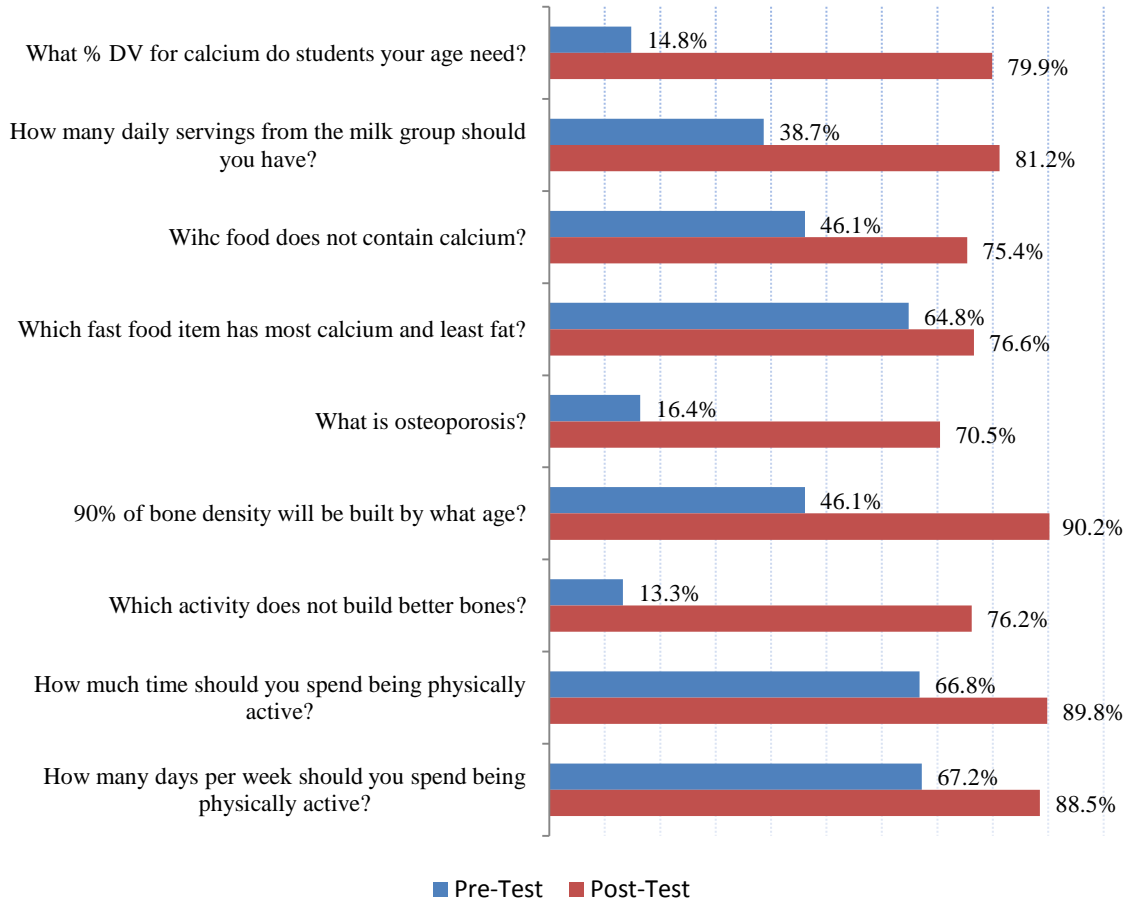
Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Table 8. Maricopa County Students' Knowledge Before and After Participating in the Building Better Bones Program, 2009-2010						
Question	Answered Correctly/Affirmatively				Odds Ratio	P-value
	Pre-test n=256		Post-test n=244			
		%		%		
What % DV for calcium do students your age need? (130%)	38	14.8	195	79.9	22.8	<0.0001
How many daily servings from the milk group should you have? (3 or more)	99	38.7	198	81.2	6.8	<0.0001
Which food does not contain calcium? (Chicken)	118	46.1	184	75.4	3.6	<0.0001
Which fast food item has most calcium and least fat? (Low fat chocolate milk)	166	64.8	187	76.6	1.8	0.0019
What is osteoporosis? (Porous bones)	42	16.4	172	70.5	12.2	<0.0001
90% of bone density will be built by what age? (18 years)	118	46.1	220	90.2	10.7	<0.0001
Which activity does not build better bones? (Swimming)	34	13.3	186	76.2	20.9	<0.0001
How much time should you spend being physically active? (60 minutes or more)	171	66.8	219	89.8	4.4	<0.0001
How many days per week should you spend being physically active? (All or most days of the week)	172	67.2	216	88.5	3.8	<0.0001

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Figure 5 shows the percentage of students who correctly answered the knowledge questions from pre- to post-test. As the Figure demonstrates, the percentage of students who correctly answered each question increased from pre- to post-test.

Figure 5. Percentage of Students Who Answered Knowledge Question Correctly From Pre to Post Test, Maricopa County BBB 2009-2010



Behavior

As Table 9 shows, all behavioral questions assessed showed a statistically significant increase between the pre and post tests.

Dairy Consumption

Over one-quarter (25.4%) of students reported on the pre-test that they consumed three or more servings of milk products on the previous day, increasing to just under half (47.1%) after completion of the BBB Program. Furthermore, students were 2.6 times more likely to have consumed the recommended amount of milk products after completion of the BBB Program. Although just under half of students reported consuming three or more servings of dairy products on the previous day on the post-test, over two-thirds (67.4%) of students reported that they drank or ate more calcium foods after the BBB Program.

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Physical Activity

The physical activity question has two answers that meet or exceed the minimum recommendations for physical activity: “60 minutes or more” and “2 hours or more”. Over one-third (36.7%) of students reported on the pre-test that they participated in 60 minutes or more of physical activity on the previous day. This increased to over half (57.0%) after completion of the BBB Program. Furthermore, students were 2.3 times more likely to have reported participating in 60 minutes or more of physical activity on the previous day. When combining the students who answered that they participated in physical activity for “60 minutes or more” with those who answered “2 hours or more” on the previous day, over two-thirds (71.5%) of students reported on the pre-test that they participated in adequate physical activity, increasing to over 80 percent (84.4%) after completion of the BBB Program. Students were 2.2 times more likely to have participated in 60 minutes or more, or two hours or more of physical activity after completion of the BBB Program. Additionally, the majority (74.4%) of students reported that the BBB Program has helped them become more physically active.

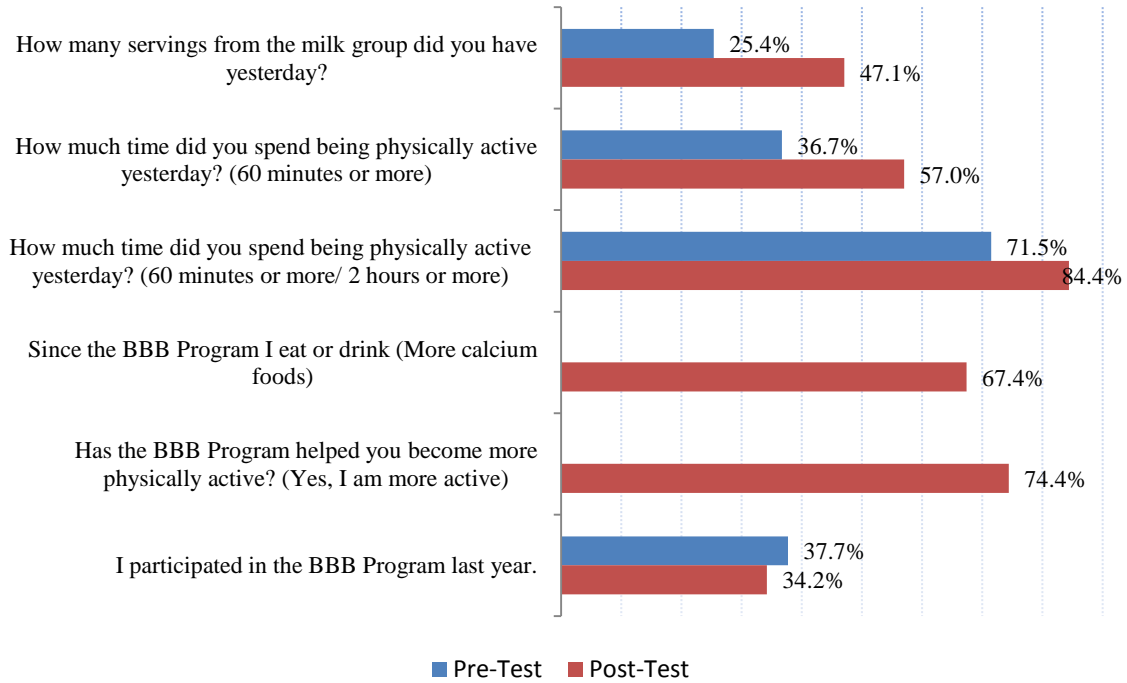
Table 9. Maricopa County Students’ Behavior Before and After Participating in the Building Better Bones Program, 2009-2010

Question	Answered Correctly/Affirmatively				Odds Ratio	P-value
	Pre-test n=256		Post-test n=244			
		%		%		
How many servings from the milk group did you have yesterday? (3 or more)	65	25.4	115	47.1	2.6	0.0000002
How much time did you spend being physically active yesterday? (60 minutes or more)	94	36.7	139	57.0	2.3	0.000003
How much time did you spend being physically active yesterday? (60 minutes or more / 2 hours or more)	183	71.5	206	84.4	2.2	0.0003
Since the BBB Program I eat or drink: (More calcium foods)			163	67.4		
Has the BBB Program helped you become more physically active? (Yes, I am more active)			180	74.4		
Did you attend the BBB Program last year? (Yes)	96	37.7	83	34.2		

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Figure 6 shows the percentage of students who reported meeting the recommendations for dairy consumption and physical activity questions from pre- to post-test. As the Figure demonstrates, the percentage of students who answered each question appropriately increased from pre- to post-test. The questions “Since the BBB Program I eat or drink:” and “Has the BBB Program helped you become more physically active?” were only asked on the post-test.

**Figure 6. Behavior Change from Pre to Post Test, Maricopa County
BBB 2009-2010**



Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Mohave County

Table 10. Characteristics of Mohave County Students Participating in the Building Better Bones Program, 2009-2010		
Characteristic	Number of Students	Percent of Total
Test		
Pre-tests	123	48.0
Post-tests	133	52.0
Participating Schools		
	1	
Income		
Schools with more than 50% of students receiving a free or reduced lunch	1	100
Grade*		
4 th grade	15	11.3
5 th grade	117	88.0
Undefined	1	0.8
Gender*		
Boy	61	45.9
Girl	72	54.1
Total Pre-/Post-tests Received	256	

*Descriptive statistics are based on the highest number of students who took the pre- or post-test.

During the 2009-2010 school year, 256 pre and post tests were completed in Mohave County. This breaks down to 123 pre-tests and 133 post-tests. An estimated 128 students participated in the Building Better Bones lessons, reaching approximately 220 less students than the 2008-2009 school year, which translates into a 63.2% decrease in participation. All participating schools had at least 50% of students receiving a free or reduced lunch through the National School Lunch Program. Most (88.0%) students were in fifth grade, but the curriculum was also provided to some fourth graders (11.3%).

Knowledge

As Table 11 shows, all but one knowledge question assessed in the tests showed a statistically significant increase between the pre and post tests. Four questions showed a vast improvement between pre- and post-test. Students were 58.8 times more likely to correctly answer the question “What percent Daily Value for calcium do students your age need?”, were 31.5 times more likely to correctly answer the question “90% of bone density will be built by what age?”, were 28.9 times more likely to correctly answer the question “Which activity does not build better bones?”, and were 26.3 times more likely to correctly answer the question “What is osteoporosis?” after completion of the BBB Program. There was no statistically significant change from pre- to post-test for the question “Which fast food item has the most calcium and least fat?”, however over three-quarters of students answered this question correctly on the pre- and post-test.

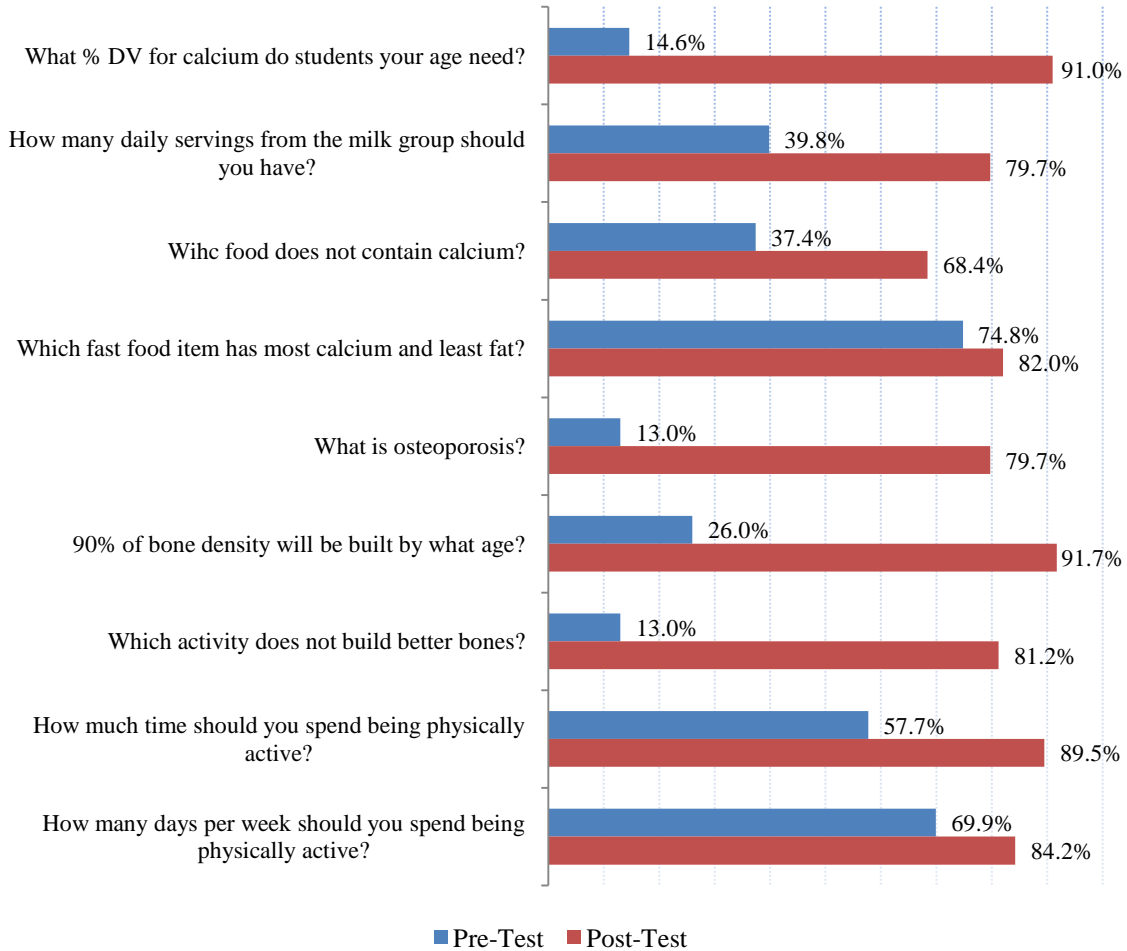
Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Table 11. Mohave County Students' Knowledge Before and After Participating in the Building Better Bones Program, 2009-2010						
Question	Answered Correctly/Affirmatively				Odds Ratio	P-value
	Pre-test n=123 %		Post-test n=133 %			
What % DV for calcium do students your age need? (130%)	18	14.6	121	91.0	58.8	<0.0001
How many daily servings from the milk group should you have? (3 or more)	49	39.8	106	79.7	5.9	<0.0001
Which food does not contain calcium? (Chicken)	46	37.4	91	68.4	3.6	0.0000003
Which fast food item has most calcium and least fat? (Low fat chocolate milk)	92	74.8	109	82.0	1.5	0.0819
What is osteoporosis? (Porous bones)	16	13.0	106	79.7	26.3	<0.0001
90% of bone density will be built by what age? (18 years)	32	26.0	122	91.7	31.5	<0.0001
Which activity does not build better bones? (Swimming)	16	13.0	108	81.2	28.9	<0.0001
How much time should you spend being physically active? (60 minutes or more)	71	57.7	119	89.5	6.2	<0.0001
How many days per week should you spend being physically active? (All or most days of the week)	86	69.9	112	84.2	2.3	0.0032

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Figure 7 shows the percentage of students who correctly answered the knowledge questions from pre- to post-test. As the Figure demonstrates, the percentage of students who correctly answered each question increased from pre- to post-test.

**Figure 7. Percentage of Students Who Answered Knowledge Questions correctly
From Pre to Post Test, Mohave County BBB 2009-2010**



Behavior

As Table 12 shows, all behavioral questions assessed in the tests showed a statistically significant increase between the pre and post tests.

Dairy Consumption

Over one-quarter (26.0%) of students reported on the pre-test that they consumed three or more servings of milk products on the previous day, increasing to almost half (39.9%) after completing the BBB Program. Furthermore, students were 1.9 times more likely to have consumed the recommended amount of milk products after completion of the BBB Program. Although half of students reported consuming three or more servings of dairy products on the previous day, almost three-quarters (72.5%) of students reported that they drank or ate more calcium foods after the BBB Program.

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Physical Activity

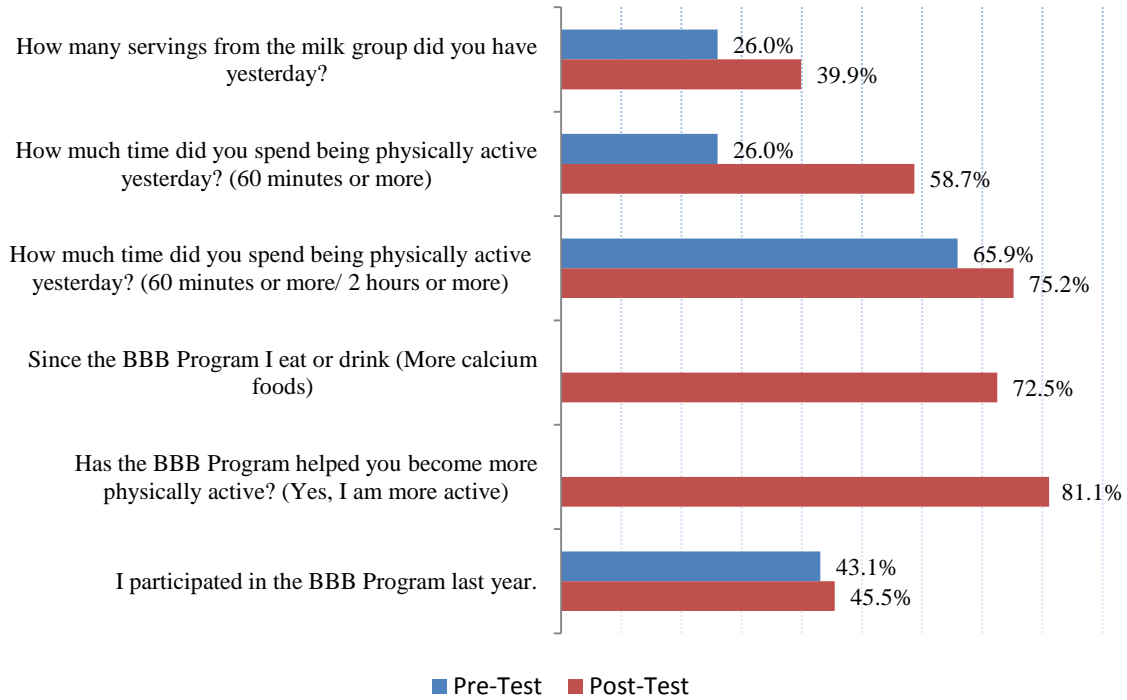
The physical activity question has two answers that meet or exceed the minimum recommendations for physical activity: “60 minutes or more” and “2 hours or more”. Just over one-quarter (26.0%) of students reported on the pre-test that they participated in 60 minutes or more of physical activity on the previous day. This increased to under two-thirds (58.7) after completing the BBB Program. Furthermore, students were 4.0 times more likely to have reported participating in 60 minutes or more of physical activity on the previous day. When combining the students who answered that they participated in physical activity for “60 minutes or more” with those who answered “2 hours or more” on the previous day, over two-thirds (65.9%) of students reported on the pre-test that they participated in adequate physical activity, increasing to over 75 percent (75.2%) after completion of the BBB Program. Students were 1.6 times more likely to have participated in 60 minutes or more, or two hours or more of physical activity after completion of the BBB Program. Additionally, over three-quarters (81.1%) of students reported that the BBB Program has helped them become more physically active.

Table 12. Mohave County Students’ Behavior Before and After Participating in the Building Better Bones Program, 2009-2010						
Question	Answered Correctly/Affirmatively				Odds Ratio	P-value
	Pre-test n=123 %		Post-test n=133 %			
How many servings from the milk group did you have yesterday? (3 or more)	32	26.0	53	39.9	1.9	0.0094
How much time did you spend being physically active yesterday? (60 minutes or more)	32	26.0	78	58.7	4.0	<0.0001
How much time did you spend being physically active yesterday? (60 minutes or more / 2 hours or more)	81	65.9	100	75.2	1.6	<0.0001
Since the BBB Program I eat or drink: (More calcium foods)			95	72.5		
Has the BBB Program helped you become more physically active? (Yes, I am more active)			107	81.1		
Did you attend the BBB Program last year? (Yes)	53	43.1	60	45.5		

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Figure 8 shows the percentage of students who reported meeting the recommendations for dairy consumption and physical activity questions from pre- to post-test. As the Figure demonstrates, the percentage of students who answered each question appropriately increased from pre- to post-test. The questions “Since the BBB Program I eat or drink:” and “Has the BBB Program helped you become more physically active?” were only asked on the post-test.

**Figure 8. Behavior change of Students from Pre to Post Test, Mohave County
BBB 2009-2010**



Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Navajo County

Characteristic	Number of Students	Percent of Total
Test		
Pre-tests	769	50.4
Post-tests	758	49.6
Participating Schools		
	13	
Income		
Schools with more than 50% of students receiving a free or reduced lunch	12	92.3
Grade*		
4 th grade	4	0.5
5 th graders	763	99.2
Undefined	2	0.3
Gender*		
Boy	378	49.2
Girl	388	50.5
Undefined	3	0.4
Total Pre-/Post-tests Received	1,527	

*Descriptive statistics are based on the highest number of students who took the pre- or post-test.

During the 2009-2010 school year, 1,527 pre and post tests were completed in Navajo County. This breaks down to 769 pre-tests and 758 post-tests. An estimated 764 students participated in the Building Better Bones lessons, reaching approximately 169 less students than the 2008-2009 school year, which translates into a 18.1% decrease in participation. All of the participating schools had at least 50% of students receiving a free or reduced lunch through the National School Lunch Program. Most (99.2%) students were in fifth grade, but the curriculum was also provided to some fourth graders (0.5%).

Knowledge

As Table 14 shows, all knowledge questions assessed in the tests showed a statistically significant increase between the pre and post tests. Two questions showed a vast improvement between pre- and post-test. Students were 15.3 times more likely to correctly answer the question “What percent Daily Value for calcium do students your age need?”, and were 11.3 times more likely to correctly answer the question “Which activity does not build better bones?” after completion of the BBB Program.

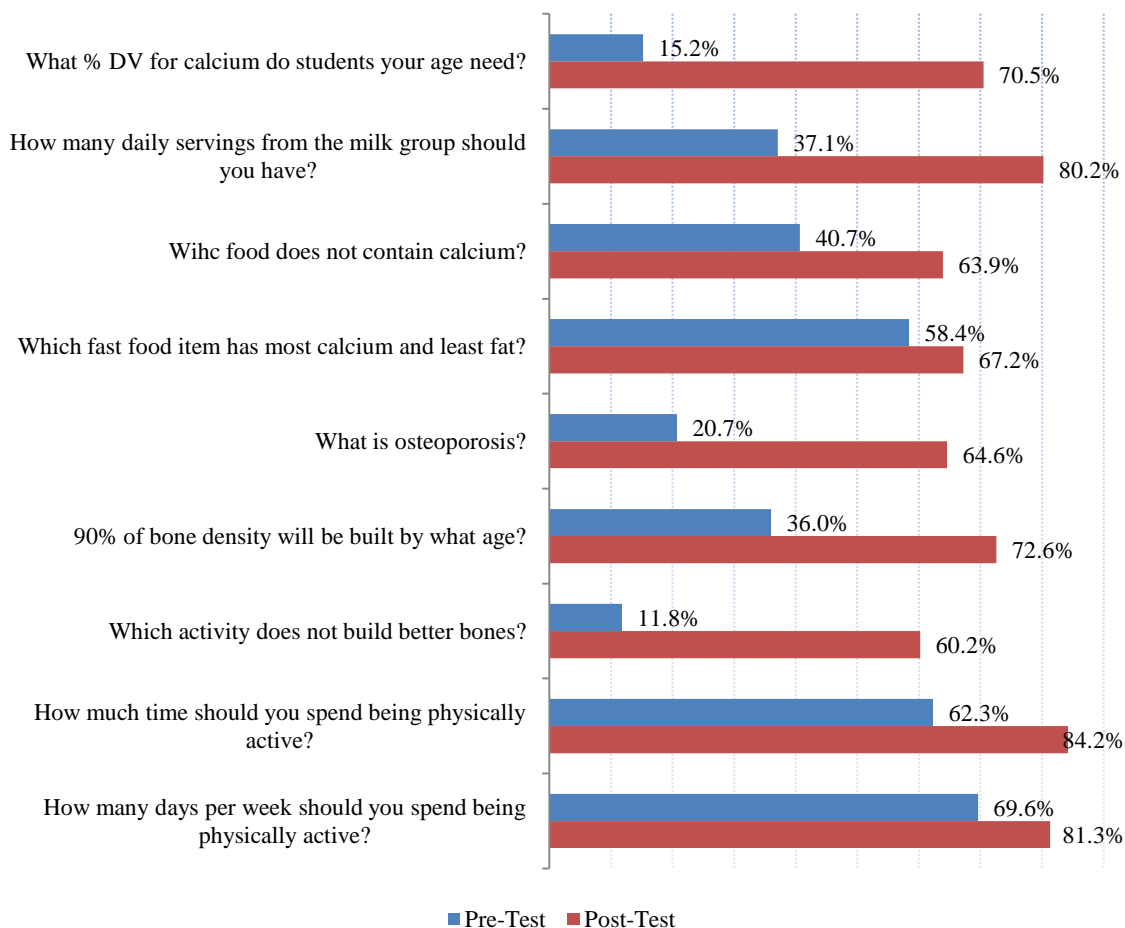
Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Table 14. Navajo County Students' Knowledge Before and After Participating in the Building Better Bones Program, 2009-2010						
Question	Answered Correctly/Affirmatively				Odds Ratio	P-value
	Pre-test n=769 %		Post-test n=758 %			
What % DV for calcium do students your age need? (130%)	117	15.2	534	70.5	13.3	<0.0001
How many daily servings from the milk group should you have? (3 or more)	285	37.1	608	80.2	6.9	<0.0001
Which food does not contain calcium? (Chicken)	313	40.7	484	63.9	2.6	<0.0001
Which fast food item has most calcium and least fat? (Low fat chocolate milk)	449	58.4	509	67.2	1.5	0.0002
What is osteoporosis? (Porous bones)	159	20.7	490	64.6	7.0	<0.0001
90% of bone density will be built by what age? (18 years)	277	36.0	550	72.6	4.7	<0.0001
Which activity does not build better bones? (Swimming)	91	11.8	456	60.2	11.3	<0.0001
How much time should you spend being physically active? (60 minutes or more)	479	62.3	638	84.2	3.2	<0.0001
How many days per week should you spend being physically active? (All or most days of the week)	535	69.6	616	81.3	1.9	<0.0001

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Figure 9 shows the percentage of students who correctly answered the knowledge questions from pre- to post-test. As the Figure demonstrates, the percentage of students who correctly answered each question increased from pre- to post-test.

Figure 9. Percentage of Students Who Answered Knowledge Questions Correctly From Pre to Post Test, Navajo County BBB 2009-2010



Behavior

As Table 15 shows, all behavioral questions assessed in the tests showed a statistically significant increase between the pre and post tests.

Dairy Consumption

Just under one-third (30.4%) of students reported on the pre-test that they consumed three or more servings of milk products on the previous day, increasing to under half (43.4%) after completing the BBB Program. Furthermore, students were 1.8 times more likely to have consumed the recommended amount of milk products after completion of the BBB Program. Although just under half of students reported consuming three or more servings of dairy products on the previous day, almost two-thirds (61.4%) of students reported that they drank or ate more calcium foods after the BBB Program.

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Physical Activity

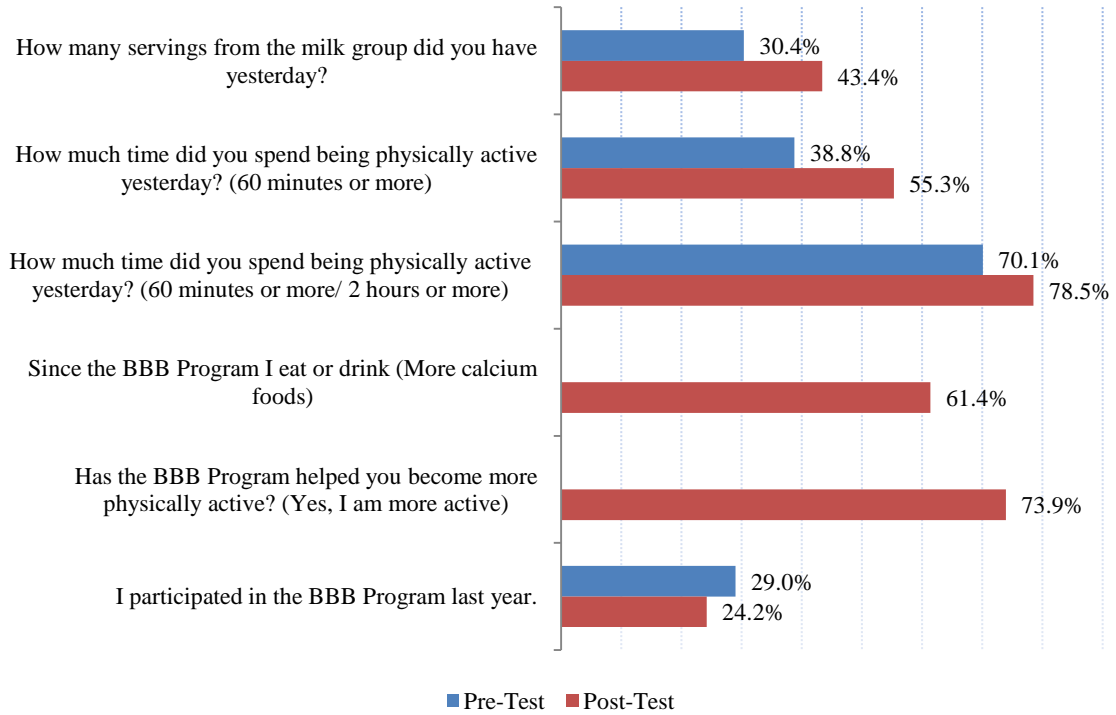
The physical activity question has two answers that meet or exceed the minimum recommendations for physical activity: “60 minutes or more” and “2 hours or more”. Over one-third (38.8%) of students reported on the pre-test that they participated in 60 minutes or more of physical activity on the previous day. This increased to under half (43.4%) after completing the BBB Program. Furthermore, students were 2.0. times more likely to have reported participating in 60 minutes or more of physical activity on the previous day. When combining the students who answered that they participated in physical activity for “60 minutes or more” with those who answered “2 hours or more” on the previous day, almost three-quarters (70.1%) of students reported on the pre-test that they participated in adequate physical activity, increasing to over 80 percent (83.1%) after completion of the BBB Program. Students were 1.6 times more likely to have participated in 60 minutes or more, or two hours or more of physical activity after completion of the BBB Program. Additionally, almost three-quarters (73.9%) of students reported that the BBB Program has helped them become more physically active.

Table 15. Navajo County Students' Behavior Before and After Participating in the Building Better Bones Program, 2009-2010						
Question	Answered Correctly/Affirmatively				Odds Ratio	P-value
	Pre-test n=769		Post-test n=758			
	n	%	n	%		
How many servings from the milk group did you have yesterday? (3 or more)	234	30.4	329	43.4	1.8	<0.0001
How much time did you spend being physically active yesterday? (60 minutes or more)	298	38.8	419	55.3	2.0	<0.0001
How much time did you spend being physically active yesterday? (60 minutes or more / 2 hours or more)	539	70.1	595	78.5	1.6	0.0001
Since the BBB Program I eat or drink: (More calcium foods)			460	61.4		
Has the BBB Program helped you become more physically active? (Yes, I am more active)			553	73.9		
Did you attend the BBB Program last year? (Yes)	220	29.0	182	24.2		

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Figure 10 shows the percentage of students who reported meeting the recommendations for dairy consumption and physical activity questions from pre- to post-test. As the Figure demonstrates, the percentage of students who answered each question appropriately increased from pre- to post-test. The questions “Since the BBB Program I eat or drink:” and “Has the BBB Program helped you become more physically active?” were only asked on the post-test.

Figure 10. Behavioral Change of Students from Pre to Post Test, Navajo County BBB 2009-2010



Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Yuma County

Table 16. Characteristics of Yuma County Students Participating in the Building Better Bones Program, 2009-2010		
Characteristic	Number of Students	Percent of Total
Test		
Pre-tests	2,251	51.0
Post-tests	2,164	49.0
Participating Schools		
	33	
Income		
Schools with more than 50% of students receiving a free or reduced lunch	29	87.9
Grade*		
4 th grade	51	2.3
5 th graders	2,175	96.6
6 th graders	22	1.0
Undefined	3	0.1
Gender*		
Boy	1,117	49.7
Girl	1,130	50.3
Total Pre-/Post-tests Received	4,415	

*Descriptive statistics are based on the highest number of students who took the pre- or post-test.

During the 2009-2010 school year, 4,415 pre and post tests were completed in Yuma County. This breaks down to 2,251 pre-tests and 2,164 post-tests. An estimated 2,208 students participated in the Building Better Bones lessons, reaching approximately 214 more students than the 2008-2009 school year, which translates into a 10.7% increase in participation. The majority (87.9%) of participating schools had at least 50% of students receiving a free or reduced lunch through the National School Lunch Program. Most (96.6%) students were in fifth grade, but the curriculum was also provided to some fourth and sixth graders (2.3% and 1.0% respectively).

Knowledge

As Table 17 shows, all knowledge questions assessed in the tests showed a statistically significant increase between the pre and post tests. Two questions showed a vast improvement between pre- and post-test. Students were 37.3 times more likely to correctly answer the question “What percent Daily Value for calcium do students your age need?”, and were 13.2 times more likely to correctly answer the question “What is osteoporosis” after completion of the BBB Program.

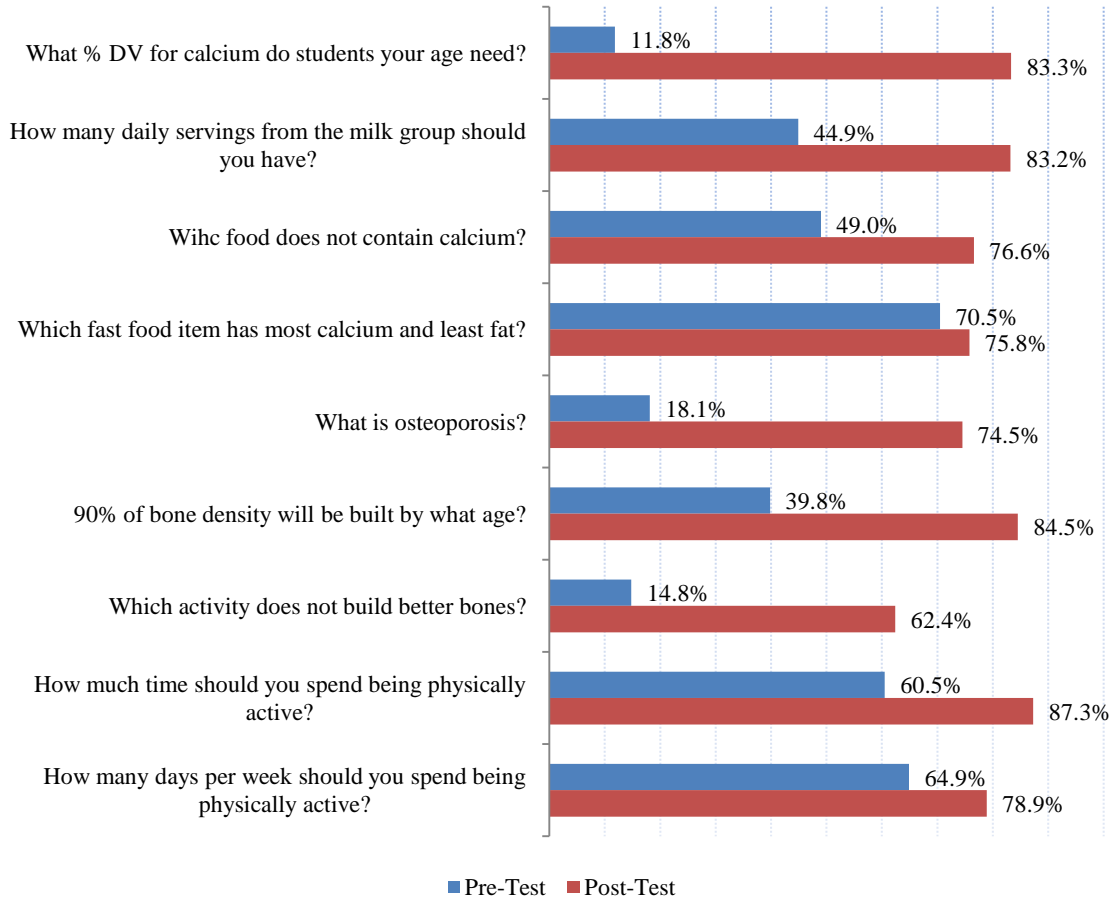
Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Table 17. Yuma County Students' Knowledge Before and After Participating in the Building Better Bones Program, 2009-2010						
Question	Answered Correctly/Affirmatively				Odds Ratio	P-value
	Pre-test n=2,251 %		Post-test n=2,164 %			
What % DV for calcium do students your age need? (130%)	265	11.8	1,802	83.3	37.3	<0.0001
How many daily servings from the milk group should you have? (3 or more)	1,011	44.9	1,800	83.2	6.1	<0.0001
Which food does not contain calcium? (Chicken)	1,103	49.0	1,658	76.6	3.4	<0.0001
Which fast food item has most calcium and least fat? (Low fat chocolate milk)	1,587	70.5	1,640	75.8	1.3	0.00004
What is osteoporosis? (Porous bones)	408	18.1	1,612	74.5	13.2	<0.0001
90% of bone density will be built by what age? (18 years)	895	39.8	1,829	84.5	8.3	<0.0001
Which activity does not build better bones? (Swimming)	333	14.8	1,350	62.4	9.6	<0.0001
How much time should you spend being physically active? (60 minutes or more)	1,362	60.5	1,888	87.3	4.5	<0.0001
How many days per week should you spend being physically active? (All or most days of the week)	1,460	64.9	1,708	78.9	2.0	<0.0001

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Figure 11 shows the percentage of students who correctly answered the knowledge questions from pre- to post-test. As the Figure demonstrates, the percentage of students who correctly answered each question increased from pre- to post-test.

Figure 11. Percentage of Students Who Answered Knowledge Questions Correctly From Pre to Post Test, Yuma County BBB 2009-2010



Behavior

As Table 18 shows, all behavioral questions assessed in the tests showed a statistically significant increase between the pre and post tests.

Dairy Consumption

Just over one-fifth (20.8%) of students reported on the pre-test that they consumed three or more servings of milk products on the previous day, increasing to under half (41.2%) after completing the BBB Program. Furthermore, students were 2.7 times more likely to have consumed the recommended amount of milk products after completion of the BBB Program. Although just under half of students reported consuming three or more servings of dairy products on the previous day, over two-thirds (70.0%) of students reported that they drank or ate more calcium foods after the BBB Program.

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Physical Activity

The physical activity question has two answers that meet or exceed the minimum recommendations for physical activity: “60 minutes or more” and “2 hours or more”. Just over one-third (36.3%) of students reported on the pre-test that they participated in 60 minutes or more of physical activity on the previous day. This increased to just over half (52.3%) after completing the BBB Program. Furthermore, students were 1.9 times more likely to have reported participating in 60 minutes or more of physical activity on the previous day. When combining the students who answered that they participated in physical activity for “60 minutes or more” with those who answered “2 hours or more” on the previous day, just under two-thirds (65.2%) of students reported on the pre-test that they participated in adequate physical activity, increasing to just over three-quarters (76.6%) after completion of the BBB Program. Students were 1.7 times more likely to have participated in 60 minutes or more or two hours or more of physical activity after completion of the BBB Program. Additionally, over three-quarters (80.5%) of students reported that the BBB Program has helped them become more physically active.

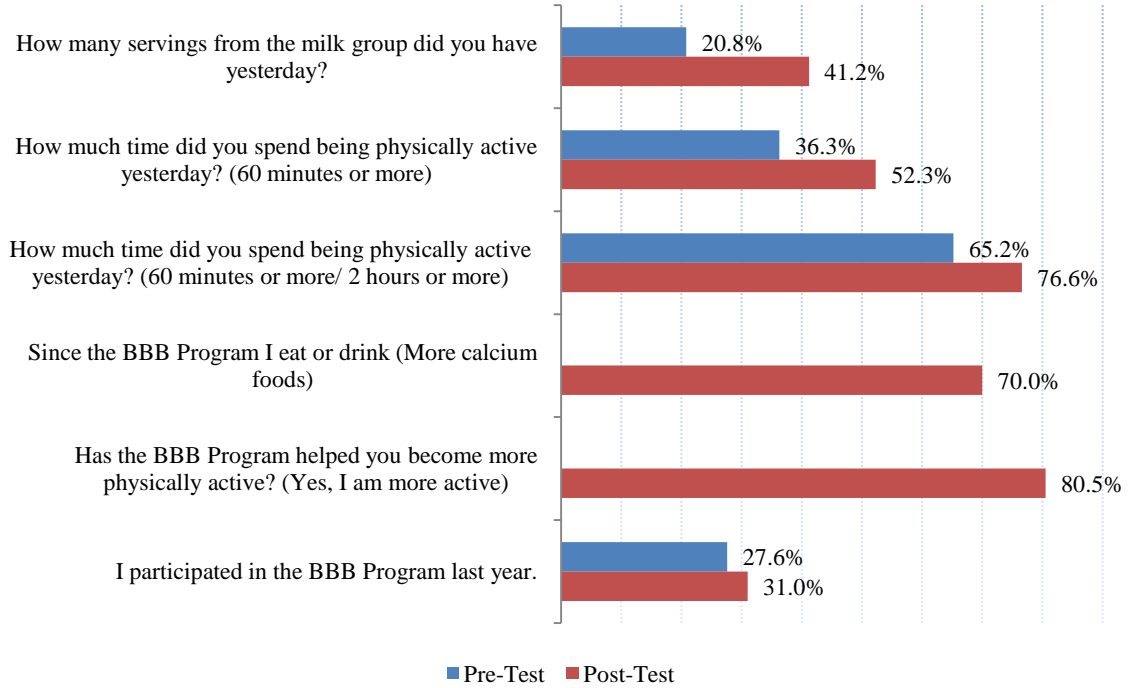
Table 18. Yuma County Students’ Behavior Before and After Participating in the Building Better Bones Program, 2009-2010

Question	Answered Correctly/Affirmatively				Odds Ratio	P-value
	Pre-test n=2,251 %		Post-test n=2,164 %			
How many servings from the milk group did you have yesterday? (3 or more)	467	20.8	892	41.2	2.7	<0.0001
How much time did you spend being physically active yesterday? (60 minutes or more)	817	36.3	1,131	52.3	1.9	<0.0001
How much time did you spend being physically active yesterday? (60 minutes or more / 2 hours or more)	1467	65.2	1,657	76.6	1.7	<0.0001
Since the BBB Program I eat or drink: (More calcium foods)			1,486	70.0		
Has the BBB Program helped you become more physically active? (Yes, I am more active)			1,706	80.5		
Did you attend the BBB Program last year? (Yes)	613	27.6	665	31.0		

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Figure 12 shows the percentage of students who reported meeting the recommendations for dairy consumption and physical activity questions from pre- to post-test. As the Figure demonstrates, the percentage of students who answered each question appropriately increased from pre- to post-test. The questions “Since the BBB Program I eat or drink:” and “Has the BBB Program helped you become more physically active?” were only asked on the post-test.

**Figure 12. Behavioral Change of Students from Pre to Post Test, Yuma County
BBB 2009-2010**



Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Washington Elementary School District

Table 19. Characteristics of Washington Elementary School District Students Participating in the Building Better Bones Program, 2009-2010		
Characteristic	Number of Students	Percent of Total
Test		
Pre-tests	913	49.5
Post-tests	930	50.5
Participating Schools		
	11	
Income		
Schools with more than 50% of students receiving a free or reduced lunch	11	100
Grade*		
4 th grade	2	0.2
5 th grade	926	99.6
Undefined	2	0.2
Gender*		
Boy	482	51.8
Girl	447	48.1
Undefined	1	0.1
Total Pre-/Post-tests Received	1,843	

*Descriptive statistics are based on the highest number of students who took the pre- or post-test.

During the 2009-2010 school year, 1,843 pre and post tests were completed in Washington Elementary School District. This breaks down to 913 pre-tests and 930 post-tests. An estimated 922 students participated in the Building Better Bones lessons, reaching approximately 81 more students than the 2008-2009 school year, which translates into a 9.6% increase in participation. All participating schools had at least 50% of students receiving a free or reduced lunch through the National School Lunch Program. Most (99.6%) students were in fifth grade, but the curriculum was also provided to some fourth and sixth graders (0.2% and 0.2% respectively).

Knowledge

As Table 20 shows, all knowledge questions assessed in the tests showed a statistically significant increase between the pre and post tests. Five questions showed a vast improvement between pre- and post-test. Students were?’, were 45.4 times more likely to correctly answer the question “What percent Daily Value for calcium do students your age need?” were 43.9 times more likely to correctly answer the question “Which activity does not build better bones, were 38.5 times more likely to correctly answer the question “90% of bone density will be built by what age?” were 22.7 times more likely to correctly answer the question “What is osteoporosis?” and were 13.2 times more likely to correctly answer the question “How many daily servings from the milk group should you have?” and after completion of the BBB Program.

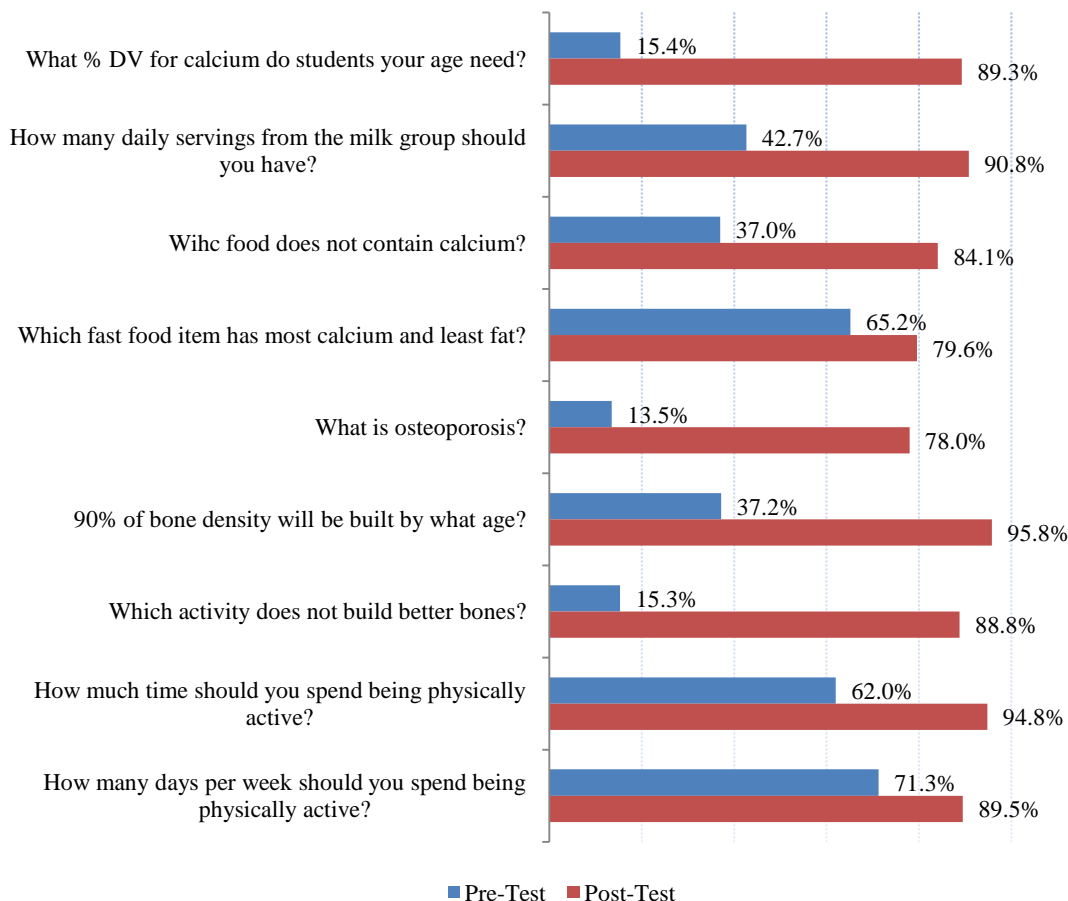
Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Table 20. Washington Elementary School District Students' Knowledge Before and After Participating in the Building Better Bones Program, 2009-2010						
Question	Answered Correctly/Affirmatively				Odds Ratio	P-value
	Pre-test n=913 %		Post-test n=930 %			
What % DV for calcium do students your age need? (130%)	141	15.4	830	89.3	45.4	<0.0001
How many daily servings from the milk group should you have? (3 or more)	390	42.7	844	90.8	13.2	<0.0001
Which food does not contain calcium? (Chicken)	338	37.0	782	84.1	9.0	<0.0001
Which fast food item has most calcium and least fat? (Low fat chocolate milk)	595	65.2	740	79.6	2.1	<0.0001
What is osteoporosis? (Porous bones)	123	13.5	725	78.0	22.7	<0.0001
90% of bone density will be built by what age? (18 years)	340	37.2	891	95.8	38.5	<0.0001
Which activity does not build better bones? (Swimming)	140	15.3	826	88.8	43.9	<0.0001
How much time should you spend being physically active? (60 minutes or more)	566	62.0	882	94.8	11.3	<0.0001
How many days per week should you spend being physically active? (All or most days of the week)	651	71.3	832	89.5	3.4	<0.0001

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Figure 13 shows the percentage of students who correctly answered the knowledge questions correctly from pre- to post-test. As the Figure demonstrates, the percentage of students who correctly answered each question increased from pre- to post-test.

Figure 13. Percentage of Students Who Answered Knowledge Questions Correctly From Pre to Post Test, Washington Elementary School District BBB 2009-2010



Behavior

As Table 21 shows, all behavioral questions assessed in the tests showed a statistically significant increase between the pre and post tests.

Dairy Consumption

Over one-third (34.2%) of students reported on the pre-test that they consumed three or more servings of milk products on the previous day, increasing to over half (54.7%) after completing the BBB Program. Furthermore, students were 2.3 times more likely to have consumed the recommended amount of milk products after completion of the BBB Program. Although over half of students reported consuming three or more servings of dairy products on the previous day on post-test, over two-thirds (69.6%) of students reported that they drank or ate more calcium foods after the BBB Program.

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Physical Activity

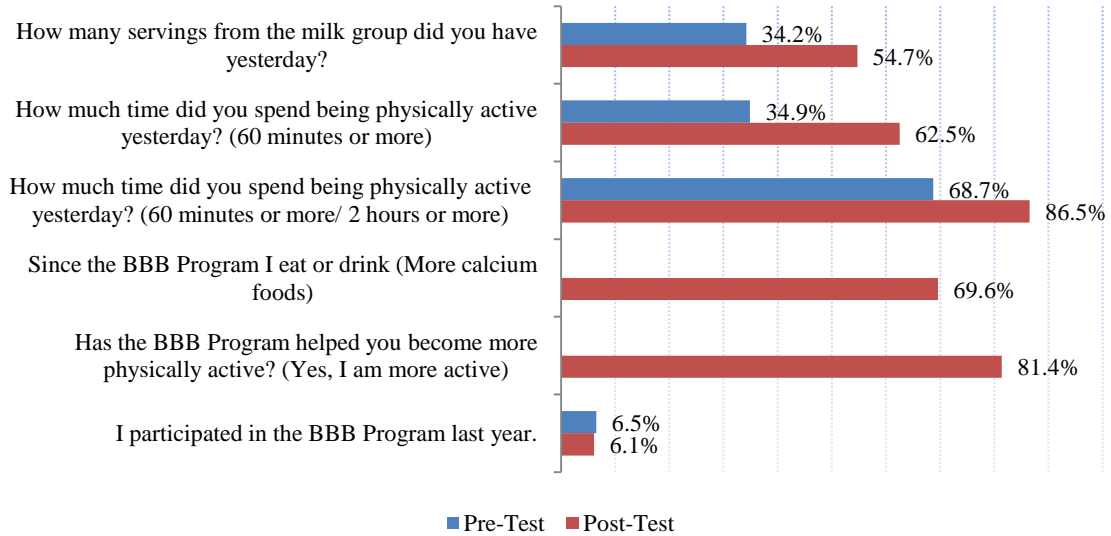
The physical activity question has two answers that meet or exceed the minimum recommendations for physical activity: “60 minutes or more” and “2 hours or more”. Just over one-third (34.9%) of students reported on the pre-test that they participated in 60 minutes or more of physical activity on the previous day. This increased to just over 60 percent (62.5%) after completing the BBB Program. Furthermore, students were 3.1 times more likely to have reported participating in 60 minutes or more of physical activity on the previous day. When combining the students who answered that they participated in physical activity for “60 minutes or more” with those who answered “2 hours or more” on the previous day, over two-thirds (68.7%) of students reported on the pre-test that they participated in adequate physical activity, increasing to over 80 percent (86.5%) after completion of the BBB Program. Students were 2.9 times more likely to have participated in 60 minutes or more or two hours or more of physical activity after completion of the BBB Program. Additionally, the majority (81.4%) of students reported that the BBB Program has helped them become more physically active.

Question	Answered Correctly/Affirmatively				Odds Ratio	P-value
	Pre-test n= 913 %		Post-test n=930 %			
How many servings from the milk group did you have yesterday? (3 or more)	312	34.2	509	54.7	2.3	<0.0001
How much time did you spend being physically active yesterday? (60 minutes or more)	319	34.9	581	62.5	3.1	<0.0001
How much time did you spend being physically active yesterday? (60 minutes or more / 2 hours or more)	627	68.7	804	86.5	2.9	<0.0001
Since the BBB Program I eat or drink: (More calcium foods)			642	69.6		
Has the BBB Program helped you become more physically active? (Yes, I am more active)			749	81.4		
Did you attend the BBB Program last year? (Yes)	59	6.5	56	6.1		

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Figure 14 shows the percentage of students who reported meeting the recommendations for dairy consumption and physical activity questions from pre- to post-test. As the Figure demonstrates, the percentage of students who answered each question appropriately increased from pre- to post-test. The questions “Since the BBB Program I eat or drink:” and “Has the BBB Program helped you become more physically active?” were only asked on the post-test.

**Figure 14. Behavior Change of Students from Pre to Post Test,
Washington Elementary School District BBB 2009-2010**



Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Conclusion

The overall goal of the Building Better Bones Program is to increase awareness of osteoporosis as a preventable disease by practicing healthy lifestyles including consuming a healthy diet high in calcium and engaging in regular weight bearing physical activity. The Building Better Bones Program includes three interactive classroom lessons with a focus on osteoporosis prevention. The purpose of this report was to summarize the results of the pre and post tests. All students who participated in the BBB Program were asked to complete a pre- and post-test.

During the 2009-2010 school year an estimated 4,686 students participated in the Building Better Bones lessons, with a 6.7% decrease in participation from the 2008-2009 school year. The majority (87.3%) of participating schools had at least half of students receiving a free or reduced lunch through the National School Lunch Program. Most (97.5%) students were in fifth grade, but the curriculum was also provided to fourth through sixth graders (2.4%)

All knowledge-related questions assessed in the tests showed a statistically significant increase between the pre and post tests. Three questions showed a vast improvement between pre- and post-test. These questions were: “What percent Daily Value for calcium do students your age need?”, “Which activity does not build better bones?” and “What is osteoporosis?”.

All behavior-related questions assessed in the tests showed a statistically significant increase between the pre and post tests. Just over one-quarter (26.0%) of students reported on the pre-test that they consumed three or more servings of milk products on the previous day, increasing to under half (45.0%) after completion of the BBB Program. Students were 2.3 times more likely to have reported that they consumed the recommended amount of milk products after completion of the BBB Program. While under half (45.0%) of students reported consuming three or more servings of dairy products on the previous day on the post-test, two-thirds (68.3%) of students reported that they drank or ate more calcium foods after the BBB Program. Additionally, students were 2.2 times more likely to have reported participating in 60 or more minutes of physical activity on the previous day. Three-quarters (78.6%) of students reported that the BBB Program has helped them become more physically active.

Arizona Building Better Bones Program Evaluation
2009-2010 School Year

Appendix A
Sample Survey
2009-2010 School Year

Circle the correct answer.

1. What grade are you in?
Fourth Fifth Sixth
2. Are you a boy or a girl?
Boy Girl
3. What percent Daily Value for calcium do students your age need?
50% 100% 130% 150% Don't know
4. How many daily servings from the milk group should you have to meet your calcium needs?
None One Two Three or more Don't know
5. How many servings from the milk group did you have yesterday?
None One Two Three or more Don't know
6. Which of the following foods does not have calcium?
Chicken Dark green leafy vegetables Yogurt Beans Don't know
7. Choose the fast food menu item with the most calcium and the least amount of fat.
Hamburger Low-fat Chocolate Milk French Fries Chicken Nuggets Don't know
8. What is osteoporosis?
Clogged blood vessels Porous bones High blood pressure High blood sugar Don't know
9. Ninety percent (90%) of your bone density will be built by what age?
10 years 18 years 25 years 40 years 55 years Don't Know
10. Which of the following activities does not build better bones?
Jumping rope Dancing Swimming Basketball Don't know
11. How much time should you spend being physically active each day to build better bones?
None 10 minutes 60 minutes or more 2 hours or more Don't know
12. How much time did you spend yesterday being physically active?
None 10 minutes 60 minutes or more 2 hours or more Don't know
13. How many days each week should you be physically active to build better bones?
1 day 2 days 3 days 4 days All or most days of the week Don't know
14. Did you attend a Building Better Bones Program last year?
Yes No

Circula la respuesta correcta.

1. ¿En qué grado estás?
Cuarto Quinto Sexto
2. ¿Eres niño o niña?
Niño Niña
3. ¿Qué porcentaje del valor diario de calcio necesitan los alumnos de tu edad?
50% 100% 130% 150% No sé
4. ¿Cuántas porciones de productos lácteos debes tomar cada día para satisfacer tus necesidades de calcio?
Ninguna Una Dos Tres o más No sé
5. ¿Cuántas porciones de productos lácteos tomaste ayer?
Ninguna Una Dos Tres o más No sé
6. ¿Cuáles de los siguientes alimentos no contienen calcio?
Pollo Verduras de hejas verdes Yogurt Frijoles No sé
7. Escoge la comida rápida que tiene más calcio y menos grasa.
Hamburguesa Leche de chocolate baja en grasa Papas fritas Pedazos (nuggets) de pollo No sé
8. ¿Qué es osteoporosis?
Vasos sanguíneos obstruidos Huesos porosos Alta presión Alta azúcar en la sangre No sé
9. ¿A qué edad estará formado el noventa por ciento (90%) de tu densidad ósea?
10 años 18 años 25 años 40 años 55 años No sé
10. ¿Cuál de las siguientes actividades no forman huesos fuertes?
Brincar la cuerda Bailar Nadar Básquetbol No sé
11. ¿Cuánto tiempo debes pasar cada día en actividad física para desarrollar huesos fuertes?
Nada 10 minutos 60 minutos o más 2 horas o más No sé
12. ¿Cuánto tiempo pasaste ayer en actividad física?
Nada 10 minutos 60 minutos o más 2 horas o más No sé
13. ¿Cuántos días por semana necesitas estar activo físicamente para desarrollar huesos fuertes?
1 día 2 días 3 días 4 días Todos o casi todos los días de la semana No sé
14. ¿El año pasado asististe a un Programa para Desarrollar Huesos Fuertes?
Sí No

Circle the correct answer.

- What grade are you in?
Fourth Fifth Sixth
- Are you a boy or a girl?
Boy Girl
- What percent Daily Value for calcium do students your age need?
50% 100% 130% 150% Don't know
- How many daily servings from the milk group should you have to meet your calcium needs?
None One Two Three or more Don't know
- How many servings from the milk group did you have yesterday?
None One Two Three or more Don't know
- Which of following foods does not have calcium?
Chicken Dark green leafy vegetables Yogurt Beans Don't know
- Choose the fast food menu item with the most calcium and the least amount of fat.
Hamburger Low-fat Chocolate Milk French Fries Chicken Nuggets Don't know
- Since the Building Better Bones Program, I eat or drink:
More calcium foods Same amount of calcium foods
- What is osteoporosis?
Clogged blood vessels Porous bones High blood pressure High blood sugar Don't know
- Ninety percent (90%) of your bone density will be built by what age?
10 years 18 years 25 years 40 years 55 years Don't know
- Which of the following activities does not build better bones?
Jumping rope Dancing Swimming Basketball Don't know
- How much time should you spend being physically active each day to build better bones?
None 10 minutes 60 minutes or more 2 hours or more Don't know
- How much time did you spend yesterday being physically active?
None 10 minutes 60 minutes or more 2 hours or more Don't know
- How many days each week should you be physically active to build better bones?
1 day 2 days 3 days 4 days All or most days of the week Don't know
- Has the Building Better Bones Program helped you become more physically active?
Yes, I am more active My physical activity is the same
- Did you attend a Building Better Bones Program last year?
Yes No

Circula la respuesta correcta.

1. ¿En qué grado estás?
Cuarto Quinto Sexto
2. ¿Eres niño o niña?
Niño Niña
3. ¿Qué porcentaje del valor diario de calcio necesitan los alumnos de tu edad?
50% 100% 130% 150% No sé
4. ¿Cuántas porciones de productos lácteos debes tomar cada día para satisfacer tus necesidades de calcio?
Ninguna Una Dos Tres o más No sé
5. ¿Cuántas porciones de productos lácteos tomaste ayer?
Ninguna Una Dos Tres o más No sé
6. ¿Cuáles de los siguientes alimentos no contienen calcio?
Pollo Verduras de hejas verdes Yogurt Frijoles No sé
7. Escoge la comida rápida que tiene más calcio y menos grasa.
Hamburguesa Leche de chocolate baja en grasa Papas fritas Pedazos (nuggets) de pollo No sé
8. Desde que fui al Programa para Desarrollar Huesos Fuertes, yo como o bebo:
Más alimento con calcio La misma cantidad de alimentos con calcio
9. ¿Qué es osteoporosis?
Vasos sanguíneos obstruidos Huesos porosos Alta presión Alta azúcar en la sangre No sé
10. ¿A qué edad estará formado el noventa por ciento (90%) de tu densidad ósea?
10 años 18 años 25 años 40 años 55 años No sé
11. ¿Cuál de las siguientes actividades no forman huesos fuertes?
Brincar la cuerda Bailar Nadar Básquetbol No sé
12. ¿Cuánto tiempo debes pasar cada día en actividad física para desarrollar huesos fuertes?
Nada 10 minutos 60 minutos o más 2 horas o más No sé
13. ¿Cuánto tiempo pasaste ayer en actividad física?
Nada 10 minutos 60 minutos o más 2 horas o más No sé
14. ¿Cuántos días por semana necesitas estar activo físicamente para desarrollar huesos fuertes?
1 día 2 días 3 días 4 días Todos o casi todos los días de la semana No sé
15. ¿Te ha ayudado a estar más activo físicamente el Programa para Desarrollar Huesos Fuertes?
Sí, soy más activo Hago la misma cantidad de siempre
16. ¿El año pasado asististe a un Programa para Desarrollar Huesos Fuertes?
Sí No

Appendix D
Fruits and Veggies - More Matters™
Class Evaluation



Champions for Change

Arizona Nutrition Network

Arizona
Fruits and Veggies - More Matters™
Class Evaluation

2009-2010

Prepared by
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November 2010

Table of Contents

Executive Summary	3
Introduction.....	4
Methods.....	4
Results	5
Navajo County.....	9
Yuma County	13
Appendix A	17

Arizona Fruits and Veggies - More Matters™ Class Evaluation
2009-2010 School Year

Executive Summary

- The overall goal of the Fruits and Veggies - More Matters™ (FVMM) classes is to provide community and school-based nutrition services to low-income children and their families.
- The FVMM curriculum is targeted at 3rd grade students and teaches the importance of including fruits and vegetables in a well-balanced diet.
- During the 2009-2010 school year, a total of 810 students participated in the FVMM classes and submitted pre and post surveys.
 - There was a 42.4% decrease in overall survey submission.
 - All of the participating schools surveyed had at least 50% of students receiving a free or reduced lunch through the National School Lunch Program.
 - All students were reported to be in third grade.
- After completion of the FVMM classes, students were significantly:
 - More likely to have consumed vegetables on the previous day.
 - More likely to like eating broccoli.
 - More likely to correctly identify food that has fiber.
 - More likely to correctly identify what fiber does in the digestive system.
 - More likely to know the importance of eating fruits and vegetables with vitamin C.
 - More likely to have seen the Fruits and Veggies - More Matters logo.

Arizona Fruits and Veggies - More Matters™ Class Evaluation
2009-2010 School Year

Introduction

Since 1998, the Arizona Department of Health Services (ADHS) has funded Arizona Nutrition Network Partners to conduct nutrition education promoting fruit and vegetable consumption for low-income children and their families. The Arizona Department of Health Services has evaluated this effort by administering pre- and post-surveys each year since 1999. From 1999 to 2008, the surveys measured the improvement in knowledge produced by this school-based nutrition class. In the 2008-2009 and 2009-2010 school years, new survey instruments measuring improvement in knowledge and eating preferences were used and the surveys became optional for partners. From 1999 to 2008, the Network provided standardized teaching materials for the classes to promote fruit and vegetable consumption. Beginning in the 2008-2009 school year, Network partners utilizing the curriculum incorporate costs for the class materials into local program budgets through the Local Incentive Award Program.

Class Objectives

Pre-survey data in first through fourth grade classrooms of qualifying schools was collected prior to the presentation of a four part curriculum. The survey contains questions regarding a student's eating behaviors on the previous day.

Selected objectives of the lesson plans are that students will be able to:

- 1) Identify the recommended amount of fruits and vegetables to eat every day.
- 2) Recognize fruits, vegetables, dried beans, and grains as sources of fiber.
- 3) Recognize fruits and vegetables that are good sources of vitamin A, vitamin C, or fiber.
- 4) Choose a meal with at least two fruits and two vegetables.
- 5) Identify at least two fruits and or/vegetables on their school cafeteria menu or the Fruits and Veggies More Matters™ Café menu.
- 6) Classify at least 10 fruits and vegetables into their respective food groups.

Lesson plans also include a produce field trip to a local grocery store, or a grocery store tour video. Following the completion of the Fruits and Veggies - More Matters™ (FVMM) classes, students were given a post-survey. The questions were identical on pre- and post-surveys.

Methods

All students in the participating classrooms were asked to complete a pre-survey prior to the first session, and a post-survey upon completion of the class series. The surveys were not matched, as no identifying information regarding the respondent was collected on the survey. The survey contained questions regarding a student's knowledge of the benefits of fruits and vegetables and preference in eating and preparing fruits and vegetables and recognition of nutritional campaign logos. An example of the survey is provided in Appendix A. For questions related to knowledge of the benefits of fruits and vegetables and consumption of fruits and vegetables, odds ratios were calculated in order to determine if there was a statistically significant change in knowledge or behavior from pre- to post-survey. The odds ratios can be interpreted as the student was x times more likely to have increased knowledge or consumed of fruits or vegetables on the

Arizona Fruits and Veggies - More Matters™ Class Evaluation
2009-2010 School Year

previous day on the post-survey after attending the FVMM lessons. Odds ratios less than one for example, indicate that a student was less likely to have increased knowledge or consumed of fruits or vegetables on the previous day on the post-survey. For the purposes of this document, when discussing changes from pre- to post-test using odds ratios, a vast improvement is defined as an odds ratio of 10.0 or greater, and a large improvement is defined as an odds ratio of 5.0 or greater. P-values based on the statistical tests were calculated and were considered statistically significant at the <0.05 level. All surveys were submitted to the Arizona Nutrition Network in the Bureau of Nutrition and Physical Activity at the Arizona Department of Health Services. The surveys were entered into Microsoft Access and analyzed using SAS 9.2. As this is the first year of data collection utilizing this new survey, results from this year should not be compared to results from previous years.

Results

Table 1. Characteristics of Arizona Students Participating in the Fruits and Veggies - More Matters™ Classes, 2008-2009		
Characteristic	Number of Students	Percent of Total
Survey		
Pre-survey	810	50.3
Post-survey	800	49.7
Participating Schools		
	13	
Income		
Schools with more than 50% of students receiving a free or reduced lunch	13	100
Age*		
7	71	8.8
8	361	44.6
9	340	42.0
10	26	3.2
Undefined	12	1.5
Gender*		
Boy	412	50.9
Girl	388	47.9
Undefined	10	1.2
Total Pre-/Post-Surveys Received	1,610	

*Descriptive statistics are based on the highest number of students who took the pre- or post-survey.

During the 2009-2010 school year, 1,641 pre- and post-surveys were completed. This breaks down to 810 pre-surveys and 800 post-surveys. There were 1,185 less surveys submitted for the 2009 - 2010 than for the 2008-2009 school year. This translates into a 42.4% decrease in survey submission.** All participating schools surveyed had at least 50% of students receiving a free or reduced cost lunch through the National School Lunch Program. All students were reported to be in third grade. The average age of the participating students was 8.4 on both the pre- and post-survey.

**Only two counties voluntarily participated for the 2009-2010 school year.

Arizona Fruits and Veggies - More Matters™ Class Evaluation
2009-2010 School Year

Table 2 shows the Arizona students knowledge of the nutritional benefits of selected foods before and after participating in the FVMM classes. Seven of the eight knowledge questions showed a statistically significant knowledge change from the pre- to the post-survey. A vast improvement was seen in the correct selection of the importance of eating fruits and vegetables with vitamin C. A large improvement was seen in the correct selection of the food that has fiber and in the correct selection of what fiber does in the digestive system.

Table 2. Arizona Students Knowledge of Nutritional Benefits of Fruits and Vegetables Before and After Participating in the Fruits and Veggies More Matters™ Classes, 2009-2010						
Question	Pre-survey		Post-survey		Change from Pre- to Post-survey	
	n	%	n	%	Odds Ratio	P-value
Which food has fiber?	245	30.3	609	76.1	7.353	<0.0000001
Which food has a lot of vitamin C?	653	80.6	728	91.0	2.431	<0.0000001
Which food has a lot of vitamin A?	151	18.6	313	39.1	2.805	<0.0000001
Why is it important to eat fruits and vegetables with Vitamin A?	392	48.4	619	77.4	3.647	<0.0000001
Why is it important to eat fruits and vegetables with Vitamin C?	69	8.5	481	60.1	16.19	<0.0000001
What does fiber do in our digestive system (food tube)?	411	50.7	700	87.5	6.796	<0.0000001
How can eating more fruits and vegetables help you?	701	86.5	697	87.1	1.052	0.3650
How many grams of fiber do you need each day to stay healthy?	167	20.6	378	47.3	3.449	<0.0000001

Bolded P-values are significant at the <0.05 level

Arizona Fruits and Veggies - More Matters™ Class Evaluation
2009-2010 School Year

Table 3 shows the Arizona students recent fruit and vegetable consumption, recognition of nutritional education logos and confidence in preparing fruit and vegetable snacks. Five of the seven questions showed a significant difference between the pre- and post-survey. The largest difference seen was in the Fruit and Veggie - More Matters™ logo recognition question. Students were more than 4 times more likely to have seen the logo after participating in the FVMM course. The odds that a student ate a fruit the day before the post-survey was higher than the odds that the students ate a vegetable the day before the post-survey, although both showed a significant difference.

Table 3. Arizona Students Consumption and Preparation of Fruits and Vegetables and Recognition of Nutritional Program Logos Before and After Participating in the Fruits and Veggies More Matters™ Classes, 2009-2010						
Question	Pre-survey n=810		Post-survey n=800		Change from Pre- to Post-survey	
	n	%	n	%	Odds Ratio	P-value
Did you eat fruit yesterday? (yes responses)	592	74.8	646	82.4	1.581	0.0001079
Did you eat a vegetable yesterday? (yes responses)	514	64.6	575	72.6	1.454	0.0002846
How sure are you that you can fix fruit snacks at home? (<u>very sure</u> , <u>sure</u> , not sure)	650	80.3	681	85.1	1.314	0.02286
How sure are you that you can fix vegetable snacks at home? (<u>very sure</u> , <u>sure</u> , not sure)	586	72.4	617	77.1	1.243	0.03161
Have you seen the Fruits and Veggies More Matters Logo? (yes responses)	644	84.9	731	96.2	4.501	<0.0000001
Have you seen the Mypyramid.gov logo? (yes responses)	675	89.9	669	92.3	0.05345	1.345
Have you seen the Bobby B. Well logo? (yes responses)	555	75.9	606	85.4	1.848	0.000003056
Bolded P-values are significant at the <0.05 level						

Arizona Fruits and Veggies - More Matters™ Class Evaluation
2009-2010 School Year

Table 4 shows the Arizona students preference for the selected fruits and vegetables. The only fruit or vegetable with a significant difference in preference between the pre-and the post-survey was preference for broccoli. Even though there was no significant difference in the change in preference from pre-to post-survey, the item with the highest percentage of students that liked to eat it was watermelon.

Table 4. Arizona Students Preference for Eating Selected Fruits and Vegetables Before and After Participating in the Fruits and Veggies More Matters™ Classes, 2009-2010						
Question	Pre-survey n=810		Post-survey n=800		Change from Pre- to Post-survey	
	n	%	n	%	Odds Ratio	P-value
For broccoli you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	588	72.6	624	78.0	1.333	0.007949
For bananas you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	727	89.8	723	90.4	1.155	0.2130
For kiwi you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	545	67.3	562	70.3	1.152	0.09977
For lettuce you: (<u>like to eat it</u> , do not like to eat it, do not know what it is) (<u>like to eat it</u> , do not like to eat it, do not know what it is)	557	68.8	570	71.3	1.167	0.08494
For oranges you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	725	89.5	723	90.4	1.211	0.1549
For carrots you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	652	80.5	668	83.5	1.315	0.02582
For watermelon you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	753	93.0	749	93.6	1.067	0.3849
For tomatoes you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	410	50.6	417	52.1	1.07	0.2515
For apples you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	760	93.8	751	93.9	0.9882	0.4806
Bolded P-values are significant at the <0.05 level						

Arizona Fruits and Veggies - More Matters™ Class Evaluation
2009-2010 School Year

Navajo County

Table 5. Characteristics of Navajo County Students Participating in the Fruits and Veggies More Matters™ Classes, 2008-2009		
Characteristic	Number of Students	Percent of Total
Survey		
Pre-survey	254	46.6
Post-survey	291	53.4
Participating Schools		
Income		
Schools with more than 50% of students receiving a free or reduced lunch	4	100
Age*		
7	94	32.3
8	158	54.3
9	33	11.3
10	6	2.1
Gender*		
Boy	145	49.8
Girl	145	49.8
Undefined	1	0.3
Total Pre-/Post-Surveys Received	545	

*Descriptive statistics are based on the highest number of students who took the pre- or post-survey.

During the 2009-2010 school year, 545 pre- and post-surveys were completed. This breaks down to 254 pre-surveys and 291 post-surveys. There were 11 more surveys submitted for the 2009 - 2010 than for the 2008-2009 school year. This translates into a 2.1% increase in survey submission. All participating schools surveyed had at least 50% of students receiving a free or reduced cost lunch through the National School Lunch Program. All students were reported to be in third grade. The average age of the participating students was 7.9 on the pre-survey and 7.8 on the post- survey.

Arizona Fruits and Veggies - More Matters™ Class Evaluation
2009-2010 School Year

Table 6 shows the Navajo county students knowledge of the nutritional benefits of selected foods before and after participating in the FVMM classes. Six of the eight knowledge questions showed a statistically significant knowledge change from the pre- to the post survey. A vast improvement was seen in the correct selection of importance of eating fruits and vegetables with vitamin C. A large improvement was seen in the correct selection of the food that has fiber and in the correct selection of what fiber does in the digestive system.

Table 6. Navajo County Students Knowledge of Nutritional Benefits of Fruits and Vegetables Before and After Participating in the Fruits and Veggies More Matters™ Classes, 2009-2010						
Question	Pre-survey		Post-survey		Change from Pre- to Post-survey	
	n	%	n	%	Odds Ratio	P-value
Which food has fiber?	87	34.3	216	74.2	5.528	<0.0000001
Which food has a lot of vitamin C?	223	87.8	268	92.1	1.62	0.04684
Which food has a lot of vitamin A?	62	24.4	129	44.3	2.466	0.00000580
Why is it important to eat fruits and vegetables with Vitamin A?	129	50.8	209	71.8	2.47	0.00000224
Why is it important to eat fruits and vegetables with Vitamin C?	28	11.0	184	63.2	13.88	<0.0000001
What does fiber do in our digestive system (food tube)?	129	50.8	264	90.7	9.475	<0.0000001
How can eating more fruits and vegetables help you?	228	89.8	253	86.9	0.7592	0.1546
How many grams of fiber do you need each day to stay healthy?	77	30.3	177	60.8	3.569	<0.0000001
Bolded P-values are significant at the <0.05 level						

Arizona Fruits and Veggies - More Matters™ Class Evaluation
2009-2010 School Year

Table 7 shows the Navajo county students recent fruit and vegetable consumption, recognition of nutritional education logos and confidence in preparing fruit and vegetable snacks. Three of the seven questions showed a significant difference. The largest difference seen was in the Fruit and Veggie - More Matters™ logo recognition question. Students were almost seven times more likely to have seen the logo after participating in the FVMM course. There was a significant difference in students who ate a vegetable the day before the post-survey.

Table 7. Navajo County Students Consumption and Preparation of Fruits and Vegetables and Recognition of Nutritional Program Logos Before and After Participating in the Fruits and Veggies More Matters™ Classes, 2009-2010						
Question	Pre-survey n=254		Post-survey n=291		Change from Pre- to Post-survey	
	n	%	n	%	Odds Ratio	P-value
Did you eat fruit yesterday? (yes responses)	201	80.7	244	85.6	1.421	0.06518
Did you eat a vegetable yesterday? (yes responses)	170	68.0	230	79.9	1.647	0.006413
How sure are you that you can fix fruit snacks at home? (<u>very sure</u> , <u>sure</u> , not sure)	213	83.9	249	85.6	1.086	0.3668
How sure are you that you can fix vegetable snacks at home? (<u>very sure</u> , <u>sure</u> , not sure)	187	73.6	230	79.0	1.353	0.06865
Have you seen the fruits and veggies more matters logo? (yes responses)	185	76.1	261	95.6	6.819	<0.000001
Have you seen the Mypyramid.gov logo? (yes responses)	219	90.9	248	94.3	1.661	0.07045
Have you seen the Bobby B. Well logo? (yes responses)	180	75.0	215	83.7	1.706	0.008468
Bolded P-values are significant at the <0.05 level						

Arizona Fruits and Veggies - More Matters™ Class Evaluation
2009-2010 School Year

Table 8 shows the Navajo county students preference for the selected fruits and vegetables. Even though there was no significant difference in the change in preference from the pre-to post-survey for any of the selected fruits or vegetables, the item with the highest percentage of students that liked to eat it was watermelon.

Question	Pre-survey n=254		Post-survey n=291		Change from Pre- to Post-survey	
	n	%	n	%	Odds Ratio	P-value
For broccoli you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	187	73.6	226	77.7	1.248	0.1393
For bananas you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	229	90.2	269	92.4	1.762	0.04376
For kiwi you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	183	72.0	211	72.5	1.06	0.3840
For lettuce you: (<u>like to eat it</u> , do not like to eat it, do not know what it is) (<u>like to eat it</u> , do not like to eat it, do not know what it is)	185	72.8	211	72.5	1.062	0.09512
For oranges you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	231	90.9	264	90.7	1.257	0.2381
For carrots you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	218	85.8	251	86.3	1.305	0.1590
For watermelon you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	243	95.7	277	95.2	1.045	0.4590
For tomatoes you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	143	56.3	163	56.0	1.027	0.4398
For apples you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	245	96.5	274	94.2	0.7743	0.2811

Bolded P-values are significant at the <0.05 level

Arizona Fruits and Veggies - More Matters™ Class Evaluation
2009-2010 School Year

Yuma County

Table 9. Characteristics of Yuma County Students Participating in the Fruits and Veggies - More Matters™ Classes, 2008-2009		
Characteristic	Number of Students	Percent of Total
Survey		
Pre-survey	556	52.2
Post-survey	509	47.8
Participating Schools		
Income		
Schools with more than 50% of students receiving a free or reduced lunch	9	100
Age*		
7	8	1.4
8	196	35.3
9	315	56.7
10	26	4.7
Undefined	11	2.0
Gender*		
Boy	289	52.0
Girl	260	46.8
Undefined	7	1.3
Total Pre-/Post-Surveys Received	1,065	

*Descriptive statistics are based on the highest number of students who took the pre- or post-survey.

During the 2009-2010 school year 1,065 pre- and post-surveys were completed. This breaks down to 556 pre-surveys and 509 post-surveys. There were 203 more surveys submitted for the 2009 - 2010 than for the 2008-2009 school year. This translates into a 23.5% increase in survey submission. All participating schools surveyed had at least 50% of students receiving a free or reduced cost lunch through the National School Lunch Program. All students were reported to be in third grade. The average age of the participating students was 8.7 on both the pre- and post-survey.

Arizona Fruits and Veggies - More Matters™ Class Evaluation
2009-2010 School Year

Table 10 shows the Yuma county students knowledge of the nutritional benefits of selected foods before and after participating in the FVMM classes. Seven of the eight knowledge questions showed a statistically significant knowledge change from the pre- to the post-survey. A vast improvement was seen in the correct selection of importance of eating fruits and vegetables with vitamin C. A large improvement was seen in the correct selection of the food that has fiber and in the correct selection of what fiber does in the digestive system.

Table 10. Yuma County Students Knowledge of Nutritional Benefits of Fruits and Vegetables Before and After Participating in the Fruits and Veggies More Matters™ Classes, 2009-2010						
Question	Pre-survey		Post-survey		Change from Pre- to Post-survey	
	n	%	n	%	Odds Ratio	P-value
Which food has fiber?	158	28.4	393	77.2	8.534	<0.000001
Which food has a lot of vitamin C?	430	77.3	460	90.4	2.751	<0.000001
Which food has a lot of vitamin A?	89	16.0	184	36.2	2.971	<0.000001
Why is it important to eat fruits and vegetables with Vitamin A?	263	47.3	410	80.6	4.614	<0.000001
Why is it important to eat fruits and vegetables with Vitamin C?	41	7.4	297	58.4	17.6	<0.000001
What does fiber do in our digestive system (food tube)?	282	50.7	436	85.7	5.803	<0.000001
How can eating more fruits and vegetables help you?	473	85.1	444	87.2	1.199	0.1556
How many grams of fiber do you need each day to stay healthy?	90	16.2	201	39.5	3.379	<0.000001
Bolded P-values are significant at the <0.05 level						

Arizona Fruits and Veggies - More Matters™ Class Evaluation
2009-2010 School Year

Table 11 shows the Yuma county students recent fruit and vegetable consumption, recognition of nutritional education logos and confidence in preparing fruit and vegetable snacks. Five of the seven questions showed a significant difference. The largest difference seen was in the Fruit and Veggie - More Matters™ logo recognition question. Students were more than three times more likely to have seen the logo after participating in the FVMM course. The odds that a student ate a fruit the day before the post-survey was higher than the odds that the students ate a vegetable the day before the post-survey, although both showed a significant difference.

Table 11. Yuma County Students Consumption and Preparation of Fruits and Vegetables and Recognition of Nutritional Program Logos Before and After Participating in the Fruits and Veggies More Matters™ Classes, 2009-2010						
Question	Pre-survey n=556		Post-survey n=509		Change from Pre- to Post-survey	
	n	%	n	%	Odds Ratio	P-value
Did you eat fruit yesterday? (yes responses)	391	72.0	402	80.6	1.611	0.0006093
Did you eat a vegetable yesterday? (yes responses)	344	63.0	345	68.5	1.274	0.03165
How sure are you that you can fix fruit snacks at home? (very sure, sure, not sure)	437	78.6	432	84.9	1.428	0.01653
How sure are you that you can fix vegetable snacks at home? (very sure, sure, not sure)	399	71.8	387	76.0	1.185	0.1183
Have you seen the Fruits and Veggies More Matters logo? (yes responses)	459	89.0	470	96.5	3.433	0.000002381
Have you seen the Mypyramid.gov logo? (yes responses)	456	9.4	421	91.1	1.216	0.1845
Have you seen the Bobby B. Well logo? (yes responses)	375	76.4	391	86.3	1.951	0.00004807
Bolded P-values are significant at the <0.05 level						

Arizona Fruits and Veggies - More Matters™ Class Evaluation
2009-2010 School Year

Table 12 shows the Yuma county students preference for the selected fruits and vegetables. The only fruit or vegetable with a significant difference in preference between the pre- and the post-survey was preference for broccoli. Even though there was no significant difference in the change in preference from the pre to post survey, the item with the highest percentage of students that liked to eat it was watermelon.

Table 12. Yuma County Students Preference for Eating Selected Fruits and Vegetables Before and After Participating in the Fruits and Veggies More Matters™ Classes, 2009-2010						
Question	Pre-survey n=556		Post-survey n=509		Change from Pre- to Post-survey	
	n	%	n	%	Odds Ratio	P-value
For broccoli you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	401	72.1	398	78.2	1.382	0.01420
For bananas you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	498	89.6	454	89.2	0.9513	0.4087
For kiwi you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	362	65.1	351	69.0	1.179	0.1092
For lettuce you: (<u>like to eat it</u> , do not like to eat it, do not know what it is) (<u>like to eat it</u> , do not like to eat it, do not know what it is)	372	66.9	359	70.5	1.21	0.08275
For oranges you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	494	88.8	459	90.2	1.187	0.2293
For carrots you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	434	78.1	417	81.9	1.29	0.06289
For watermelon you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	510	91.7	472	92.7	1.053	0.4218
For tomatoes you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	267	48.0	254	49.9	1.072	0.2884
For apples you: (<u>like to eat it</u> , do not like to eat it, do not know what it is)	515	92.6	477	93.7	1.095	0.09298

Bolded P-values are significant at the <0.05 level

Arizona Fruits and Veggies - More Matters™ Class Evaluation
2009-2010 School Year

Appendix A
Sample Survey
2009-2010 School Year

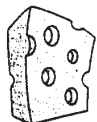
1. How **old** are you?
 7 8 9 10

2. Are you a **boy** or a **girl**?
 Boy Girl

3. Did you eat fruit yesterday?
 Yes No

4. Did you eat a vegetable yesterday?
 Yes No

5. Which food has fiber?



Cheese



Pinto beans



Chicken



Eggs

6. Which food has a lot of Vitamin C?



Eggs



Oranges



Pinto Beans



Cheese

7. Which food has a lot of Vitamin A?



Chicken



Apples



Carrots



Milk

8. How sure are you that you can fix fruit snacks at home?
 Very Sure Sure Not Sure

9. How sure are you that you can fix vegetable snacks at home?
 Very Sure Sure Not Sure

10. Why is it important to eat fruits and vegetables with Vitamin A?
 Keeps your eyes and skin healthy Makes you taller
 Keeps your teeth white Don't Know

11. Why is it important to eat fruits and vegetables with Vitamin C?
 Heals cuts and wounds Builds strong bones
 Makes your hair shiny Don't Know

12. What does fiber do in our digestive system (food tube)?
 Cleans/Scrubs Makes a mess Makes you sick Don't Know
13. How can eating more fruits and vegetables help you?
 Helps you stay healthy Helps your hearing
 Keeps your teeth white Don't Know
14. How many grams of fiber do you need each day to stay healthy?
 5 10 25 Don't Know

15. Have you seen the logo before today?



Yes No



Yes No



Yes No

16. For each food pictured:

Fill in the circle for 😊 if you like to eat it.

Fill in the circle for ☹️ if you do not like to eat it.

Fill in the circle for 🤔 if you do not know what it is.



😊 ☹️ 🤔



😊 ☹️ 🤔



😊 ☹️ 🤔



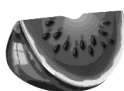
😊 ☹️ 🤔



😊 ☹️ 🤔



😊 ☹️ 🤔



😊 ☹️ 🤔



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😊 ☹️ 🤔

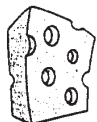
1. How **old** are you?
 7 8 9 10

2. Are you a **boy** or a **girl**?
 Boy Girl

3. Did you eat fruit yesterday?
 Yes No

4. Did you eat a vegetable yesterday?
 Yes No

5. Which food has fiber?



Cheese



Pinto beans



Chicken



Eggs

6. Which food has a lot of Vitamin C?



Eggs



Oranges



Pinto Beans



Cheese

7. Which food has a lot of Vitamin A?



Chicken



Apples



Carrots



Milk

8. How sure are you that you can fix fruit snacks at home?
 Very Sure Sure Not Sure

9. How sure are you that you can fix vegetable snacks at home?
 Very Sure Sure Not Sure

10. Why is it important to eat fruits and vegetables with Vitamin A?
 Keeps your eyes and skin healthy Makes you taller
 Keeps your teeth white Don't Know

11. Why is it important to eat fruits and vegetables with Vitamin C?
 Heals cuts and wounds Builds strong bones
 Makes your hair shiny Don't Know

12. What does fiber do in our digestive system (food tube)?
 Cleans/Scrubs Makes a mess Makes you sick Don't Know
13. How can eating more fruits and vegetables help you?
 Helps you stay healthy Helps your hearing
 Keeps your teeth white Don't Know
14. How many grams of fiber do you need each day to stay healthy?
 5 10 25 Don't Know

15. Have you seen the logo before today?



Yes No



Yes No



Yes No

16. For each food pictured:

Fill in the circle for 😊 if you like to eat it.

Fill in the circle for ☹️ if you do not like to eat it.

Fill in the circle for 🤔 if you do not know what it is.



😊 ☹️ 🤔



😊 ☹️ 🤔



😊 ☹️ 🤔



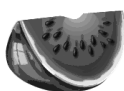
😊 ☹️ 🤔



😊 ☹️ 🤔



😊 ☹️ 🤔



😊 ☹️ 🤔



😊 ☹️ 🤔



😊 ☹️ 🤔

Appendix E
“Fruits and Veggies More Matters”
Post Campaign Research Report



**Arizona Department of Health Services
(ADHS)/
Arizona Nutrition Network (AzNN)
“Fruits and Veggies More Matters”
Post Campaign Research Report#**

Report Prepared for:
Arizona Department of Health Services / AzNN

February 2010

Table of Contents

I. Background & Methodology	2
II. Executive Summary.....	6
III. Summary of Findings	8
A. Unaided Ad Awareness and Messages - <i>FVMM</i>	8
B. Aided/Total Ad Awareness – <i>FVMM</i>	12
C. Main Message – <i>FVMM</i>	15
D. Media Recall.....	19
E. Evaluation of Advertising	22
F. “Stage of Readiness”	29
G. Influence of <i>FVMM</i> Advertising	32
H. Physical Activities	33
I. Milk Consumption	37
J. Whole Grain Foods	40
K. Grocery Shopping.....	45

Appendices:

A. Questionnaire

B. Data Tables##

#

I. Background & Methodology

The Arizona Nutrition Network (AzNN), a public and private partnership led by the Arizona Department of Health Services' Bureau of USDA Nutrition Programs, was developed to educate all Arizonans, especially lower income residents, on the importance of nutrition and physical activity. The organization's mission is to shape food consumption in a positive way, promote healthy behaviors, and reduce disease among specific target groups – in this case, Supplemental Nutrition Assistance Program (SNAP) applicants and participants living in Arizona. AzNN accomplishes this by promoting basic, consistent messages that help the target audience choose diets rich in nutrients, which include increased consumption of fruits and vegetables, drinking 1% low fat and fat free milk, and family togetherness.

Moses Anshell has developed social marketing campaigns around the three messages of increased consumption of fruits and vegetables, drinking 1% low fat or fat free milk, and family togetherness. These campaigns are designed to inform and educate the target market about the importance and benefits of living a healthier lifestyle with a goal to influence their nutrition choices. When appropriate, campaign materials are in both English and Spanish.

The primary target for this campaign is women ages 18 to 49 with children ages 2 to 11, with household income equal to or less than 130% of federal poverty level. The secondary target is children 2 to 11.

The subject of this research report is the 2009 *Fruits & Veggies More Matters (FVMM)* campaign, which focuses on eating more fruits and veggies. The campaign, which ran October through December 2009, was statewide and included the following media and projects:

- Television
- Outdoor (Billboards)
- Door hangers
- Website (www.eatwellbewell.org)
- Educational reinforcements (e.g., nutrition-based games and toys)
- Collateral items (e.g., recipe cards, Fun Food News Newsletter)
- Posters in government offices
- Community events (Event in a Box)

To test awareness and effectiveness of this campaign, Moses Anshell contracted with WestGroup Research to conduct a study with the target population. The research objectives were as follows:

- Measure awareness of the campaign
- Evaluate exposure to the campaign
- Gauge effectiveness of the advertising

Intercept interviews were conducted with 803 women between the ages of 18 and 49 who have children ages 2 to 11. The study was conducted at Food City locations in Phoenix, Tucson, Yuma, and Cottonwood, at a Bashas location in Flagstaff, and at the DES office in Winslow. All interviews were completed between January 16 and January 28, 2010.

The following table lists the specific locations of the intercepts and the number of completed interviews at each location. (These locations were selected based on the demographics of the zip codes in which they reside.)

City	Location/Address	Sample Size	Interview Dates
Phoenix	Food City: 1450 N. Dysart 7333 W. Thomas 2124 E. McDowell 4727 E. Southern	300	January 2, 3, 16
Tucson	Food City: 1221 W. Irvington 3030 E. 22 nd Street 3923 N. Flowing Wells	304	January 18 - 21
Yuma	Food City: 1240 W. 8th Street 2600 W. 16 th Street	101	January 5 - 7
Flagstaff	Bashas: 1000 N. Humphreys	98	January 12 - 14
Winslow	DES Office: 319 E. Third Street		
Cottonwood	Food City: 1502 E. Highway 89A		

All survey participants met the following screening criteria:

- S1. Do you have any children between the ages of 2 and 11?
 Yes
 No (THANK & TERMINATE)
- S2. Which of the following categories best describes your age?
 18 to 25
 26 to 35
 36 to 45
 45 to 49
 over 49 (THANK & TERMINATE)
- S3. How many people are there living in your household?
 2
 3

- _____ 4
- _____ 5
- _____ 6 or more

S4. What is your household income? You can give that to me as a weekly income, every 2 weeks, monthly, or yearly income. *(Must be under these to qualify.)*

Family Size	Weekly Income	2-Week Income	Monthly Income	Yearly Income
1	\$ 385	\$ 770	\$1,670	\$20,036
2	\$ 518	\$1,036	\$2,246	\$26,955
3	\$ 651	\$1,302	\$2,823	\$33,874
4	\$ 784	\$1,568	\$3,399	\$40,793
5	\$ 917	\$1,834	\$3,976	\$47,712
6	\$1,050	\$2,101	\$4,553	\$54,631

Participants had the option of completing the interview in English or Spanish and were given a \$5 Food City/Bashas gift certificate or a \$5 bill as a “thank you.”

It is important to note that although this information is quantitative, it is not necessarily representative of all low-income women between 18 and 49 years old in Arizona. To be representative of that population, respondents would have to have been selected at random. That is, each person in the population would have had an equal chance of being included in the sample. These intercepts were conducted using a convenience sample (e.g., those who shop at Food City). Though this sampling technique is appropriate to meet the study objectives (within the budget guidelines), it does introduce a sampling bias and should be considered when interpreting the findings.

Respondent Profile

	Total n=803	Phoenix n=300	Tucson n=304	No. AZ n=98	Yuma n=101
Age					
18 – 25	19%	19%	18%	19%	19%
26 – 35	48%	50%	49%	38%	44%
36 – 45	27%	22%	26%	37%	31%
46 – 49	<u>6%</u>	<u>9%</u>	<u>7%</u>	<u>6%</u>	<u>6%</u>
Total	100%	100%	100%	100%	100%
Ethnicity					
Hispanic	75%	80%	85%	33%	78%
Caucasian	11%	6%	9%	26%	14%
Native American	6%	4%	1%	35%	1%
African American	4%	6%	2%	0%	3%
Other	<u>4%</u>	<u>4%</u>	<u>3%</u>	<u>6%</u>	<u>4%</u>
Total	100%	100%	100%	100%	100%
Education					
8 th Grade or less	10%	12%	9%	6%	8%
Some High School	19%	21%	19%	14%	15%
GED/HS Grad	40%	39%	41%	35%	48%
Some College+	<u>31%</u>	<u>28%</u>	<u>31%</u>	<u>45%</u>	<u>29%</u>
Total	100%	100%	100%	100%	100%
Food Assistance*					
Yes	62%	56%	65%	61%	70%
No	36%	43%	32 %	34%	29%
DK/Refused	<u>2%</u>	<u>1%</u>	<u>3%</u>	<u>5%</u>	<u>1%</u>
Total	100%	100%	100%	100%	100%
Food Stamps**	72%	75%	61%	85%	81%
WIC	52%	52%	50%	57%	51%
Other	64%	54%	69%	80%	61%

* Do you or anyone in your family participate in food assistance programs?

** If yes, which ones? Summer Food Service Program, Food Stamps, School Lunch/School Breakfast, WIC, CSFP, Other

II. Executive Summary

FVMM Advertising

- **Over four in ten moms (43%) recalled the FVMM campaign.** Five percent (5%) of all moms interviewed recalled specific elements of the campaign without being prompted. This compares to **44% of moms who recalled the 2009 Go Low campaign** and **46% of moms who recalled the 2008 FVMM campaign**. (There is no statistically significant difference in the three awareness measures.)
 - *When asked what they remember about healthy foods advertising, one in five moms said something **about eating lots of fruits and veggies**. And, when asked about advertising about fruits and veggies, over half (53%) said something similar (**eat lots of fruits and veggies**). In addition, 25% said **fruit is healthy for you**, with 21% saying *eat 5 A Day*.*
- **The dominant message respondents recall** once they have seen the FVMM materials is to *eat more fruits and vegetables* (60%) and/or *eat healthy or healthier/better nutrition for kids* (58%). Interestingly, at least one in four moms agree the main message relates to *kids and fruits and veggies, nutrition for kids, healthy kids, and getting kids involved in meal preparation*.
- **Most mothers (92%) like the advertising and do so for a variety of reasons.** The top three reasons moms like the ad include: *it says to eat fruits and vegetables* (23%), *it says to eat healthy* (22%) and, *it gets kids involved with meal shopping and preparation* (18%).
- **Overwhelmingly, women find the advertising easy to understand, with 98% rating it as such.** In addition, nearly one half (47%) agree it is better than other advertising about the importance of eating fruits and vegetables.
- **TV is the #1 medium, with 86% of those who had seen or heard FVMM advertising saying they had seen the ads on TV.** Government office was mentioned by more than one-half of those interviewed, followed by radio, a website, door hangers, and billboards.

Stages of Change

- **When asked which of five *Stages of Change* statements best describes them, just over one half (53%) of the women interviewed said they already eat three or more servings of fruits and vegetables daily, putting them in the *Maintenance stage*.** An additional 39% said they are trying to eat more fruits and veggies now (*Action stage*). Seven percent (7%) say they definitely *plan to eat more fruits and veggies in the next month (Preparation)*, or are *planning to start eating more within six months (Contemplation)*. Just 1% say they are not thinking about it, putting them in the *Pre-contemplation Stage*.

- **Nearly nine in ten (88%) of those who are currently trying, planning or thinking about trying to eat more fruits and vegetables in the near future maintain the *FVMM* campaign influenced their behavior or thought process a great deal.**

Physical Activities

- Eating meals is the #1 indoor activity moms and children do together – 98% say they do this. This is followed closely by housework (91%) and playing video/board games (90%). Dancing (77%) and baking/cooking (68%) follow.
- Walking is the most popular outdoor activity mothers do with their children, with 94% of moms saying they do this. Running (84%) and playing ball (84%) are the next two most common activities.

Milk Consumption

- Mothers are most likely to report they and their children drink 2% milk, with half (49%) of those interviewed saying they prefer this kind of milk. Whole milk (25%) and 1% low fat milk (23%) are next most popular among moms. **Consumption of whole milk has decreased slightly compared to last year (25%, down from 31%), while consumption of 1% low fat milk has increased (23%, up from 12%). Consumption of 2% milk has remained the same.**

Whole Grain Foods

- Corn tortillas are the most common whole grain food purchased by mothers (93%), followed closely by 100% whole-wheat bread (89%) and oatmeal (83%). Purchase behavior has remained constant over the past couple of years.
- The primary reasons women do not buy more whole grain food are because they feel they already eat enough of them (38%) and/or they do not like the taste (35%).

Grocery Shopping

- **Over half (56%) of mothers say veggies are among the three things most often on their grocery lists, while slightly fewer (48%) say fruit.**

III. Summary of Findings

A. Unaided Ad Awareness and Messages – FVMM

#

1. Eating Healthy Foods Advertising & Message Recall

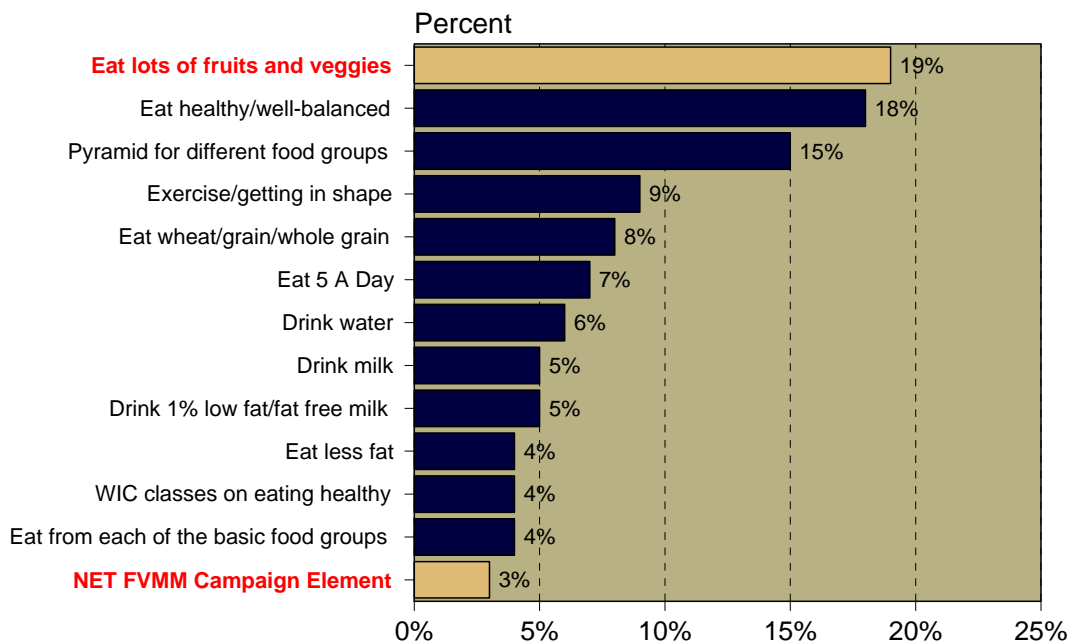
#

Prior to discussing advertising specifically related to the FVMM campaign, participants were asked if they had seen or heard any advertising or public service announcements about *eating healthy foods*. Six in ten (59%) said they had, with 38% saying they had not and 3% saying they did not know.

When asked what they remember about *healthy foods* advertising, women were most likely to say the advertising was about *eating lots of fruits and vegetables* (19%). In addition to this general statement about fruits and veggies, **3% of those aware of healthy eating advertising said something specific to this FVMM campaign** (e.g., wash your fruits and vegetables, don't give up trying to get your kids to eat vegetables, fruit is nature's candy, get kids involved in preparing/shopping for fruits and veggies).

Healthy Eating Message Recall

What do you remember about the advertising?



n=466 (Among those aware of healthy eating advertising.)

Demographic Differences:

Moms who consider both English and Spanish their primary language are more likely to recall the *eat fruits and vegetables* message than English-speaking moms.

**Table 1: Message Recall - Healthy Foods
Top Mentions by City, Ethnicity, and Primary Language**

Message	City of Residence				Ethnicity			Primary Language		
	Phx n=224	Tuc n=138	NoAZ n=57	Yuma n=47	White N=46	Hisp n=346	Am Ind n=34	Eng n=197	Span n=108	Both n=157
Eat fruits and vegetables	20%	16%	23%	15%	15%	21%	15%	<u>13%</u>	19%	24%
NET FVMM campaign elements	1%	3%	5%	4%	4%	2%	6%	4%	2%	2%

BOLD indicates statistically higher percentage than underlined comparative group(s).

2. *Eating Fruits and Vegetables – Message Recall*

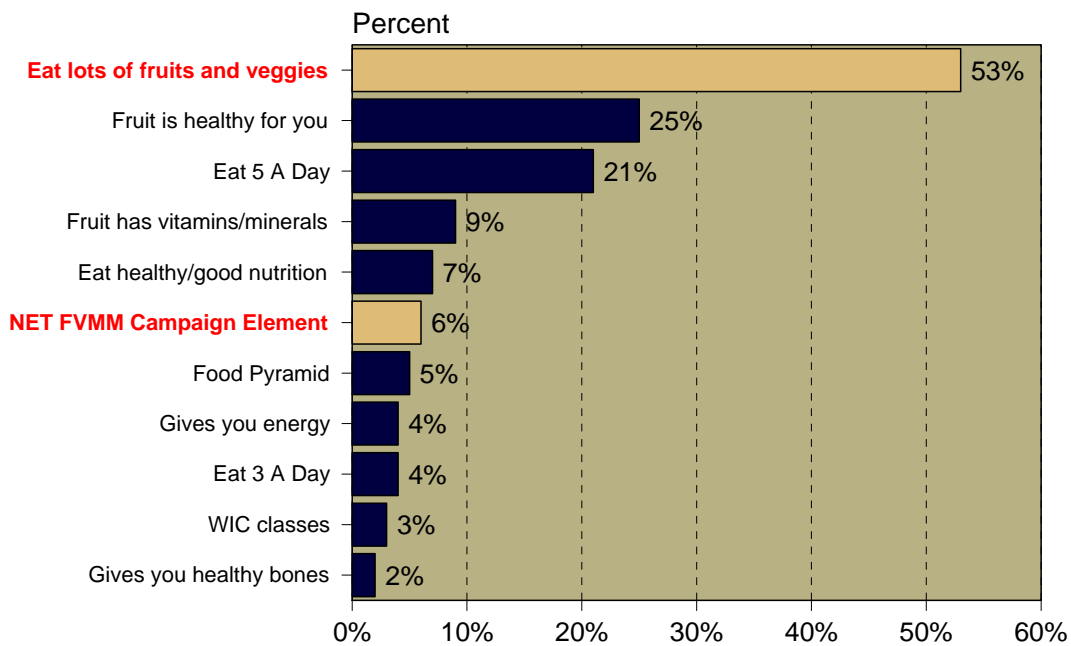
Women who did not mention an element of the *FVMM* campaign were asked a more specific question about whether or not they recall seeing or hearing any advertising or public service announcements about *eating fruits and vegetables*. At this point, nearly six in ten (57%) mothers said they had. These respondents were asked about the main message of the ads.

Again, *eat lots of fruits and vegetables* was mentioned most frequently (53%), followed by *fruit is healthy for you* (25%), and *eat 5 a day* (21%). At this point, **6% of moms recalled a specific element of the FVMM campaign.**

#

Fruits & Veggies Message Recall

What do you remember about the advertising?



n=423 (Among those aware of healthy eating advertising.)

Demographic Differences:

Consistent with the *eating healthy foods* message recall, moms who consider both English and Spanish their primary language are more likely to recall the *eat fruits and vegetables* message than English-speaking moms.

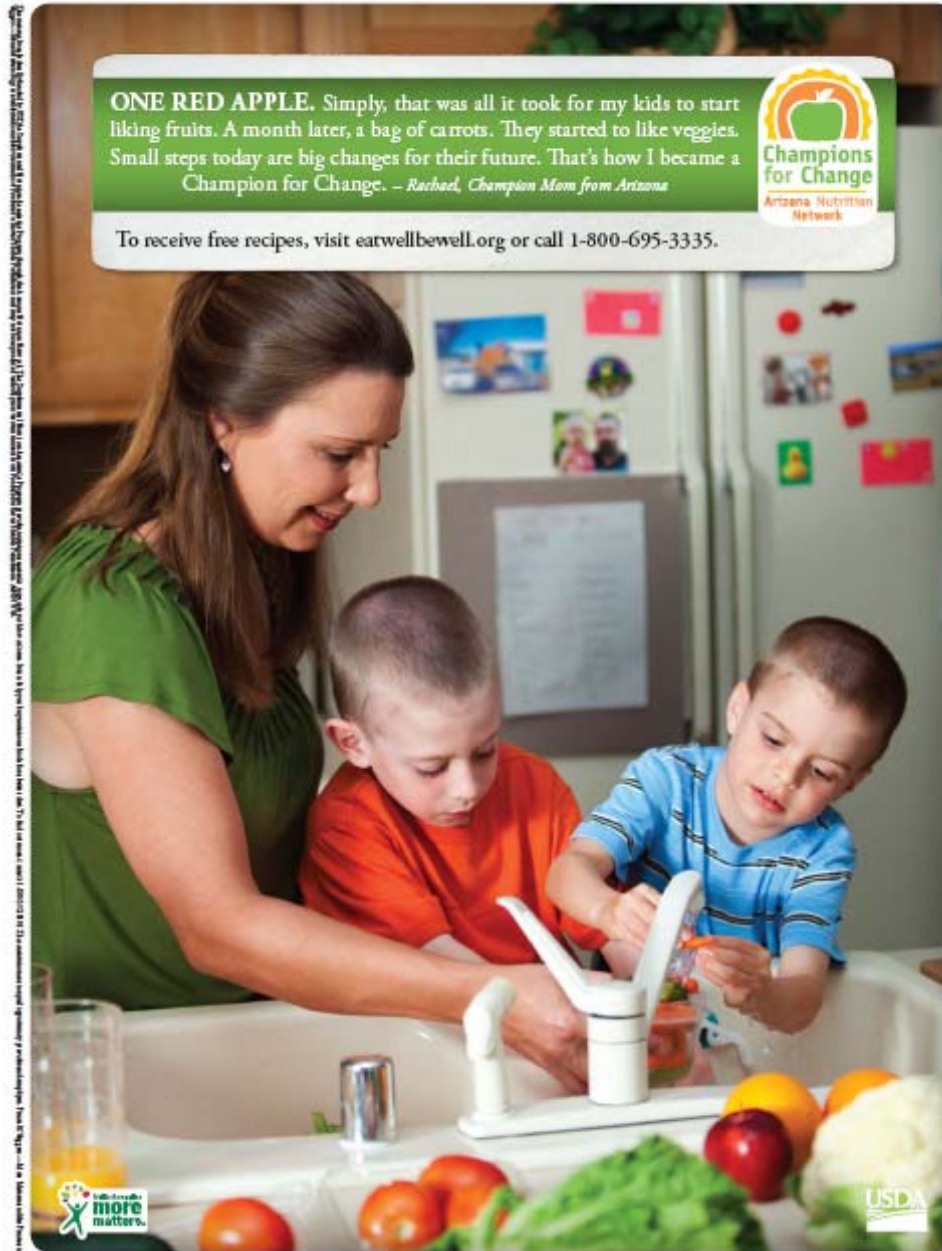
**Table 2: Message Recall – Eating Fruits & Vegetables
Top Mentions by City, Ethnicity, and Primary Language**

Message	City of Residence				Ethnicity			Primary Language		
	Phx n=173	Tuc n=143	NoAZ n=66	Yuma n=41	White N=47	Hisp n=315	Am Ind n=32	Eng n=164	Span n=117	Both n=139
Eat fruits and vegetables	54%	57%	47%	46%	49%	55%	50%	<u>41%</u>	62%	60%
NET FVMM campaign elements	5%	8%	8%	2%	4%	7%	3%	<u>3%</u>	10%	7%

BOLD indicates statistically higher percentage than underlined comparative group(s).

B. Aided/Total Ad Awareness - FVMM

Respondents were then shown a DVD of the thirty-second TV ad as well as a picture of the campaign's door hanger and poster in either English or Spanish, depending on their language preference.



ELLOS EMPEZABAN A DAR SUS PRIMEROS PASOS Y YO TAMBIÉN!
 Para ser una mejor mamá. Para alimentarlos con comidas saludables. Un día, traje manzanas a casa. Una semana después traje paltos como bocadillo. Pléense en grande, comience poco a poco. Sea una Campeona del Cambio.
 – Viviana, Mamá Campeona de Arizona

Para recibir recetas gratis, visite comesanovivemejor.org o llame al 1-800-695-3335.

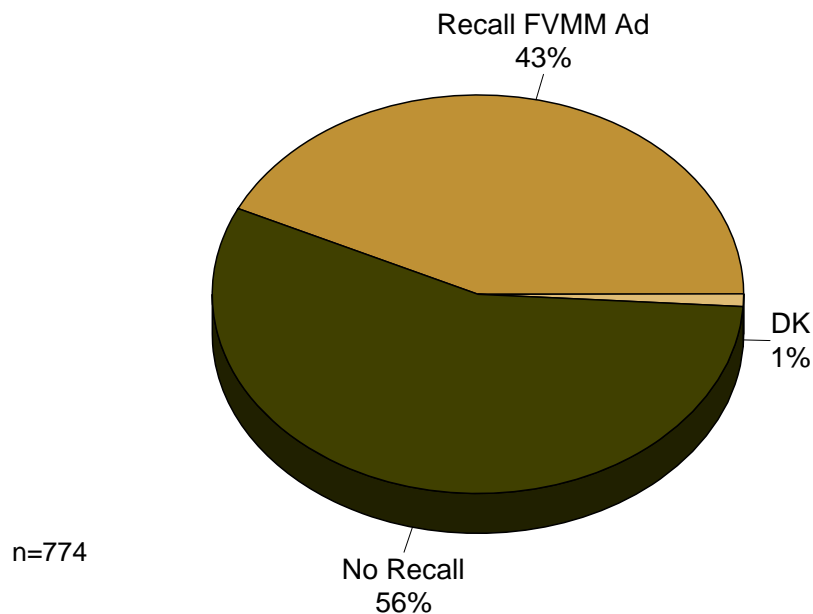
Campeones del Cambio
 La Red de Nutrición de Arizona

Let's make more matter.

USDA

They were then asked “Do you recall seeing this or something that looked very similar?”
 A total of 43% of all women interviewed said they had, with 56% *saying they had not*.

Awareness of FVMM Advertising



Demographic Differences:

Moms who consider Spanish their primary language were significantly more likely than English-speaking moms and moms who consider both languages to be primary to have seen the FVMM ads. Similarly, Tucson residents were significantly more likely than those in other cities to have seen the ads once prompted.

**Table 3: Aware of FVMM Advertising
By City, Ethnicity, and Primary Language**

Aware	City of Residence				Ethnicity			Primary Language		
	Phx n=289	Tuc n=294	NoAZ n=92	Yuma n=99	White N=84	Hisp n=583	Am Ind n=46	Eng n=304	Span n=208	Both n=254
Yes	41%	50%	46%	<u>24%</u>	<u>30%</u>	47%	41%	<u>32%</u>	58%	<u>45%</u>

BOLD indicates statistically higher percentage than underlined comparative group(s).

C. Main Message – FVMM

#

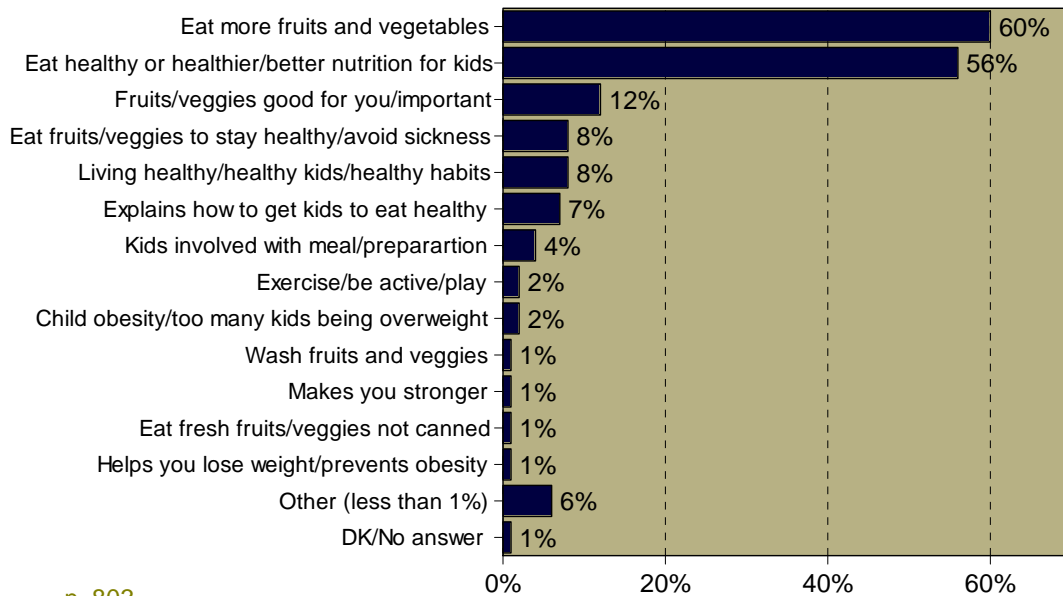
1. Main Message of Advertising

Once they had viewed the TV spot and the FVMM poster, women were asked what they consider to be the main message of the advertising. The dominant messages participants recall include: *eat more fruits and vegetables* (60%) and/or *eat healthy or healthier/better nutrition for kids* (58%).

The vast majority of comments revolve around the importance of eating healthy and eating fruits and vegetables. In addition, many moms mentioned *getting kids to eat healthy/eat fruits and veggies*, as well as *getting children more involved in meal preparation*. A few moms mentioned *exercise/being active* and *losing weight or concerns over obesity* as advertising message themes.

Main Message

What would you say is the main message of this advertising?



Demographic Differences:

Moms in Phoenix and Tucson are significantly more likely than those in the Northern Arizona communities and Yuma to say the message was generally about *eating more fruits and vegetables* and/or about *eating healthy or better nutrition for kids*.

Flagstaff/Winslow/Cottonwood moms are significantly more likely than Phoenix and Tucson moms to find the message to be about the *importance of fruits and veggies*. In addition, moms in Northern Arizona and Phoenix are significantly more likely than Tucson moms to think the main message was about *explaining how to get kids to eat healthy/don't give up*.

The table below summarizes all of the differences by city.

**Table 4: Main Message – FVMM
By City**

Message	Phoenix n=300	Tucson n=304	No. AZ n=98	Yuma n=101
Eat more fruits and vegetables	62%	67%	<u>41%</u>	<u>50%</u>
Eat healthy or healthier/better nutrition for kids	64%	56%	<u>44%</u>	<u>42%</u>
Fruits/veggies good for you/important	<u>9%</u>	<u>9%</u>	22%	16%
Eat fruits/veggies to stay healthy/avoid sickness	9%	10%	5%	<u>3%</u>
Living healthy/healthy kids/healthy habits	6%	10%	<u>3%</u>	8%
Explains how to get kids to eat healthy/don't give up	7%	<u>3%</u>	13%	8%
Kids involved with meal preparation	<u>1%</u>	<u>3%</u>	12%	9%
Exercise/be active/play	2%	3%	1%	1%
Child obesity/too many kids being overweight	2%	2%	2%	--
Wash fruits and veggies	1%	--	5%	1%
Makes you stronger	2%	1%	--	1%
Eat fresh fruits/veggies not canned	1%	1%	1%	1%
Helps you lose weight/prevents obesity	1%	--	4%	1%
Other	9%	5%	8%	3%
DK/No answer	--	<u>1%</u>	--	9%

BOLD indicates statistically higher percentage than underlined comparative group(s).

* May add to more than 100% due to multiple responses.

Hispanics are significantly more likely than American Indians to say the main message was about *eating more fruits and vegetables*.

Moms who are Spanish-speaking or consider both English and Spanish to be their primary language are significantly more likely than English-speaking moms to take away a main message of *eat fruits and veggies to stay healthy* and/or a primary message of *living healthy, healthy kids or healthy habits*. However, English-speaking moms are significantly more likely to perceive the message being about how to get kids to eat healthy.

**Table 5: Main Message – FVMM
By Ethnicity, and Primary Language**

Message	Ethnicity			Primary Language		
	White N=84	Hispanic n=583	American Indian n=46	English n=304	Spanish n=208	Both n=254
Eat more fruits and vegetables	55%	63%	<u>45%</u>	58%	64%	59%
Eat healthy or healthier/better nutrition for kids	55%	57%	47%	57%	49%	60%
Fruits/veggies good for you/important	12%	11%	18%	13%	13%	9%
Eat fruits/veggies to stay healthy/avoid sickness	7%	9%	8%	<u>4%</u>	11%	11%
Living healthy/healthy kids/healthy habits	5%	9%	6%	<u>4%</u>	10%	10%
Explains how to get kids to eat healthy/don't give up	15%	4%	14%	11%	<u>5%</u>	<u>2%</u>
Kids involved with meal preparation	5%	2%	12%	7%	1%	3%
Exercise/be active/play	1%	3%	--	1%	3%	4%
Child obesity/too many kids being overweight	2%	2%	--	2%	2%	2%
Wash fruits and veggies	4%	1%	6%	3%	--	--
Makes you stronger	--	2%	--	--	2%	2%
Eat fresh fruits/veggies not canned	5%	1%	--	2%	--	--
Helps you lose weight/prevents obesity	5%	1%	--	2%	--	1%
Other	1%	7%	6%	6%	6%	8%

BOLD indicates statistically higher percentage than underlined comparative group(s).

* May add to more than 100% due to multiple responses.

2. *Additional Comments about Advertising*

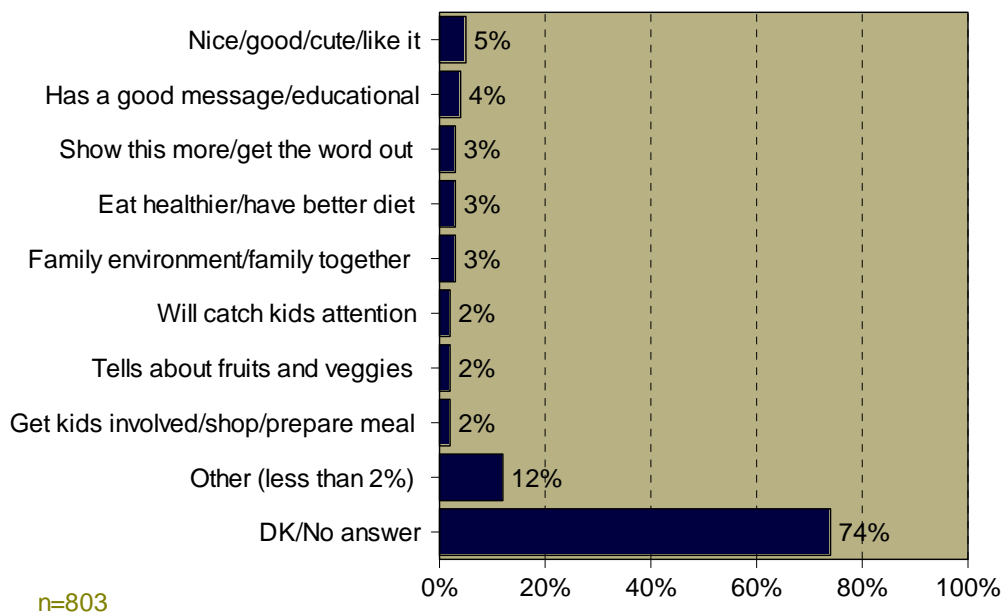
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Participants were asked to share additional comments and opinions about the advertising. While nearly three quarters (74%) had no comments, the remaining 26% mentioned a variety of things. The most prevalent response was that the ad was *nice or good and that they liked it* in general (5%). Four percent (4%) felt it had a *good message or was educational*. This was followed by 3% each for *should be shown more often to help get the word out*, *eat healthier/have better diet*, and *family environment/family together*. #

#

Other Comments about Advertising

What other comments do you have about this advertising?

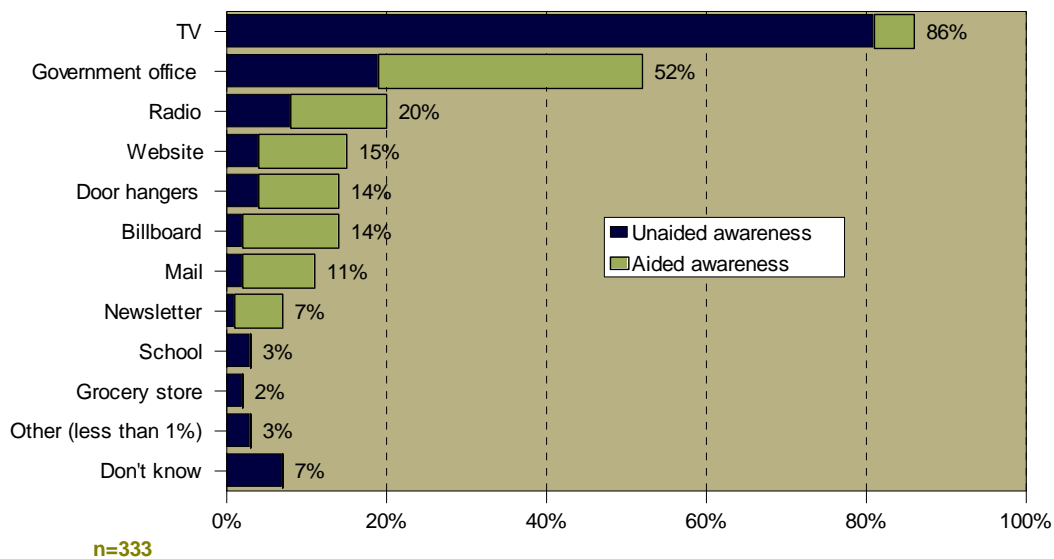


D. Media Recall

Overwhelmingly, respondents most often recalled seeing advertising on TV, with 86% naming this medium when asked where they had seen or heard the advertising. Government office was cited next most frequently, with more than one-half (52%) of survey participants mentioning this. When asked about specific media (*aided recall*), a considerable percentage recalled the messages on the radio (20%), on a website (15%), door hangers (14%), and billboards (14%). Approximately one in ten remembered seeing FVMM messaging on something they received in the mail (11%) or in a newsletter (7%). (Note: It is important to keep in mind that respondents of all ages tend to default to TV when they are unsure of where they have seen or heard advertising.)

Source of FVMM Advertising

Among those who had seen/heard Advertising-Aided or Unaided



Demographic Differences:

Participants in Phoenix and Tucson are more likely than those in Northern Arizona and Yuma to say they saw the *Fruits and Veggies More Matters* advertising on TV. Phoenix and Northern Arizona moms are more likely than Tucson moms to have seen campaign elements at a government office. Radio advertising awareness was highest in Phoenix and Yuma, with Phoenix being significantly higher than in Northern Arizona. Phoenix stands out for awareness of website, billboard and direct mail advertising and is significantly higher than other markets in some cases.

American Indians are significantly more likely than Caucasians and Hispanics to cite being exposed to the campaign at a government office. Moms who consider their primary language to be both Spanish and English are more likely to recall hearing advertising on the radio, seeing billboard ads, and receiving information in the mail. English speaking moms are more likely to cite web-based advertising.

**Table 6: Source of Advertising
By City, Ethnicity, and Primary Language**

Source	City of Residence				Ethnicity			Primary Language		
	Phx n=119	Tuc n=148	NoAZ n=42	Yuma n=24	White N=25	Hisp n=275	Am Ind n=19	Eng n=97	Span n=120	Both n=114
Television	90%	90%	<u>69%</u>	<u>67%</u>	84%	88%	68%	82%	88%	87%
Govt. office	59%	<u>42%</u>	64%	62%	<u>52%</u>	<u>50%</u>	79%	60%	48%	51%
Radio	25%	18%	<u>12%</u>	25%	20%	21%	21%	<u>12%</u>	<u>18%</u>	30%
Website	24%	<u>8%</u>	14%	17%	20%	14%	21%	22%	<u>8%</u>	17%
Door hangers	15%	12%	14%	21%	16%	13%	26%	19%	12%	13%
Billboard	19%	11%	17%	<u>4%</u>	16%	14%	16%	15%	<u>9%</u>	19%
Mail	19%	<u>3%</u>	10%	17%	12%	11%	16%	11%	<u>6%</u>	15%
Newsletter	8%	4%	17%	8%	16%	6%	11%	10%	6%	6%
School	3%	3%	5%	--	--	3%	--	--	3%	5%
Grocery store	2%	1%	5%	8%	--	2%	5%	6%	1%	--

BOLD indicates statistically higher percentage than underlined comparative group(s).

A total of 333 respondents said they had seen the advertising on TV. As expected, there were significant differences by city in the TV stations mentioned. Following is a list of those named most frequently. (*Note the small sample size for Northern Arizona and Yuma.*)

**Table 7: Top TV Stations
By City**

Phoenix n=119	Tucson n=148	No. AZ n=42	Yuma n=24
Univision/Ch.33 – 54% Fox/Ch. 10 - 5%	Univision/Ch.38/ Ch.46 – 58% Telemundo/Ch. 40 - 17% PBS/Ch. 6 - 5%	Univision/Ch.33 – 12% NBC/Ch. 12 – 10%	Univision/Ch. 7 - 25% NBC/Ch. 11 - 8% Ch.44 - 8%

E. Evaluation of Advertising

#

1. Overall Opinion of Advertising

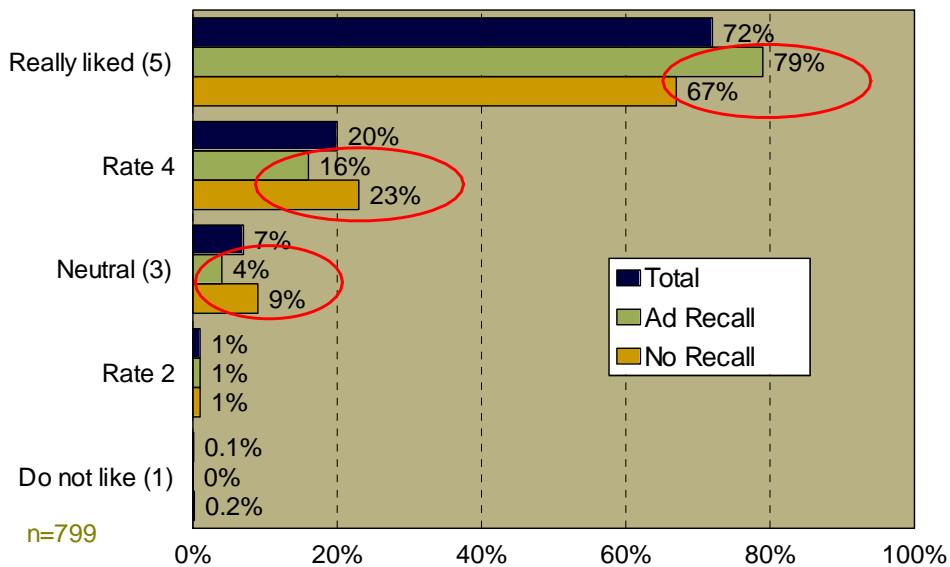
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Moms were asked to rate the advertising on a 5-point scale, with “5” meaning they really liked the ad and “1” meaning they did not like it at all. More than nine in ten (92%) indicated they liked the ad, with 72% rating it a “5” and 20% giving the ad a “4” rating. Seven percent (7%) are neutral, and only 1% rate the ad “1” or “2.”

Mothers who recalled seeing the advertising prior to the interview are significantly more likely to say they “really liked” it (79% vs. 67% with no previous recall). Those with no prior recall are significantly more likely to give a rating of “4” or a neutral rating.

Overall Opinion of FVMM Advertising

Among All Moms with an Opinion



Demographic Differences:

The most notable demographic differences are among those indicating they “really liked” the ad (5 rating). Tucson moms are significantly more likely than those in Northern Arizona to say they “really liked it.” Hispanics are significantly more likely than Caucasians to give the advertising the highest rating. Mothers who primarily speak Spanish are more likely than English-dominant and bilingual mothers to rate the ad highly. (*Note: it is important to keep in mind the “courtesy bias” often seen in research with Hispanics. This theory maintains that some cultures are predisposed to giving positive responses so that the interviewer is not distressed or disappointed in any way.*)

Mothers ages 26 to 35 are most likely to give the advertising a rating of “5” (78%) and are significantly more likely to “really like it” than those who are younger (62% of those ages 18 to 25) and those ages 36 to 45 (69%). This may be due in part to the ages of the moms in the ads. In addition, mothers who participate in a food assistance program are significantly more likely to “really like it” than those not in a program (75% vs. 67%).

**Table 8: Overall Opinion of FVMM Advertising
By City, Ethnicity, and Primary Language**

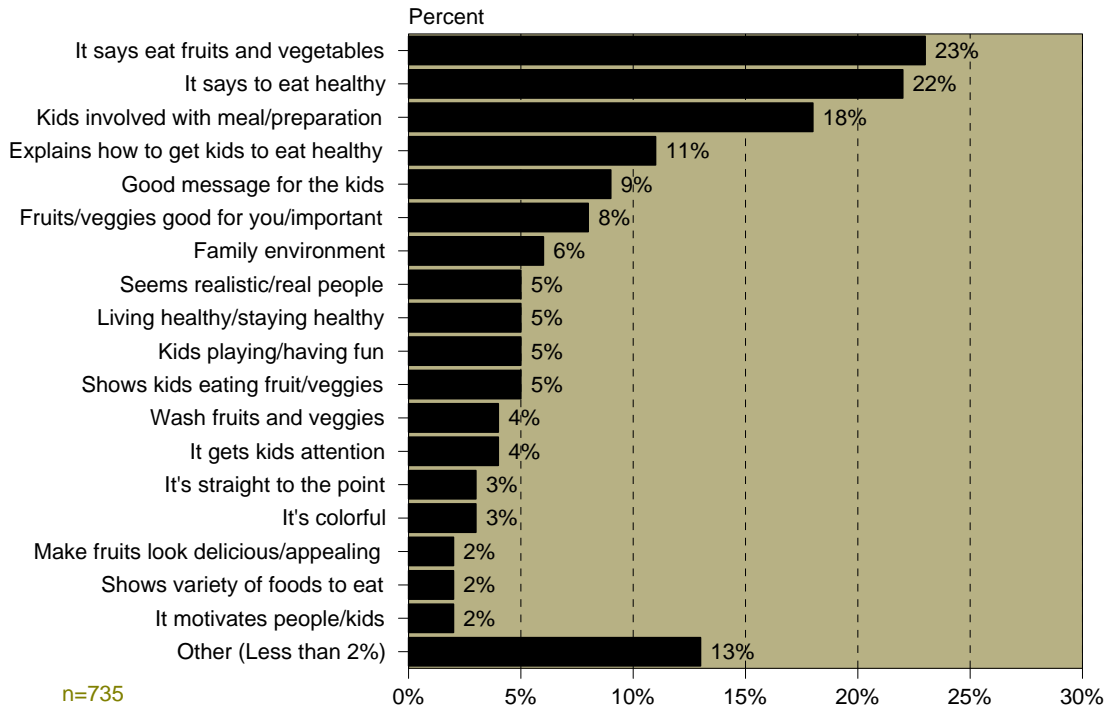
Rating	City of Residence				Ethnicity			Primary Language		
	Phx n=300	Tuc n=302	NoAZ n=97	Yuma n=100	White N=86	Hisp n=599	Am Ind n=48	Eng n=314	Span n=217	Both n=259
5- Really liked it	72%	75%	<u>63%</u>	73%	<u>62%</u>	75%	67%	<u>66%</u>	80%	73%
4	19%	18%	26%	22%	27%	18%	23%	22%	17%	21%
3	8%	6%	9%	4%	10%	6%	10%	11%	<u>3%</u>	<u>6%</u>
2	1%	1%	2%	1%	1%	1%	--	1%	--	--
1- Did not like it at all	--	--	--	--	--	--	--	--	--	--

BOLD indicates statistically higher percentage than underlined comparative group(s).

2. *Reasons Like Advertising*

Mothers who rated the ad highly (“4” or “5” rating) liked the ad for a variety of reasons, with the top three reasons being: *it says to eat fruits and vegetables* (23%) and to *eat healthy* (22%), and, *it gets kids involved with the shopping or meal preparation* (18%).

Reasons Why Moms Like Advertising Among Mothers Rating Ad a 4 or 5



Demographic Differences:

Yuma moms are significantly more likely than moms who reside in the other cities to like that the advertising promotes *eating fruits and vegetables*. In addition, Yuma moms stand out over Tucson and Northern Arizona moms for their appreciation of how the advertising explains *how to get kids to eat healthy*.

Hispanic moms are more likely than American Indian mothers to say they like the advertising because it says to *eat fruits and vegetables*. Caucasians are significantly more likely than Hispanics to say they like the advertising because it *shows kids involved helping to shop and prepare meals*. Similarly, English-dominant mothers are significantly more likely than those who primarily speak Spanish to like the advertising because of the message to *get children involved in the meal planning and preparation process*.

**Table 9: Reason Like Advertising
Top Mentions by City, Ethnicity, and Primary Language**

Message	City of Residence				Ethnicity			Primary Language		
	Phx n=273	Tuc n=281	NoAZ n=86	Yuma n=95	White N=76	Hisp n=560	Am Ind n=43	Eng n=277	Span n=209	Both n=242
It says eat fruits and veggies	<u>22%</u>	<u>21%</u>	<u>21%</u>	35%	22%	24%	<u>12%</u>	21%	27%	22%
It says to eat healthy	25%	<u>16%</u>	26%	24%	21%	23%	16%	20%	24%	22%
Kids involved with meal/preparation	18%	21%	21%	17%	28%	<u>16%</u>	21%	24%	<u>11%</u>	18%
Explains how to get kids to eat healthy	12%	<u>9%</u>	<u>8%</u>	18%	15%	12%	7%	13%	10%	10%

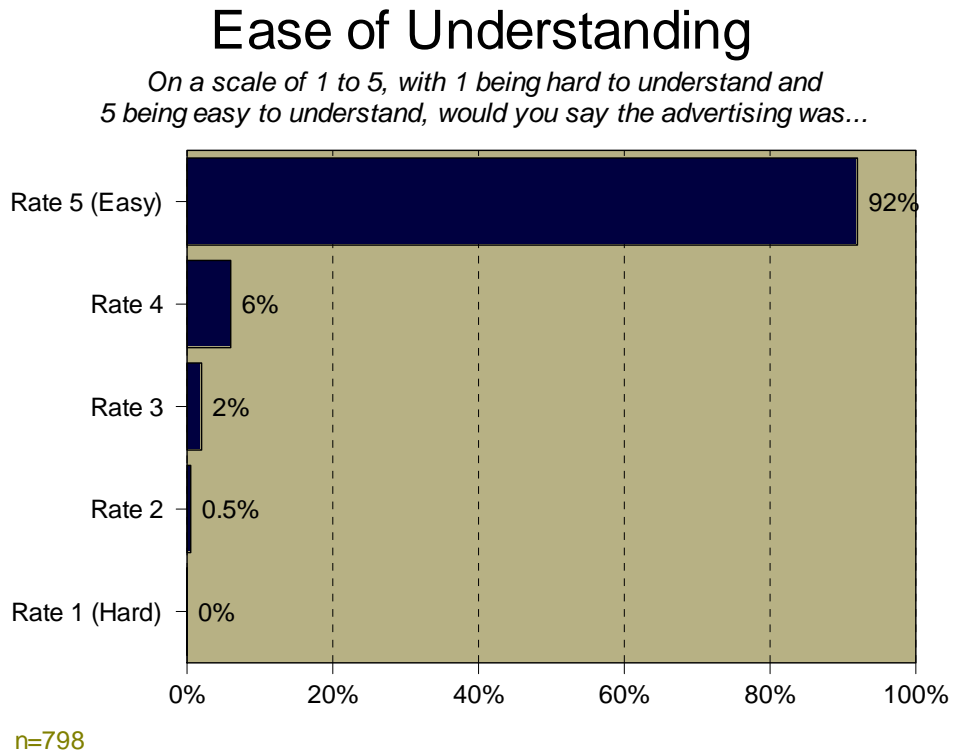
BOLD indicates statistically higher percentage than underlined comparative group(s).

3. Reasons Do Not Like Advertising

Only seven moms rated the ad poorly. When asked why they disliked it, the top two responses were because it does not offer a lot of information/want more information on eating healthy (3 mentions) and/or it was not eye catching (2 mentions). Others commented that it is nothing new or special/is just a normal commercial (1 mention) and that it needs to be longer (1 mention).

4. *Ease of Understanding*#

Nearly all mothers interviewed (98%) indicate the advertising is *easy to understand*, with 92% rating it “5” and an additional 6% rating it “4.” Fewer than 1% feel it is *hard to understand* (“1” or “2” rating).



Demographic Differences:

Younger moms (ages 18 to 25) are significantly less likely than older moms to think the advertising is *easy to understand* (84% gave a “5” rating vs. 93% of moms 26 to 49). In addition, Yuma moms are significantly less likely than moms residing in Phoenix and Northern Arizona to indicate the advertising is *easy to understand* (85% vs. 93% and 94% giving a rating of “5”).

5. Comparison of FVMM to other Fruits and Vegetables Advertising

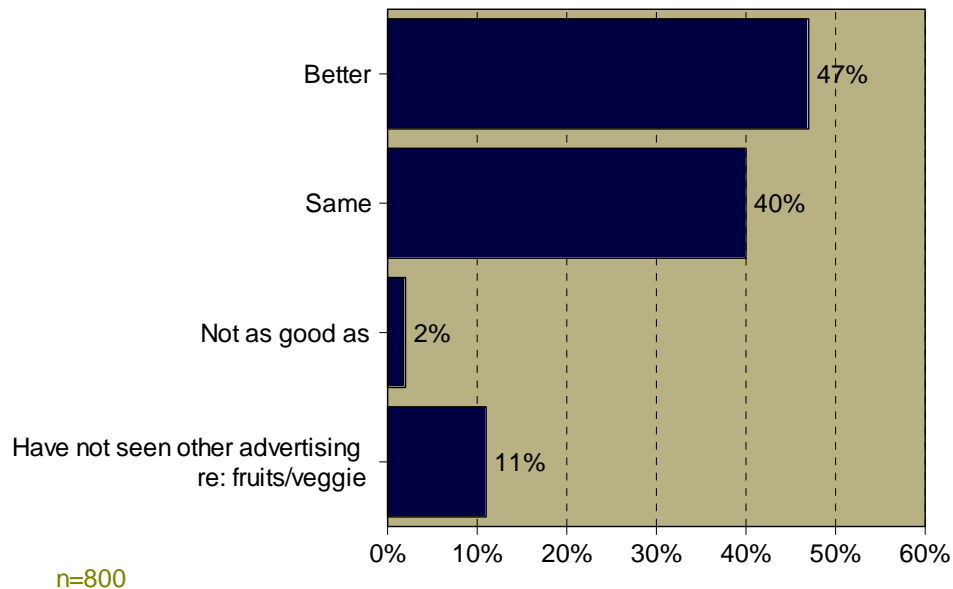
#

Nearly one-half of moms (47%) say the FVMM advertising is *better than* other advertising about the importance of eating fruits and vegetables. Four in ten (40%) feel the ad is *about the same as* others. Only 2% rated FVMM *not as good as* other advertising promoting eating fruits and vegetables.

Moms with prior awareness of the advertising are significantly more likely to think the advertising is “better” than other advertising on the same topic (52% vs. 44% with no previous awareness).

Comparison of FVMM Advertising

Thinking about other advertising you have seen or heard about the importance of eating fruits and veggies, would you say this is better than, about the same as, or not as good as other advertising?



Demographic Differences:

Phoenix and Northern Arizona moms are most likely to say the advertising is “better” than other advertising on the same subject and significantly more likely than Tucson moms to say so.

Moms who speak English and Spanish equally say the advertising is better more often than those who primarily speak English. On the other hand, English-speaking moms are more likely to feel the advertising is “about the same” as other advertising about the importance of eating fruits and veggies.

Moms under the age of 45 are significantly more likely than older moms to say the advertising is “about the same”(42% vs. 25%) and 18 to 25 year olds are more likely to think that it is “not as good” as other similar advertising (5% vs. 0% to 2% for older moms).

Table 10: Comparison of FVMM Advertising By City, Ethnicity, and Primary Language

Evaluation	City of Residence				Ethnicity			Primary Language		
	Phx n=299	Tuc n=303	NoAZ n=97	Yuma n=101	White N=85	Hisp n=600	Am Ind n=49	Eng n=315	Span n=218	Both n=258
Better	52%	<u>40%</u>	55%	48%	45%	48%	37%	<u>43%</u>	46%	53%
Same	38%	45%	35%	40%	43%	39%	53%	45%	39%	<u>35%</u>
Not as Good	2%	2%	--	1%	--	2%	--	1%	3%	2%
Have not seen other fruit and veggie ads.	<u>8%</u>	13%	9%	12%	12%	11%	10%	11%	12%	10%
DK/refused	--	--	1%	--	--	--	--	--	--	--

BOLD indicates statistically higher percentage than underlined comparative group(s).

F. “Stage of Readiness”

FVMM study participants were asked a question to help determine their *Stage of Readiness* with regard to eating more fruits and vegetables.

The question was as follows:

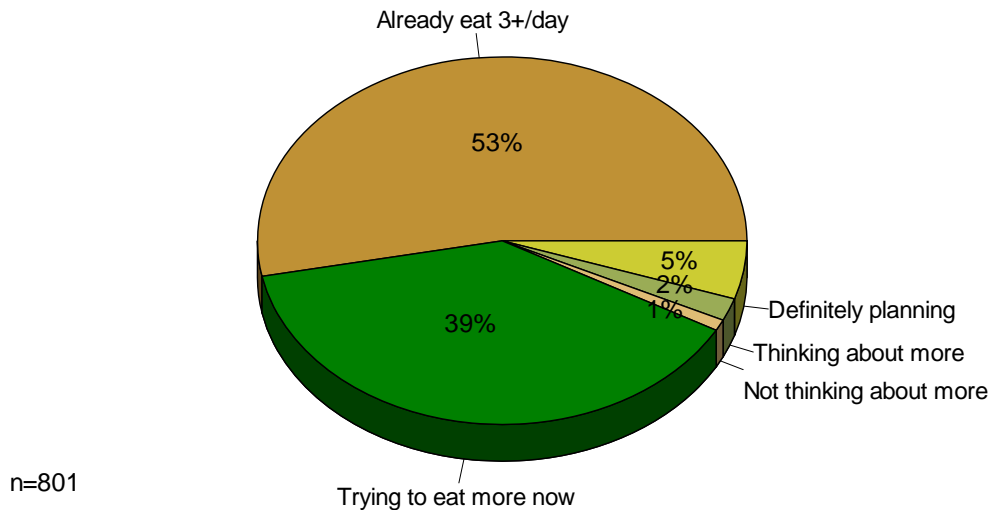
Which of the following statements best represents you?

- I am not thinking about eating more fruits and veggies.
- I am thinking about eating more fruits and veggies . . . planning to start within six months.
- I am definitely planning to eat more fruits and veggies in the next month.
- I am trying to eat more fruits and veggies now.
- I am already eating 3 or more servings of fruits and veggies a day.

As seen below, more than one-half (53%) of the women interviewed indicate they *already eat three or more servings of fruits and vegetables daily*, with another 39% saying they are *trying to eat more fruits and veggies now*. Five percent (5%) say they *definitely plan to eat more fruits and veggies in the next month*, while 2% report *planning to start eating more in six months*, and 1% saying they are *not thinking about eating more fruits and vegetables*.

“Stage of Readiness”

Which of the following statements best represents you?



Following are responses to the *Stage of Readiness* question by advertising awareness. Moms familiar with the advertising are significantly more likely to say they are *already eating three or more servings of fruits daily* (62% vs. 47% with no recall), while those with no recall are more likely to say they are *trying to eat more fruits and vegetables now* (44% vs. 31% aware).

**Table 11: “Stage of Readiness”
By Advertising Awareness**

Stage	Advertising Awareness	
	Total Awareness (n=331)	No Recall (n=470)
Not thinking about eating more fruits and veggies	1%	1%
Thinking about eating more fruits and veggies/planning to start within 6 months	2%	2%
Definitely planning to eat more fruits and veggies in the next month	4%	6%
Trying to eat more fruits and veggies now	31%	44%
Already eating 3 or more servings of fruits and veggies daily	62%	47%

BOLD indicates statistically significant differences from others in category/row.#

Demographic Differences:

Tucson moms are significantly more likely than moms in the other cities to say they are *already eating 3 or more servings of fruits and veggies a day*. In contrast, moms in the other areas are more likely than Tucson moms to be *trying to eat more fruits and veggies now*. Northern Arizona moms stand out over moms in other cities for saying they are *planning to eat more fruits and veggies in the next month*.

While Caucasians are more likely than Hispanics to be in the stage of *trying to eat more fruits and veggies*, Hispanics are more likely to *already be eating 3 or more servings daily*. Similarly, those who primarily speak English are more likely than Spanish-speakers and bilingual moms to be *trying to eat more fruits and veggies* and those speaking Spanish predominantly or equally along with English are more likely to be in the final stage (*already eating 3+ servings*).

**Table 12: “Stage of Readiness”
By City, Ethnicity, and Primary Language**

Evaluation	City of Residence				Ethnicity			Primary Language		
	Phx n=298	Tuc n=304	NoAZ n=98	Yuma n=101	White N=85	Hisp n=601	Am Ind n=49	Eng n=315	Span n=219	Both n=258
Not thinking about eating more fruits and veggies	2%	1%	--	--	--	1%	--	1%	1%	1%
Thinking about eating more fruits and veggies/ planning to start within 6 months	3%	2%	2%	1%	1%	2%	4%	2%	3%	1%
Definitely planning to eat more fruits and veggies in the next month	<u>3%</u>	<u>3%</u>	12%	9%	6%	5%	8%	5%	<u>2%</u>	7%
Trying to eat more fruits and veggies now	40%	<u>32%</u>	51%	43%	48%	<u>36%</u>	45%	46%	<u>34%</u>	<u>34%</u>
Already eating 3 or more servings of fruits and veggies daily	<u>52%</u>	62%	<u>35%</u>	<u>47%</u>	<u>45%</u>	56%	43%	<u>46%</u>	60%	57%

BOLD indicates statistically higher percentage than underlined comparative group(s).

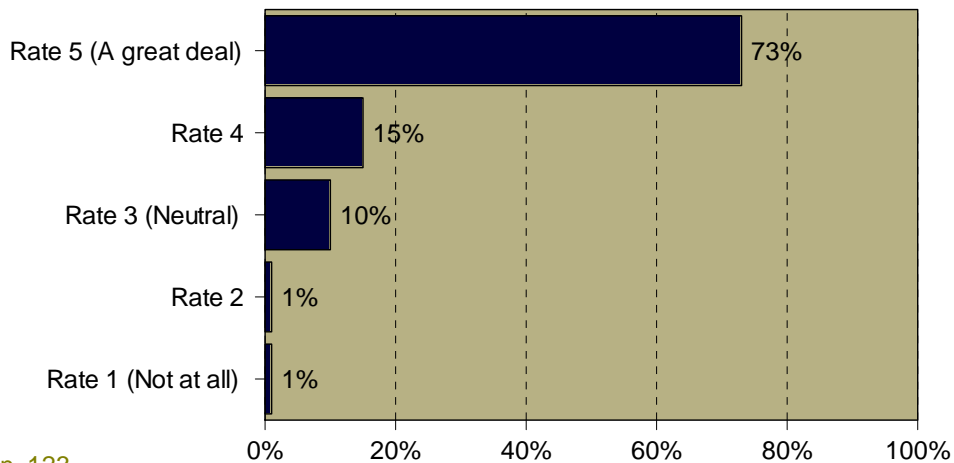
G. Influence of FVMM Advertising

Women who *are trying to eat more fruits and veggies now, are planning to eat more in the next month, or are thinking about eating more and planning to start in the next six months* and had seen the advertising, were asked how much the TV commercials, posters, billboards and other materials influenced their decision to try or think about trying to eat more fruits and veggies.

Nearly nine in ten (88%) aware of the advertising and who are trying, planning or thinking about trying to eat more fruits and vegetables indicate the FVMM advertising positively influenced them to do so (“4” + “5” rating). Nearly three in four (73%) say it influenced them *a great deal* (“5” rating). Only 1% say the advertising has *not influenced them at all* to think about eating more fruits and veggies (“1” rating).

Advertisement Influence

On a scale of 1 to 5, with 1 meaning not at all and 5 meaning a great deal, how much have these TV commercials, posters, billboards and other materials helped you think about eating or trying to eat more fruits and veggies?



n=123
(Those aware of FVMM advertising and who either eat 3+ servings of fruits and veggies, are trying to or thinking about trying to eat more f&v.)

H. Physical Activities

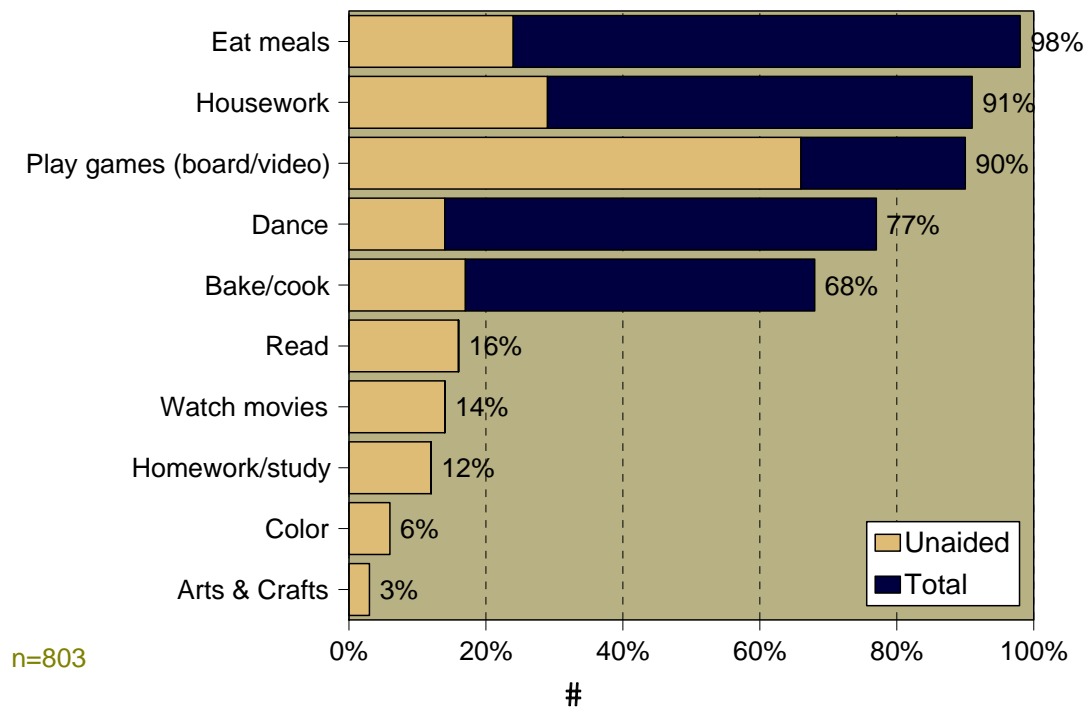
#

1. Indoor Activities

As might be expected, eating meals is the #1 indoor activity that moms and children do together, with virtually all moms (98%) saying they participate in this activity. This is followed closely by housework (91%) and playing video/board games (90%). Dancing (77%) and baking/cooking (68%) round out the top-five indoor activities mothers take part in with their children.

Indoor Activities with Children: Top Mentions

What indoor/outdoor activities do you do with your children?



#

Demographic Differences:#

Moms and kids living in Phoenix and Northern Arizona are more likely to do housework, play video/board games, and bake or cook compared to moms and kids in other communities. Phoenix families are least likely to read; however, they along with Tucson families are the most likely to indicate they do homework and study.

Caucasian moms and kids are significantly more likely than Hispanic moms and kids to play video or board games. Native American moms and kids are significantly less likely to dance and/or do homework compared to other ethnic groups. Spanish speaking moms and kids are least likely to play video/board games, bake/cook, or read; however, they are more likely than other groups to dance and color.

**Table 13: Participation in Indoor Activities – Moms and Children Together
Top Mentions by City, Ethnicity, and Primary Language**

Activity	City of Residence				Ethnicity			Primary Language		
	Phx n=300	Tuc n=304	NoAZ n=98	Yuma n=101	White N=86	Hisp n=602	Am Ind n=49	Eng n=315	Span n=219	Both n=260
Eat meals	98%	98%	97%	97%	100%	<u>98%</u>	96%	98%	97%	98%
Housework	93%	<u>88%</u>	95%	92%	90%	92%	94%	90%	90%	93%
Play games (board/video)	93%	<u>88%</u>	95%	<u>85%</u>	95%	<u>90%</u>	86%	92%	<u>85%</u>	93%
Dance	77%	79%	70%	75%	74%	77%	<u>63%</u>	<u>73%</u>	81%	77%
Bake/cook	73%	<u>65%</u>	74%	<u>57%</u>	69%	68%	73%	69%	<u>59%</u>	74%
Read	<u>11%</u>	20%	21%	19%	20%	15%	20%	21%	<u>11%</u>	16%
Watch movies	14%	13%	18%	15%	13%	14%	16%	16%	14%	12%
Homework/study	13%	15%	<u>8%</u>	<u>5%</u>	14%	13%	<u>8%</u>	11%	13%	13%
Color	<u>4%</u>	9%	7%	<u>2%</u>	7%	6%	4%	5%	10%	<u>4%</u>
Arts & Crafts	3%	3%	3%	1%	5%	3%	2%	3%	3%	3%

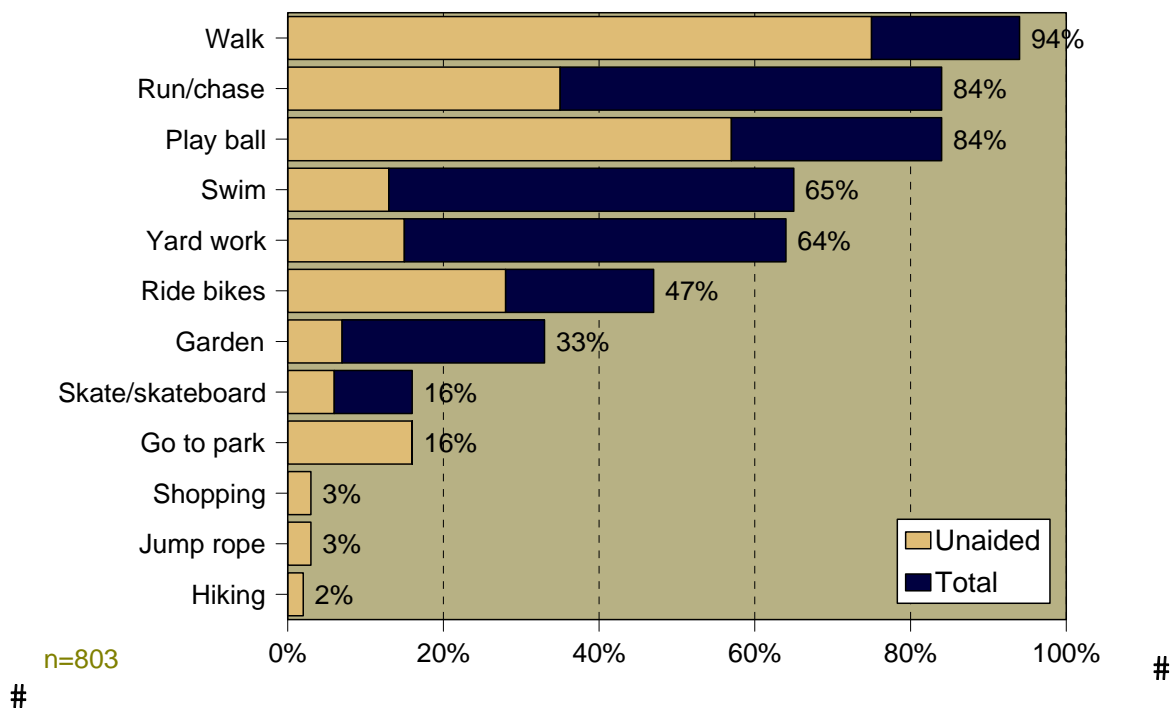
BOLD indicates statistically higher percentage than underlined comparative group(s).

2. Outdoor Activities

Walking is the most popular outdoor activity that mothers do with their children, with 94% reporting they walk with their kids. Running and playing ball are the next two most common activities (each mentioned by 84%), while swimming and yard work round out the top-five outdoor activities (65% and 64%). (Note: “Go to park” was not included in the aided list, so the 16% seen below is unaided only.)

Outdoor Activities with Children: Top Mentions

What indoor/outdoor activities do you do with your children?



Demographic Differences:#

Phoenix and Northern Arizona moms and kids are most likely to report that they walk with their kids. Tucson moms stand out for running and chasing with their children. Phoenix moms and kids are more likely to play ball than those in Tucson, more likely to swim than those in Northern Arizona, and more likely to skate or skateboard than families in other cities. Tucson and Yuma moms are more likely to say they garden than moms in Phoenix.

Caucasian moms are more likely to report swimming and hiking with their children than are Hispanics or Native Americans. Similarly, English-speaking moms are more likely to report doing these activities than are those who speak Spanish either predominantly or equally with English. Hispanic mothers are more likely than American Indian moms to say they garden or skate with their kids.

**Table 14: Participation in Outdoor Activities – Moms and Children Together
Top Mentions by City, Ethnicity, and Primary Language**

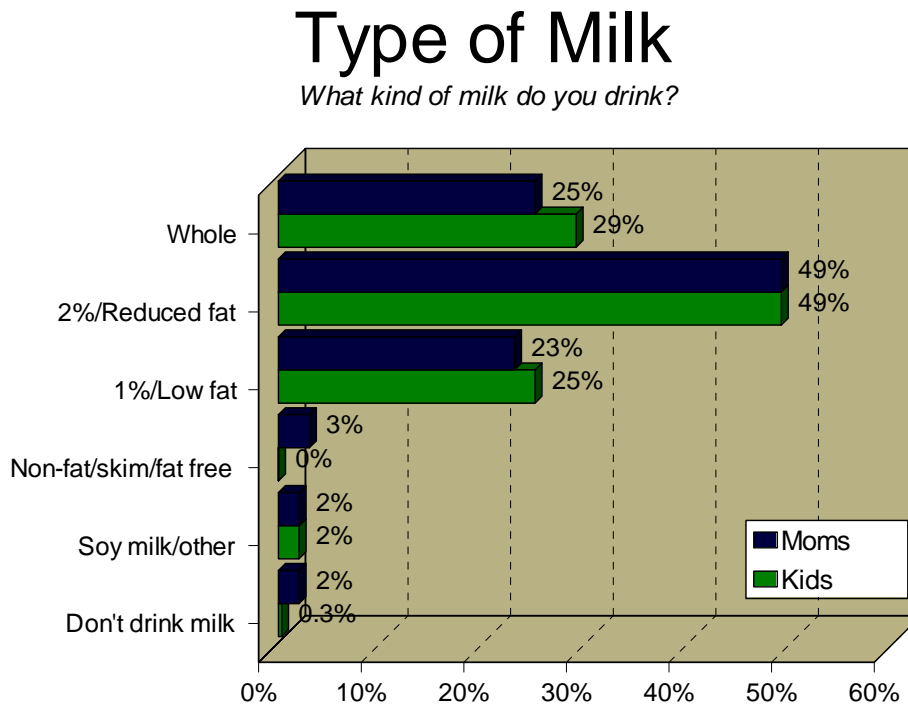
Activity	City of Residence				Ethnicity			Primary Language		
	Phx n=300	Tuc n=304	NoAZ n=98	Yuma n=101	White N=86	Hisp n=602	Am Ind n=49	Eng n=315	Span n=219	Both n=260
Walk	96%	92%	97%	<u>88%</u>	97%	94%	92%	94%	95%	93%
Run/chase	84%	89%	<u>77%</u>	<u>77%</u>	78%	85%	80%	<u>80%</u>	86%	87%
Play ball	87%	<u>81%</u>	79%	87%	87%	84%	84%	83%	81%	87%
Swim	68%	67%	<u>56%</u>	60%	76%	<u>64%</u>	<u>51%</u>	68%	<u>59%</u>	67%
Yard work	60%	66%	62%	68%	69%	66%	55%	61%	64%	66%
Ride bikes	54%	42%	47%	46%	50%	49%	43%	43%	50%	51%
Garden	<u>25%</u>	38%	35%	40%	33%	35%	<u>22%</u>	<u>26%</u>	40%	35%
Skate/skate-board	27%	<u>10%</u>	<u>9%</u>	<u>12%</u>	19%	17%	<u>8%</u>	15%	<u>13%</u>	21%
Go to park	17%	15%	12%	18%	10%	16%	12%	14%	18%	16%
Shopping	<u>2%</u>	5%	2%	3%	--	4%	2%	2%	4%	5%
Jump rope	2%	3%	5%	1%	4%	2%	4%	3%	2%	3%
Hiking	2%	2%	7%	--	12%	<u>1%</u>	<u>6%</u>	5%	<u>1%</u>	<u>1%</u>

BOLD indicates statistically higher percentage than underlined comparative group(s).

I. Milk Consumption

1. Current

While milk almost always makes the shopping list, the specific type of milk purchased varies. Mothers are most likely to report they and their children drink 2% milk (49% of moms and children). Whole milk is the next most popular among moms (25%) and kids (29%). Over one-fourth (26%) report personally drinking milk with a lower fat content – 23% drink 1% low fat milk and 3% drink fat free milk. One in four children are given 1% low fat milk (25%).



n=803

Demographic Differences:

Women in the “other” ethnic category are significantly more likely to report drinking whole milk (35%) than are Native American women (16%). In addition, younger mothers are most likely to drink whole milk and give it to their children (35% drink it personally and 39% give it to their children), significantly higher than mothers between the ages 26 and 45 (22% drink it personally and 26% give it to their children). Moms living in Northern Arizona are less likely to drink whole milk themselves or give it to their children compared to those living in other communities.

Table 15: Type of Milk Consumed by City, Ethnicity, and Primary Language

Type of Milk	City of Residence				Ethnicity			
	Phx n=300	Tuc n=304	NoAZ n=98	Yuma n=101	White N=86	Hisp n=602	Am Ind n=49	Other N=62
Whole								
<i>Mom</i>	29%	24%	<u>19%</u>	24%	24%	25%	<u>16%</u>	35%
<i>Child</i>	33%	30%	<u>20%</u>	25%	27%	29%	20%	35%
2%/reduced fat								
<i>Mom</i>	48%	48%	55%	50%	47%	49%	51%	55%
<i>Child</i>	51%	<u>44%</u>	58%	52%	<u>44%</u>	<u>48%</u>	53%	61%
1%/low fat								
<i>Mom</i>	22%	25%	18%	26%	24%	24%	24%	13%
<i>Child</i>	<u>21%</u>	28%	24%	30%	31%	25%	31%	<u>11%</u>
Non-fat/skim/fat-free								
<i>Mom</i>	3%	4%	4%	2%	7%	3%	--	2%
<i>Child</i>	--	--	--	--	--	--	--	--
Soy milk/other								
<i>Mom</i>	1%	2%	5%	--	5%	1%	6%	3%
<i>Child</i>	1%	2%	5%	--	4%	1%	2%	5%
Don't drink milk								
<i>Mom</i>	2%	1%	4%	1%	--	2%	6%	2%
<i>Child</i>	--	--	2%	--	--	--	--	--

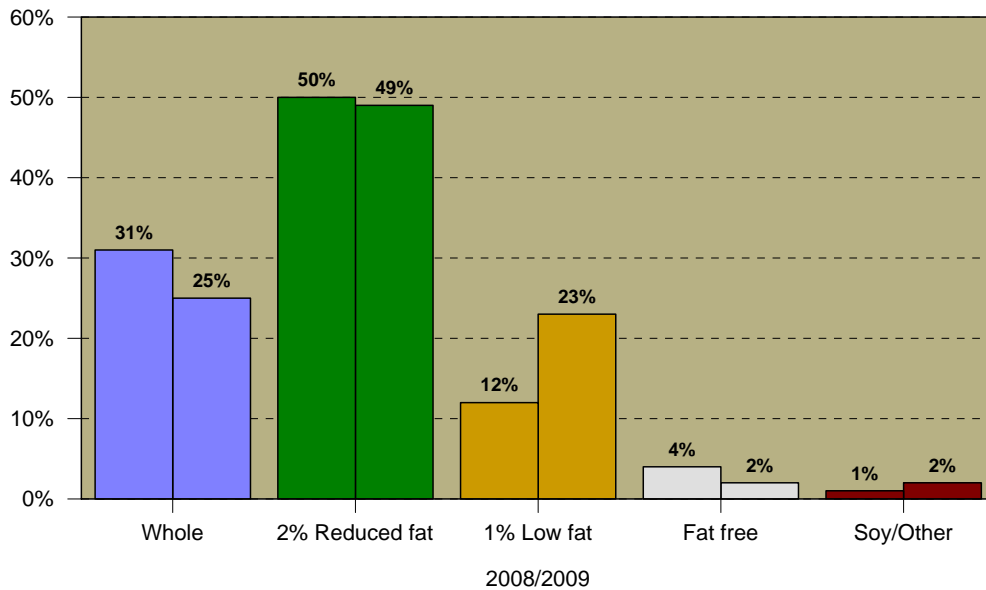
BOLD indicates statistically higher percentage than underlined comparative group(s).

2. *Milk Consumption Comparison*

Comparing milk consumption this year to last year, we see a decrease in whole milk and an increase in consumption of 1% low fat milk. Consumption of 2% reduced fat milk has remained the same. Though consumption of 1% low fat milk has likely not doubled in one year, the data does suggest an increase.

Type of Milk

What kind of milk do you drink?



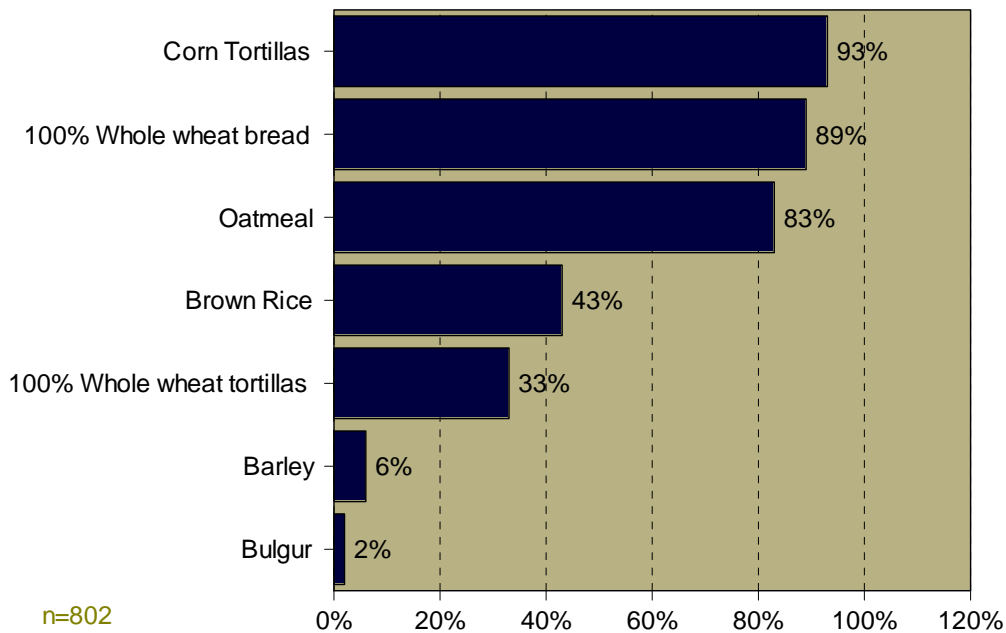
J. Whole Grain Foods

1. Purchase Behavior

Corn tortillas are the most common whole grain food purchased by mothers, with over nine in 10 (93%) indicating they currently buy this item. The next two most popular items are 100% whole-wheat bread (89%) and oatmeal (83%). Brown rice (43%) and 100% whole-wheat tortillas (33%) are in the next tier of purchases.

Whole Grain Food Purchase

Which of these whole grain foods do you currently buy?



Demographic Differences:

Women living in Phoenix and Tucson are most likely to purchase corn tortillas (96% and 97%), as are Hispanics (97%) and those that primarily speak Spanish or are bilingual (96% for each). Oatmeal is purchased most often by Phoenix and Northern Arizona residents (89% and 88%), Caucasians and “other” ethnicities (93% for each), as well as those that primarily speak English (88%). Caucasians are significantly more likely than Hispanics and Native Americans to purchase brown rice (59% vs. 40% and 39%).

Table 16: Whole Grain Food Purchase by City, Ethnicity, and Primary Language

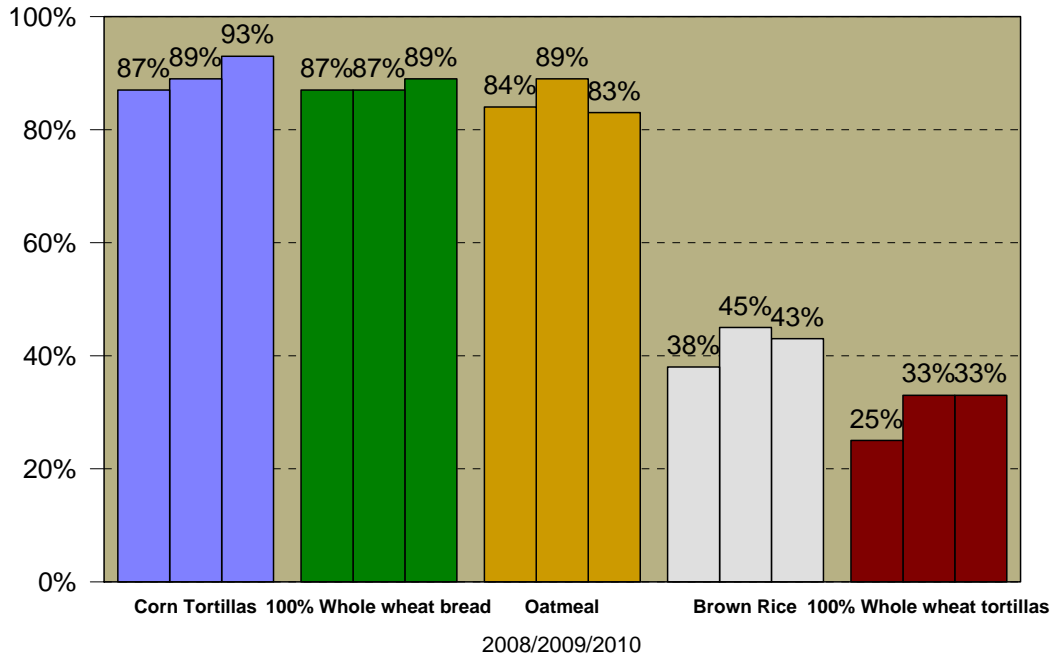
Food	City of Residence				Ethnicity			Primary Language		
	Phx n=299	Tuc n=304	NoAZ n=98	Yuma n=101	White N=86	Hisp n=602	Am Ind n=49	Eng n=314	Span n=219	Both n=260
Corn tortillas	96%	97%	<u>79%</u>	<u>87%</u>	88%	97%	<u>67%</u>	<u>89%</u>	96%	96%
100% Whole wheat bread	91%	88%	88%	85%	91%	88%	88%	88%	89%	89%
Oatmeal	89%	<u>77%</u>	88%	<u>76%</u>	93%	<u>80%</u>	86%	88%	<u>73%</u>	85%
Brown rice	48%	<u>40%</u>	44%	38%	59%	<u>40%</u>	<u>39%</u>	45%	40%	44%
100% Whole wheat tortillas	40%	<u>29%</u>	<u>27%</u>	30%	30%	34%	24%	<u>25%</u>	39%	38%
Barley	6%	6%	5%	6%	8%	6%	4%	6%	6%	6%
Bulgur	4%	<u>1%</u>	<u>1%</u>	3%	1%	3%	--	<u>1%</u>	2%	4%

BOLD indicates statistically higher percentage than underlined comparative group(s).

As seen in the chart below, purchase of whole grain food items has remained virtually the same over the past couple of years.

Whole Grain Food Purchase

Which of these whole grain foods do you currently buy?

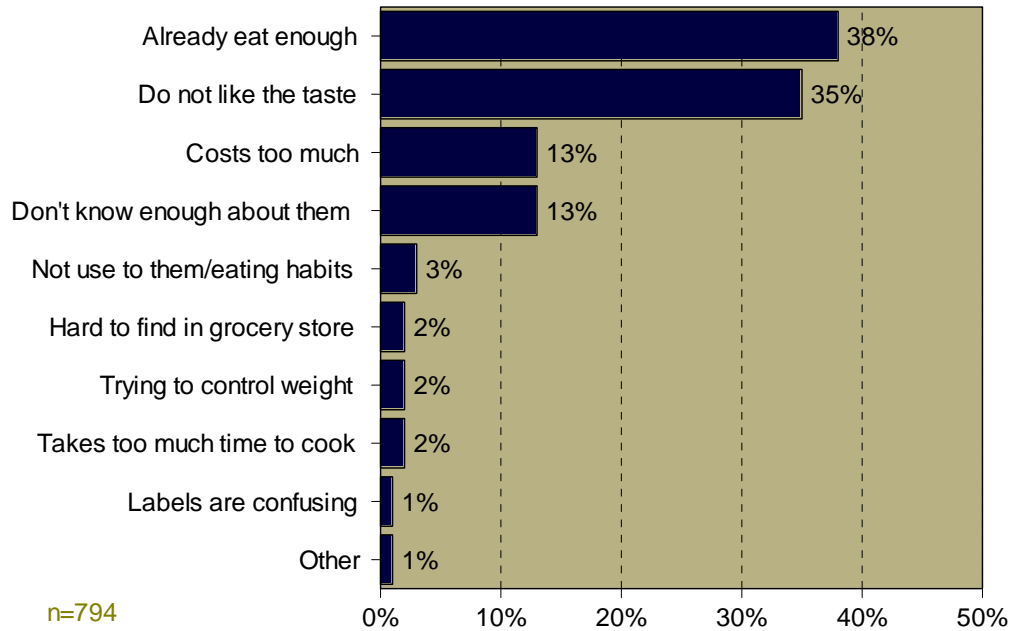


2. *Reasons do not Purchase More Whole Grain Foods*

The primary reasons women do not buy more whole grain food is because they feel they *already eat enough of them* (38%) and/or they *do not like the taste* (35%). Over one in 10 women indicate they do not buy more whole grains because of the *cost* with the same number saying they *don't know enough about them*.

Reasons do not Buy More Whole Grains

What is the reason you don't buy more whole grain foods?



Demographic Differences:

Moms in Northern Arizona are more likely than those in other cities to say they *already eat enough whole grain foods*, while those in the other cities are more likely to say they *do not like the taste*.

Table 17: Reasons do not Purchase More Whole Grain Foods by City, Ethnicity, and Primary Language

Food	City of Residence				Ethnicity			Primary Language		
	Phx n=299	Tuc n=300	NoAZ n=94	Yuma n=101	White N=86	Hisp n=597	Am Ind n=46	Eng n=308	Span n=219	Both n=258
Already eat enough	<u>38%</u>	<u>34%</u>	55%	<u>35%</u>	45%	36%	46%	35%	41%	40%
Do not like taste	39%	36%	<u>15%</u>	38%	29%	36%	28%	36%	33%	35%
Costs too much	13%	12%	14%	16%	19%	12%	11%	17%	9%	12%
Don't know enough about them	17%	<u>10%</u>	15%	<u>8%</u>	13%	13%	15%	16%	<u>9%</u>	13%
Not use to them	--	4%	2%	7%	4%	3%	2%	<u>2%</u>	6%	2%
Hard to find in grocery store	2%	2%	2%	2%	--	2%	4%	2%	3%	2%
Trying to control weight	2%	1%	1%	3%	1%	2%	2%	2%	1%	2%
Takes too much time to cook	--	3%	2%	2%	1%	2%	--	1%	2%	1%
Labels are confusing	--	1%	2%	2%	1%	1%	2%	1%	1%	1%

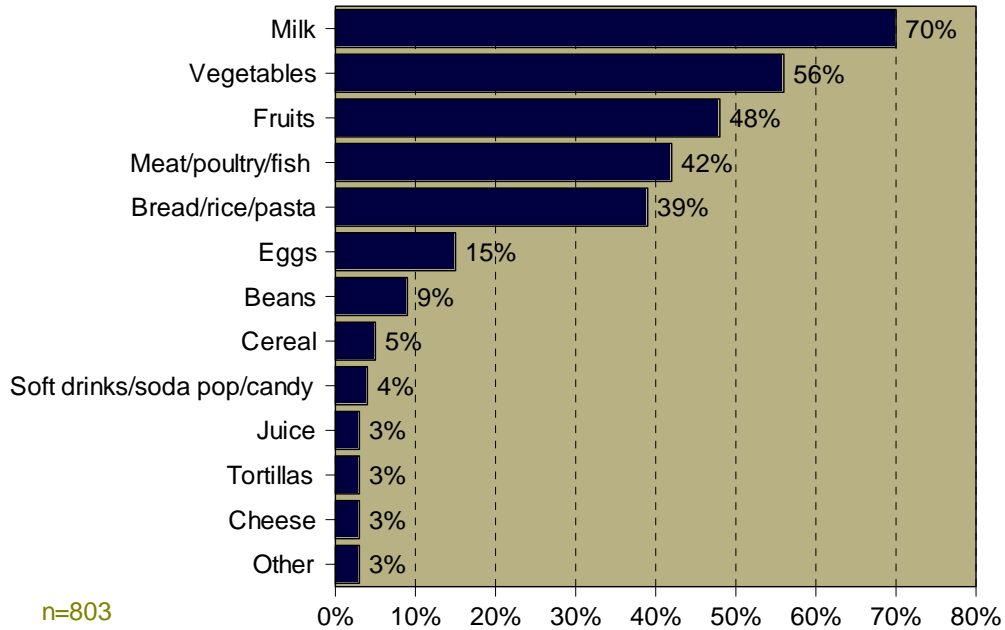
BOLD indicates statistically higher percentage than underlined comparative group(s).

K. Grocery Shopping

Participants were asked what three things are most likely to be on their grocery lists. Seven in ten (70%) mentioned milk. This is followed by vegetables (56%), fruit (48%), meat/poultry/fish (42%), and bread/rice/pasta (39%).

Items Most Often on Grocery List

What 3 things are most often on your grocery list?



Demographic Differences:

Tucson moms are more likely than moms in other communities to include vegetables and fruits on their shopping lists. Hispanic women are more likely than Caucasian women to include both vegetables and fruit. Similarly, Spanish-speaking moms are more likely than English speaking moms to have both on their grocery list.

**Table 18: Items on Grocery List
Fruits and Veggies by City, Age, Ethnicity and Primary Language**

Food Item	City				Age			
	Phoenix n=300	Tucson n=304	No. AZ n=98	Yuma n=101	18-25 n=149	26-35 n=381	36-45 n=213	45-49 n=59
Vegetables	<u>49%</u>	66%	<u>45%</u>	58%	53%	55%	60%	56%
Fruits	<u>39%</u>	60%	<u>47%</u>	<u>42%</u>	50%	48%	47%	47%

BOLD indicates statistically higher percentage than underlined comparative group(s).

Food Item	Ethnicity			Primary Language		
	White n=86	Hisp n=602	Am Ind n=49	English n=315	Spanish n=219	Both n=260
Vegetables	<u>47%</u>	59%	45%	<u>46%</u>	65%	60%
Fruits	<u>38%</u>	50%	47%	<u>39%</u>	63%	<u>46%</u>

BOLD indicates statistically higher percentage than underlined comparative group(s).

Appendix F
“Go Low”
Post Campaign Research Report



**Arizona Department of Health Services (ADHS)/
Arizona Nutrition Network (AzNN)
“Go Low”
Post Campaign Research Report**

Report Prepared for:
Arizona Department of Health Services / AzNN

October 2010

Table of Contents

I. Background & Methodology	3
II. Key Findings & Conclusions	7
III. Summary of Findings	10
A. Go Low Advertising Awareness & Message Recall	10
B. Media Recall	19
C. Stages of Change/Influence of Go Low Advertising.....	20
D. Attitudes Toward Milk.....	22
E. Whole Grain Food Habits	26
F. FVMM Pretest	28
G. Items on Grocery List	33
H. Additional Respondent Information	34

Appendices:

- A. Questionnaire
- B. Data Tables

I. Background & Methodology

The Arizona Nutrition Network (AzNN), a public and private partnership led by the Arizona Department of Health Services' (ADHS) Bureau of Nutrition and Physical Activity was developed to educate all Arizonans, especially lower income residents, on the importance of nutrition and physical activity. The Nutrition Network's mission is to shape food consumption in a positive way, promote health and reduce disease among specific target groups – in this case, Supplemental Nutrition Assistance Program (SNAP) applicants and participants living in Arizona. AzNN accomplishes this by promoting basic, consistent messages that help the target audience choose diets rich in nutrients, which include increased consumption of fruits and vegetables, drinking 1% low fat and fat free milk, and family togetherness.

Moses Anshell has developed social marketing campaigns around these messages. These campaigns are designed to inform and educate the target market about the importance and benefits of living a healthier lifestyle with a goal to influence their nutrition choices. When appropriate, campaign materials are in both English and Spanish.

The subject of this research report is the 2010 *Go Low* campaign, which focuses on drinking 1% low fat or fat free milk. The campaign, which ran April through August 2010, was statewide and included the following media and projects:

- Television
- Outdoor (Billboards)
- Door hangers
- Website (www.eatwellbewell.org)
- Educational reinforcements (e.g., nutrition-based games and toys)
- Collateral items (e.g., recipe cards, Fun Food News Newsletter)
- Posters in government offices
- Community events (Event in a Box)

Intercept interviews were conducted with 830 women between the ages of 18 and 49, with children ages 2 to 11, who have household incomes equal to or less than 130% of federal poverty level. The secondary target is children 2 to 11.

The study was conducted at Food City locations in Phoenix, Tucson, and Yuma, and at the WIC clinic and Flagstaff Farmers Market in Flagstaff. In addition, 83 of the interviews were conducted at Nutrition Network partner sites in Phoenix (Desert Mission Food Bank), and Flagstaff (Killip Elementary School). All interviews were completed between September 1 and September 16, 2010.

Participants had the option of completing the interview in English or Spanish and were given a \$5 Food City/Bashas gift certificate as a “thank you.” Participants in Yuma were given Champions for Change/Nutrition Network logo items (e.g., coupon holders, pencils, grocery list pads, recipes). The following table lists the specific locations of the intercepts and the number of completed interviews at each location. (These locations were selected based on the demographics of the zip codes in which they reside.)

City	Location/Address	Sample Size	Interview Dates
Phoenix	<i>Food City:</i> 9020 W. Thomas 5810 W. Peoria 6020 N. 59 th Avenue 4239 W. McDowell Desert Mission Food Bank	297	September 1 - 8
Tucson	<i>Food City:</i> 1221 W. Irvington Road 3030 E. 22 nd Street 1740 W. Ajo Way 2950 S. 6 th Avenue	330	September 7 - 11
Yuma	<i>Food City:</i> 1240 W. 8th Street 2600 W. 16 th Street	102	September 8 - 10
Flagstaff/ Cottonwood	WIC Clinic Flagstaff Farmers Market Killip Elementary School Food City (Cottonwood)	101	September 14 - 16

All survey participants met the following screening criteria:

- S1. Do you have any children between the ages of 2 and 11?
 Yes
 No (THANK & TERMINATE)
- S2. Which of the following categories best describes your age?
 18 to 25
 26 to 35
 36 to 45
 45 to 49
 over 49 (THANK & TERMINATE)
- S3. How many people are there living in your household?
 2
 3
 4
 5
 6 or more
- S4. What is your household income? You can give that to me as a weekly income, every 2 weeks, monthly, or yearly income. (*Must be under these to qualify.*)

Family Size	Weekly Income	2-Week Income	Monthly Income	Yearly Income
1	\$ 385	\$ 770	\$1,670	\$20,036
2	\$ 518	\$1,036	\$2,246	\$26,955
3	\$ 651	\$1,302	\$2,823	\$33,874
4	\$ 784	\$1,568	\$3,399	\$40,793
5	\$ 917	\$1,834	\$3,976	\$47,712
6	\$1,050	\$2,101	\$4,553	\$54,631

It is important to note that although this information is quantitative, it is not necessarily representative of all low-income women between 18 and 49 years old in Arizona. To be representative of that population, respondents would have to have been selected at random. That is, each person in the population would have had an equal chance of being included in the sample. These intercepts were conducted using a convenience sample (e.g., those who shop at Food City). Though this sampling technique is appropriate to meet the study objectives (within the budget guidelines), it does introduce a sampling bias and should be considered when interpreting the findings.

Respondent Profile

	Total n=830	Phoenix n=297	Tucson n=330	Flagstaff n=102	Yuma n=101
Age					
18 – 25	18%	19%	18%	20%	14%
26 – 35	47%	47%	48%	50%	40%
36 – 45	28%	28%	28%	26%	31%
46 – 49	7%	6%	6%	4%	15%
Total	100%	100%	100%	100%	100%
Race/Ethnicity					
Anglo/White	84%	85%	87%	74%	87%
Native American	8%	3%	10%	22%	2%
African American	5%	9%	1%	1%	8%
Multi-Racial/Other	3%	3%	2%	3%	3%
Total	100%	100%	100%	100%	100%
Hispanic	74%	77%	79%	50%	72%
Non-Hispanic	25%	22%	21%	48%	28%
Refused	1%	1%	*	2%	*
Primary Language					
English	43%	43%	43%	58%	33%
Spanish	22%	25%	22%	22%	13%
Both	35%	32%	35%	20%	54%
Total	100%	100%	100%	100%	100%
Education					
8 th Grade or less	7%	11%	3%	11%	5%
Some High School	17%	21%	18%	9%	14%
GED/HS Grad	39%	32%	39%	43%	51%
Some College+	37%	36%	40%	37%	30%
Total	100%	100%	100%	100%	100%
Food Assistance**					
Yes	66%	52%	72%	70%	80%
Food Stamps/SNAP	45%	31%	53%	46%	57%
WIC	30%	27%	31%	36%	32%
School Lunch/Bkfst	38%	14%	49%	46%	61%

*Less than .5%

** Do you or anyone in your family participate in food assistance programs? Base: All respondents

II. Key Findings & Conclusions

Go Low Campaign

- **Nearly four in ten mothers interviewed (38%) recalled the Go Low campaign** on an aided basis. This is below 2009 (44%) but slightly above 2008 (34%). *(Refer to p. 12)*
- **The dominant message respondents recall is 1% low fat milk is better for you/healthier for you/has less fat**, with over six in ten women (62%) mentioning this. One-quarter (24%) believes the primary message is that *1% low fat milk has all the vitamins and minerals without the fat of whole milk*, or, the more general message of *staying/eating healthy*. *(Refer to p. 13)*
- **Overwhelmingly, these mothers liked the advertising and did so for a variety of reasons - the top ones being it tells you 1% low fat milk has less fat and is healthier for you and it is educational/gives a good message**. Nine in ten (89%) indicated they liked the ad, rating it a 5 or 4 on a 5-point scale. Only nine moms gave the ad a low rating (2 or 1). *(Refer to pp. 15, 16)*
- **Women find the advertising easy to understand, with 98% rating it as such**. In addition, 43% agreed it is better than other advertising on the importance of drinking milk. *(Refer to pp. 17, 18)*
- **TV is the #1 medium, with nine in ten (89%) of those who had seen or heard Go Low advertising saying they had seen the ads on TV**. Government office was mentioned by over half (54%) of those interviewed, followed by radio, mail, door hangers, after school programs, billboards, newsletters, and website. *(Refer to p. 19)*
 - *Participants in Phoenix, Tucson, and Flagstaff/Cottonwood named Univision most often when asked on which TV station they had seen the ads. Moms in Yuma were more likely to mention Telemundo. (Refer to p. 19)*
- **Two in ten women say they have thought about trying, tried, or switched to 1% low fat or fat free milk in the past three months**. Twelve percent (12%) of the women interviewed have tried 1% low fat or fat free milk at least once in the past three months, with another 6% saying they have thought about trying this kind of milk, and 2% reporting they have switched to 1% low fat or fat free milk in the past three months. One-third (33%) said they have not thought about trying, tried, or switched to 1% low fat or fat free milk. Interestingly, more than four in ten (45%) say they already drink 1% low fat or fat free milk. A few (2%) indicate they do not drink milk at all. *(Refer to p. 20)*
- **The majority of moms report the Go Low advertising positively influenced them to switch to, try, or think about trying 1% low fat or fat free milk in the past three months**. *(Refer to p. 21)*
 - *Over half (54%) of those who switched to 1% low fat or fat free milk, tried 1% low fat or fat free milk, or thought about trying 1% low fat or fat free milk and saw the Go*

Low advertising indicate the advertising positively influenced them to switch to, try, or think about trying 1% low fat or fat free milk in the past three months. Three in ten (29%) say it influenced them “a great deal,” with an additional 25% giving a “4” rating. (Refer to p. 21)

Implications:

- ✓ *Although the exact portion has fluctuated slightly from year to year, approximately four in ten moms in the target audience recall Go Low advertising.*
- ✓ *The target audience finds the Go Low advertising likable, educational, and easy to understand. They also believe the message is clear, that is, 1% low fat milk is healthier for you/has less fat.*
- ✓ *These moms maintain that the Go Low advertising has influenced their decisions to switch to, try, or think about trying 1% low fat or fat free milk.*

Milk Consumption/Attitudes About Milk

- **Over eight in ten mothers (81%) include milk on their grocery lists.** Vegetables, fruit, meat/poultry/fish and bread/rice/pasta/tortillas follow. (Refer to p. 33)
- **One-third of women (34%) interviewed report drinking 1% low fat milk.** This is down slightly from 2009 when 39% of moms said they drink 1% low fat milk, but consistent with the 2008 *Go Low* study (37%). About the same number - 35% - report drinking 2% reduced fat milk. Eighteen percent (18%) say they drink whole milk, consistent with 2009 (17%) but down from 2008 (23%). (Refer to p. 23)
- **Two-thirds of moms (66%) say it is true that 1% low fat and fat free milk have the same amount of vitamins and minerals as whole milk.** This is consistent with 2009 (67%), but a significant increase over the 2008 *Go Low* study in which 55% of those interviewed said this is a true statement. (Refer to p. 22)
- **Over eight in ten mothers (84%) agree that drinking 1% low fat or fat free milk is an important part of a healthy diet.** This, too, is consistent with 2009 (87%), but a significant increase over 2008 results, in which 77% said they strongly agreed or agreed with this statement. (Refer to p. 23)
- **One-quarter (25%) of these moms talk with friends or family members about milk.** Participants are most likely to talk about *which milk is better/comparing types of milk, general eating habits and dinner talk, or talking about whole milk not being good for you.* (Refer to p. 25)

Implications:

- ✓ *The portion of target audience moms who drink 1% low fat or fat free milk has remained fairly consistent over the past few years – 41% (combined 1% low fat and fat free) in 2008, 44% in 2009, and 40% in 2010. However, there has been a decrease in the number who reported drinking whole milk – 25% in 2008, 17% in 2009, and 18% in 2010. As other research has*

shown, some moms may believe that by switching from whole milk to 2% reduced fat (which has increased slightly), they have chosen the healthy alternative.

- ✓ *As mentioned above, there is clear evidence that, in the past few years, more women are getting the message that 1% low fat and fat free milk have the same amount of vitamins and minerals as whole milk (but without the fat), as there has been a significant increase in those who believe this statement is true. Similarly, more moms agree that drinking 1% low fat or fat free milk is an important part of a healthy diet.*

Whole Grain Food Consumption

- **Approximately nine in ten moms report buying corn tortillas and 100% whole grain bread, with 78% saying they purchase oatmeal.** Interestingly, when asked why they don't buy more whole grain foods, nearly half (48%) said they feel they eat enough, while one-quarter (27%) said they don't like the taste. Hispanic women are more likely to declare they don't like the taste of whole grains. *(Refer to p. 26)*
- Over half of moms (54%) state that their family eats whole grain foods *every day*, with an additional 26% saying they eat them *at least three times a week*. *(Refer to p. 27)*

FVMM Pretest

- **The overwhelming majority of women interviewed say they strongly agree or agree with four of the fruits and veggies statements**, with fewer than two in ten saying they strongly agree or agree that *it is too expensive to eat fruits and vegetables*. *(Refer to pp. 28 - 31)*

Additional Information

- When asked to name the three best sources of health and nutrition information moms gave a wide variety of responses. Overall, the most frequently cited information sources were television (49%) and family (44%). *(Refer to p. 35)*
- Cell phones and DVD players are the two technology items moms indicate they are most likely to have in their home (affirmed by 86% and 80%, respectively). A majority also has a computer (67%), CD player (66%), and Internet access (62%) at home. *(Refer to p. 36)*
- Nearly nine in ten of the mothers interviewed say they get to and from places by using their own car (86%). Others report using the bus/light rail (6%) or riding with a friend (6%). *(Refer to p. 36)*
- Regarding appliances in their homes, virtually all mothers indicate they currently have a refrigerator (99%) and stove in their home (97%). Microwave ovens are also almost universal (94%). Food choppers (29%) and processors (28%) are the two appliances least likely to be in homes. *(Refer to p. 36)*
- Outside of salt (94% use) and pepper (93% use), the top three spices used to prepare foods in the home include garlic (90%), onion (89%), and cilantro (82%). *(Refer to p. 36)*

III. Summary of Findings

A. Go Low Advertising Awareness & Message Recall

1. Advertising Awareness

Respondents were shown several elements from the 2010 *Go Low* advertising campaign: a :30 TV spot, a poster and a door hanger.



This material was federally funded by USDA's Supplemental Nutrition Assistance Program through the Arizonan Nutrition Network. The Supplemental Nutrition Assistance Program provides nutrition assistance to people with low incomes. It can help you buy nutritious foods for a healthier diet. To find out more, contact 1-800-353-8481. This illustration is an equal opportunity provider and employee AEO 5/08.



¡PRUEBE LA NUEVA RECETA ADJUNTA!



¡HEY, CHICOS! ¿ESTÁN LISTOS PARA EL RETO DE LA LECHE 1%?



SÉ UN CAMPEÓN

Colorea un círculo cada vez que tomes un vaso (de 8 onzas) de leche 1%. ¡Mándalo y séamos héroes sabiendo que vas a lograr unos huesos y dientes más fuertes. Sé un Campeón del Cambio y pégalo en tu refrigerador para inspirar a tu familia y que así seas como tú!

¿Cuánta grasa contiene la leche (en 1 taza de 8 onzas)?

- 0%: 0 gramos de grasa
- 1%: 2.5 gramos de grasa
- 2%: 5 gramos de grasa
- 3%: 7.5 gramos de grasa

¿CUÁNTA LECHE 1% BAJA EN GRASA NECESITA SU FAMILIA CADA DÍA?

- 1 niño y 1 niña: 2-4 vasos
- 2 niños y 2 niñas: 3 vasos
- 3 niños y 3 niñas: 3 vasos
- 4 niños y 4 niñas: 3 vasos
- 5 niños y 5 niñas: 3 vasos
- 6 niños y 6 niñas: 3 vasos
- 7 niños y 7 niñas: 3 vasos
- 8 niños y 8 niñas: 3 vasos
- 9 niños y 9 niñas: 3 vasos
- 10 niños y 10 niñas: 3 vasos

*En los estados de 1 a 2 años, sus niños deben tomar leche entera.

DIP CREMOSO PARA FRUTA

INGREDIENTES	PREPARACIÓN	CANTIDAD
1 taza de yogur descremado y sin azúcar	(1) Llévate los vasos con agua fría y jélicón.	1 vaso
1 taza de crema agria descremada	(2) Combina el yogur descremado, la crema agria y la vainilla en un tazón chico.	1 vaso
2 cucharadas de extracto de vainilla	(3) Agrega las jugas de frutas y azúcar. ¡Mézclalo bien.	1 vaso
1 cucharada de jugo de limón	(4) Tapa y revuélvalo al más bajo por unos 30 segundos.	1 vaso
½ taza de jugo de naranja	(5) Sirve con coronas, queso, frutas o algo que te guste.	1 vaso



Colorea los círculos para hacer 1 vaso de leche 1%.

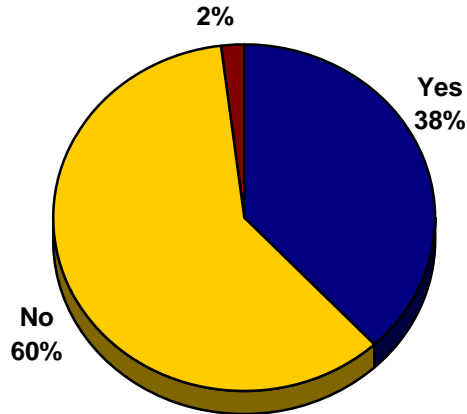
Para más recetas, visita ComedoresPrivilegiados.org o llámanos al 1-800-645-5135.

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They were then asked, “Do you recall seeing this or something that looked very similar?” Thirty-eight percent (38%) said they had. This is similar to the 2008 study (34%), but slightly lower than 2009 (44%).

% Recalled Advertising When Shown Ads
Don't know



Demographic Differences:

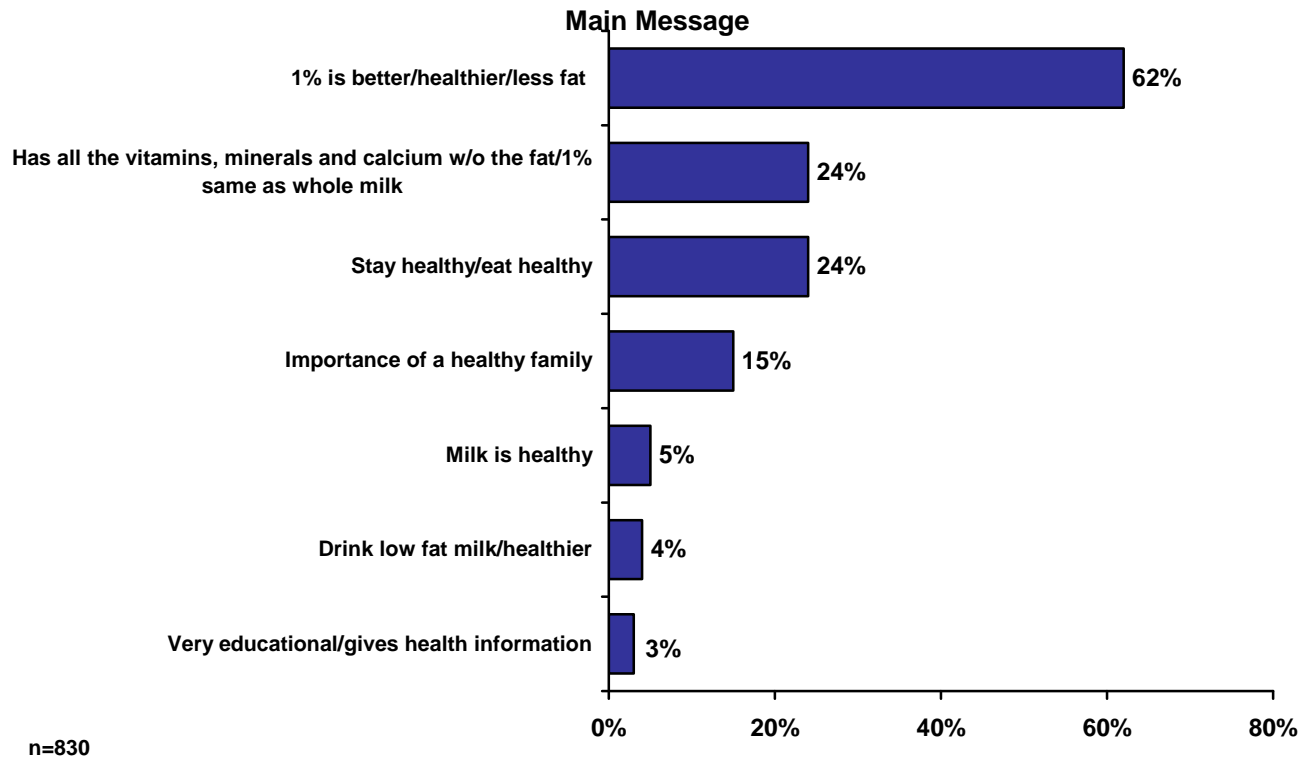
Moms in Phoenix (45%) and Tucson (39%) were significantly more likely than those in Yuma (28%) and Flagstaff/Cottonwood (22%) to have seen the advertising.

Reviewing the data by ethnicity, Hispanics were more likely than non-Hispanics to recall the Go Low ads – 40% compared to 31%.

2. Main Message of Advertising

Once they had viewed the TV spot and the *Go Low* poster, women were asked what they consider to be the main message of the advertising. By far, the dominant message that participants recalled was *1% low fat milk is better for you/healthier/has less fat*, with 62% of women mentioning this.

One-quarter (24%) believes the primary message is that 1% low fat milk *has all the vitamins and minerals without the fat of whole milk*, with the same portion saying *stay healthy/eat healthy* is the main message. Approximately 1 in 7 (15%) maintain that the main message relates to the *importance of a healthy family*.



Demographic Differences:

The table below shows the key results by city. Those outside the metropolitan Phoenix area were significantly more likely than those moms in Phoenix to say the main message is specifically about *1% milk having less fat and being a healthier alternative*. Interestingly, those in the two major metropolitan areas (Phoenix and Tucson) were more likely to hear/see a general message about *eating healthy* than those in Flagstaff and Yuma. Flagstaff residents were significantly more likely than residents of other cities to say the main message had to do with the *importance of a healthy family*.

**Table 1: Main Message – Go Low
By City**

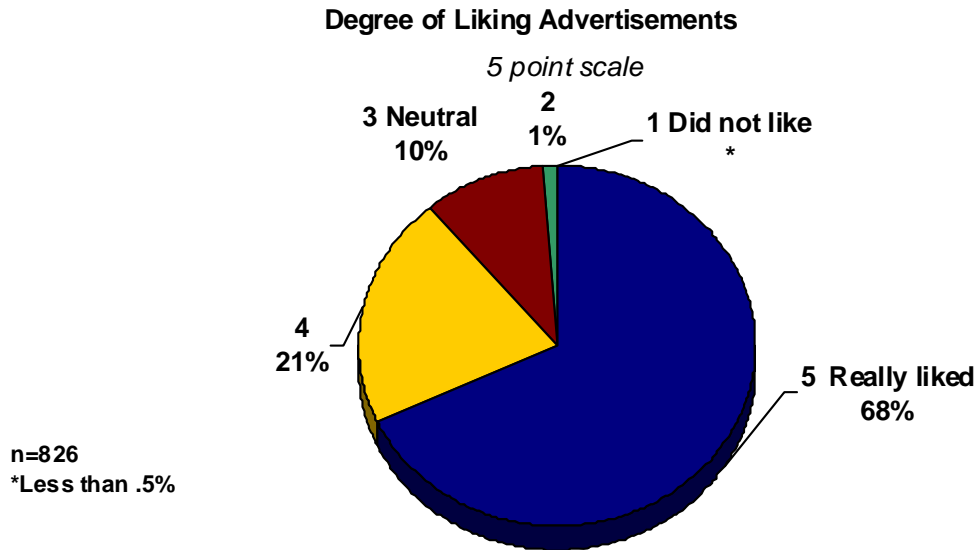
Message	City of Residence			
	Phoenix n=297 (A)	Tucson n=330 (B)	Flagstaff/ Cottonwood n=101 (C)	Yuma n=100 (D)
1% is better/healthier/less fat	51%	59% ^A	79% ^{AB}	85% ^{AB}
1% has all the vitamins/ minerals/calcium without the fat	22%	27%	19%	27%
Stay healthy/eat healthy	29% ^{CD}	25% ^{CD}	16%	12%
Importance of a healthy family	13%	15% ^D	35% ^{ABD}	7%

^{ABCD} Significantly higher than others in category

Consistent with these differences by city, Native American mothers (who, for the purposes of this study, are heavily concentrated in Flagstaff and Cottonwood) were significantly more likely than other moms to say the main message is about the *importance of a healthy family* – 35% versus 14%

3. *Likeability of Advertising*

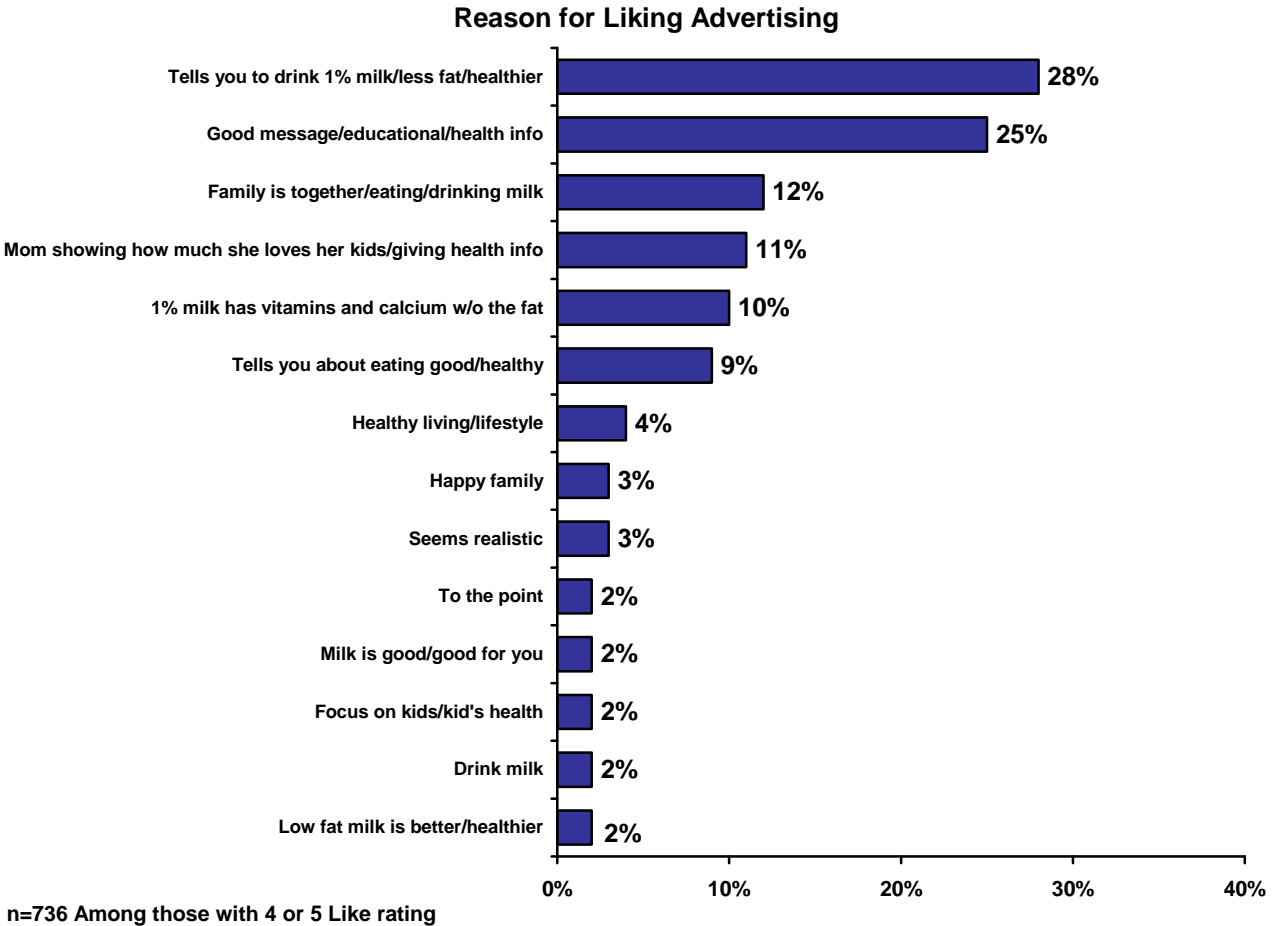
All respondents were asked to rate how well they liked the ads. Two-thirds (68%) of moms said they *really liked* the ads (5 on a 5-point scale), and one in five (21%) gave a 4 rating. There were very few who did not like the ads, with only 1% giving a rating of 1 or 2.



There were no statistically significant differences by demographic group.

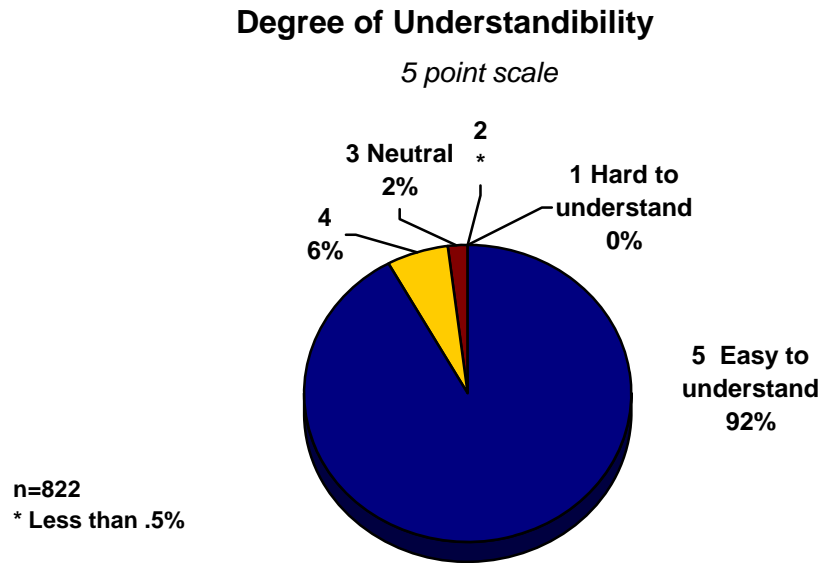
4. Reason for Liking Advertising

When asked why they liked the ads, the top two reasons were that they *tell you to drink 1% milk/1% milk has less fat/1% milk is healthier* (28%), and the *message is educational/gives health information* (25%).



5. *Understandability of Advertising*

The advertising had a very high level of understandability. Nearly all moms rated the advertising *easy to understand* – 98% gave 5 or 4 ratings on a 5-point scale.

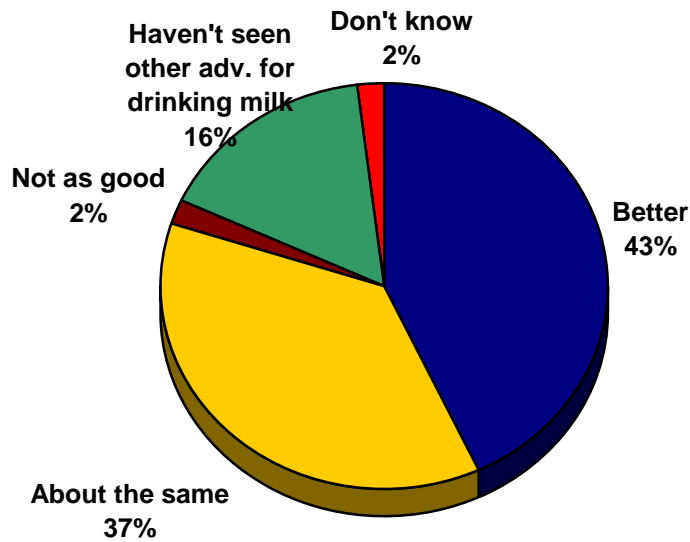


There were no statistically significant differences by demographic group.

6. Comparison of Go Low to other Milk Advertising

Over four in ten moms (43%) say the Go Low advertising is better than other advertising about the importance of drinking milk, with 37% saying they feel the ad is about the same as others. Just 2% said the Go Low ad is not as good as other advertising about drinking milk. Approximately one in six (16%) said they had not seen or heard other advertising about the importance of drinking milk.

Go Low Advertising Compared With Other Milk Advertising



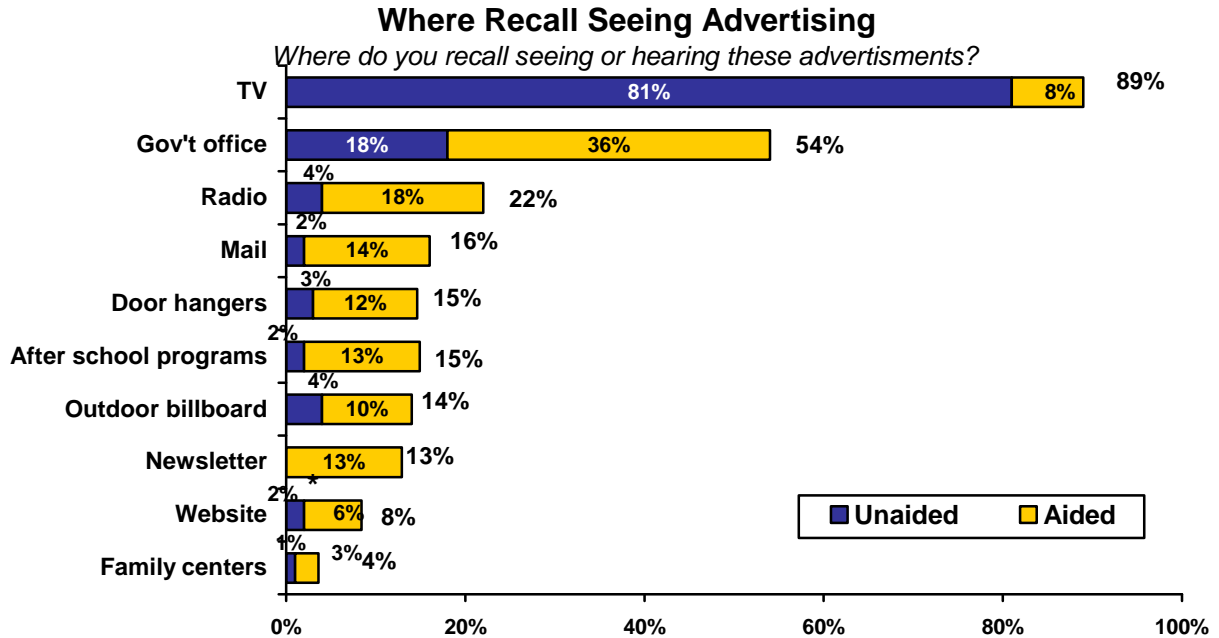
There were no statistically significant differences by demographic group.

7. Additional Comments about Advertising

When asked if they had any additional comments about the advertising, 26% of those interviewed suggested making it *more eye-catching*. Roughly the same portion (25%) said it should be *shown more often*.

B. Media Recall

Overwhelmingly, respondents most often recalled seeing advertising on TV, with 89% naming this medium when asked where they had seen or heard the advertising. Government office was cited next most frequently, with over one-half (54%) of survey participants mentioning this. One in five moms (22%) said they heard a *Go Low* ad on the radio. In addition, approximately one in six recalled receiving mail related to drinking 1% low fat milk, (16%), seeing door hangers (15%), billboards (14%), and the newsletter (13%), with 8% saying they saw ads online. (*Note: It is important to keep in mind that respondents of all ages tend to default to TV when they are unsure of where they have seen or heard advertising.*)



n=311 Base: Aware of advertising

* Less than .5%

Following is a list of the TV stations named most frequently. (*Note the small sample size for Flagstaff/Cottonwood and Yuma.*)

**Table 2: Top TV Stations
By City**

Phoenix n=133	Tucson n=101	Flagstaff/Cottonwood n=16	Yuma n=21
Univision/Channel 33 - 41%	Univision - 43%	Univision - 46%	Telemundo - 24%
Channel 3 - 4%	Channel 13 - 20%	Channel 12 - 25%	Univision - 19%
Channel 10 - 4%	Telemundo - 4%		Channel 4 - 14%
	Channel 9 - 4%		

Among those who recall seeing or hearing advertising.

C. Stages of Change/ Influence of Go Low Advertising

1. Stage of Change

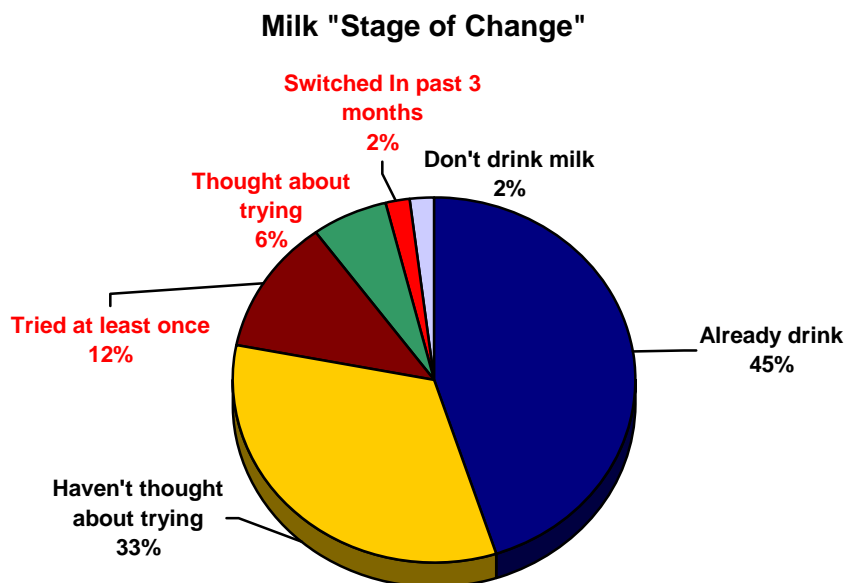
Go Low study participants were asked a question to help determine their “Stage of Change” with regard to drinking 1% low fat or fat free milk.

The question reads as follows:

Which of the following statements best represents you?

- In the past 3 months, I have switched to 1% low fat or fat free milk.
- In the past 3 months, I have tried 1% low fat or fat free milk at least once.
- In the past 3 months, I have thought about trying 1% low fat or fat free milk, but I haven’t tried it yet.
- In the past 3 months, I have not thought about trying, tried, or switched to 1% low fat or fat free milk.
- I already drink 1% low fat or fat free milk.
- I don’t drink milk.

One in five (20%) indicated some change in attitude or behavior (as identified in red in the chart below). Just over one in ten (12%) tried 1% low fat or fat free milk, while a smaller percentage thought about trying (6%), and 2% actually made the switch.



Demographic Differences:

African-American women were significantly more likely than other races to say they had tried 1% low fat or fat free milk at least once in the past three months – 28% compared to 12% of White moms and 6% of Native Americans.

2. *Influence of Go Low Advertising*

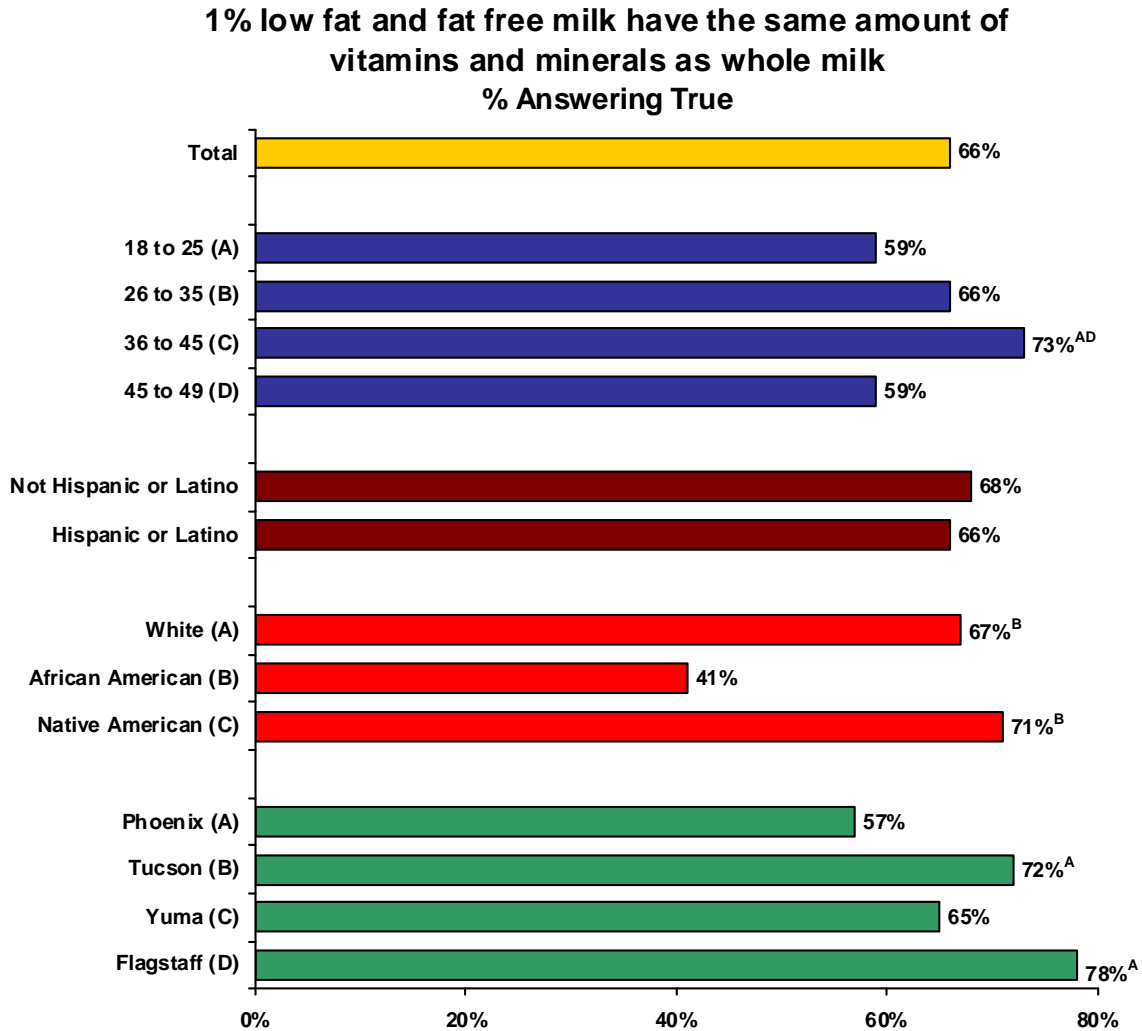
Women who have *switched to 1% low fat or fat free milk in the past three months, have tried 1% low fat or fat free milk at least once in the past three months, or have thought about trying 1% low fat or fat free milk, but haven't done so yet* and had seen the advertising, were asked how much the TV commercials, posters, billboards and other materials influenced their decision to try or think about trying to drink 1% low fat or fat free milk.

Over half (54%) of those who switched to 1% low fat or fat free milk, tried 1% low fat or fat free milk, or thought about trying 1% low fat or fat free milk and saw the Go Low advertising indicate the advertising positively influenced them to switch to, try, or think about trying 1% low fat or fat free milk in the past three months. Three in ten (29%) say it influenced them “a great deal,” with an additional 25% giving a “4” rating.

D. Attitudes Toward Milk

1. Same Amount of Vitamins and Minerals

Two-thirds of moms (66%) say it's true that *1% low fat and fat free milk have the same amount of vitamins and minerals as whole milk*. This is comparable to the 2009 *Go Low* study results (66%), and continues the significant increase over the 2008 results (55%).

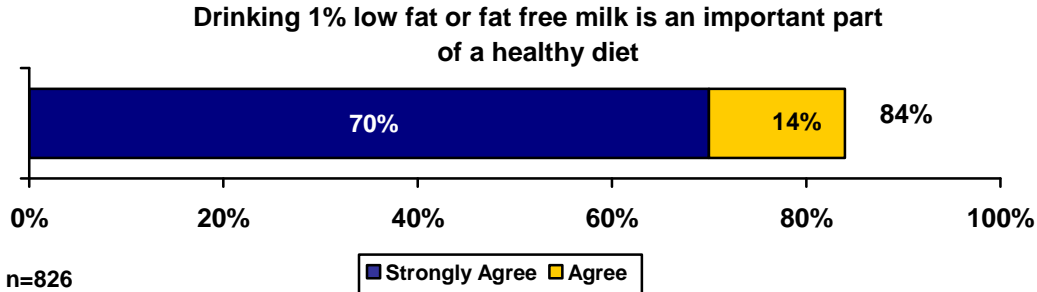


n=830

^{ABCE} Significantly higher than others in category

2. 1% Low Fat or Fat free Milk Important to Healthy Diet

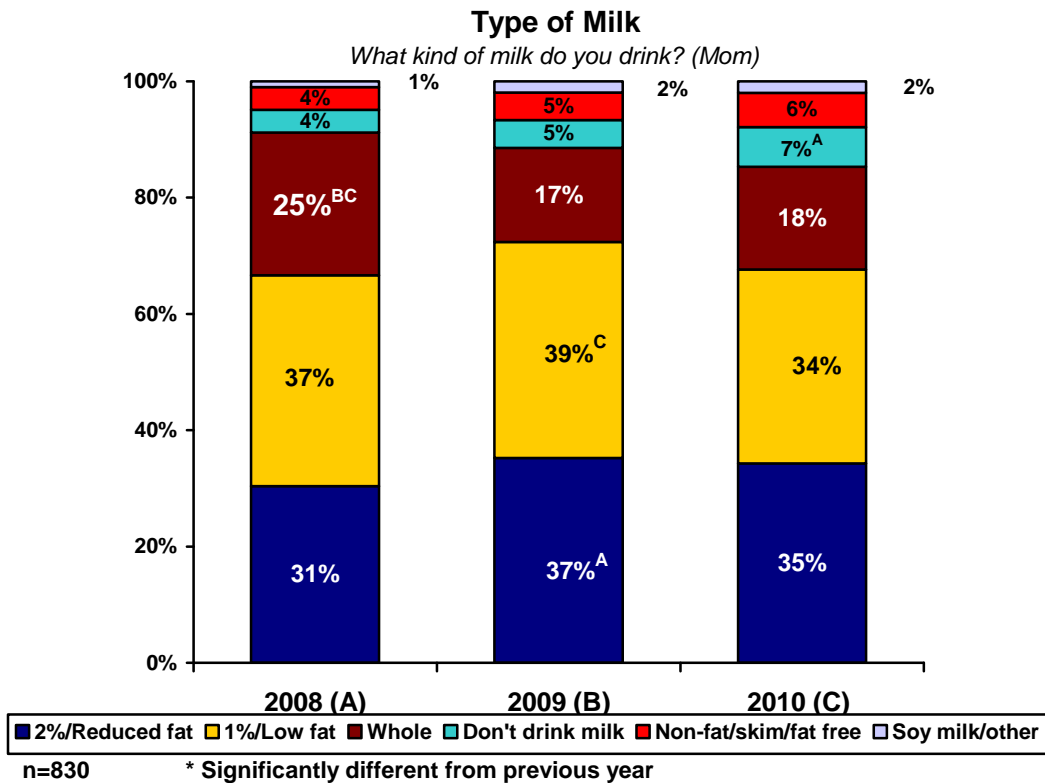
More than eight in ten mothers (84%) agreed that *drinking 1% low fat or fat free milk is an important part of a healthy diet*. This is comparable to last year's results (87% strongly agreed/agreed) and continues the increase over 2008 *Go Low* results (77%).



3. Type of Milk Consumed

One-third of moms (34%) report drinking 1% low fat milk, with an additional 6% saying they drink non-fat milk. The portion drinking 1% low fat milk is down slightly from 2009 (39%).

Approximately one-third (35%) also report drinking 2% reduced fat milk, consistent with previous years. Just fewer than one in five (18%) drink whole milk, consistent with 2009.



Demographic Differences:

Anglo/White moms are significantly more likely to drink 1% low fat or fat free milk than African American mothers, while African Americans are significantly more likely than all other racial groups to say they drink whole milk. Interestingly, Native American moms are more likely than other racial groups to not drink milk at all.

Reviewing the data by ethnicity, Hispanic mothers are more likely than non-Hispanics to report drinking 2% reduced fat milk, while non-Hispanics are significantly more likely to report drinking whole milk and to say they do not drink milk at all.

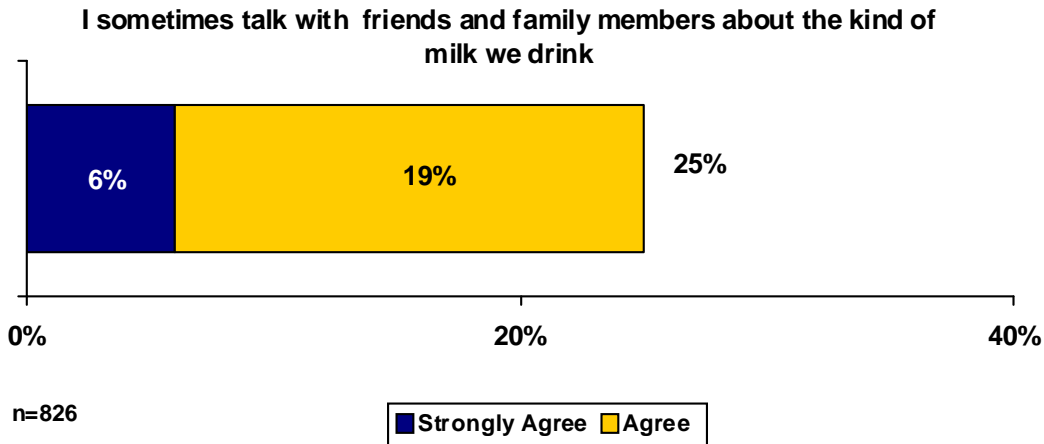
**Table 3: Type of Milk Consumed - Mom
By City and Ethnicity**

Milk	City of Residence				Race				Ethnicity	
	Phoenix n=297 (A)	Tucson n=330 (B)	Flagstaff n=101 (C)	Yuma n=100 (D)	Anglo/ White n=699 (A)	African American n=39 (B)	Native American n=65 (C)	Other n=18 (D)	Hispanic n=613 (A)	Non- Hispanic n= 211 (B)
1% low fat/ fat free	34%	32%	30%	41%	35%^B	18%	28%	28%	35%	28%
2% reduced fat	35%	34%	36%	37%	36%	33%	26%	39%	38%^B	24%
Whole	23%^{BD}	17% ^D	17% ^D	6%	17%	41%^{ACD}	15%	6%	16%	24%^A
Non-fat	4%	7%^C	2%	7%	6%	5%	3%	6%	6%	6%
Soy/other	1%	3%	3%	1%	1%	-	2%	17%	1%	4%
Don't drink milk	3%	8% ^A	13% ^A	8%	5%	3%	26%^{ABD}	6%	4%	14%^A

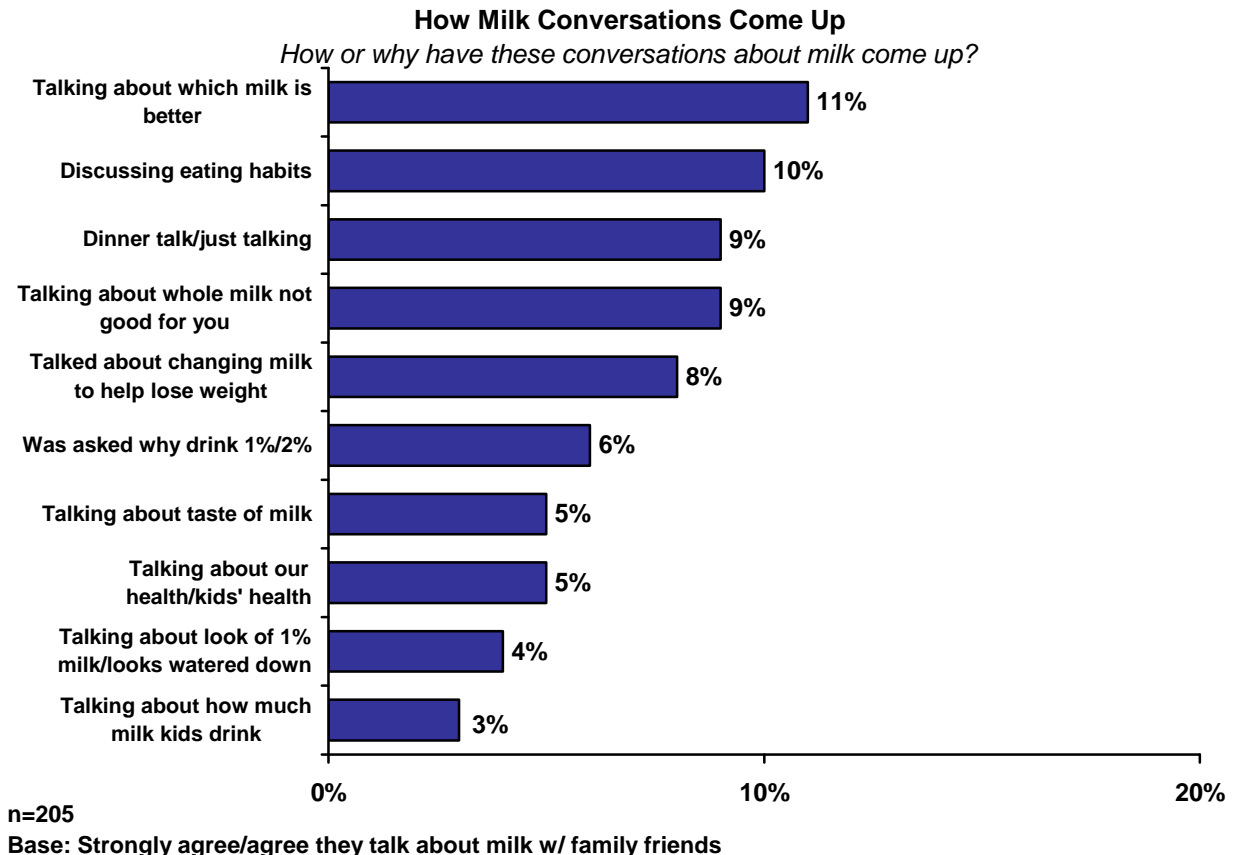
^{ABCD} Significantly higher than others in category

4. Discussions About Milk

Moms were asked if they have discussions about milk with friends and family members. One-fourth (25%) strongly agreed/agreed with the statement *I sometimes talk with friends and family members about the milk we all drink*. This is lower than the figure measured in 2009 (32% strongly agreed/agreed).



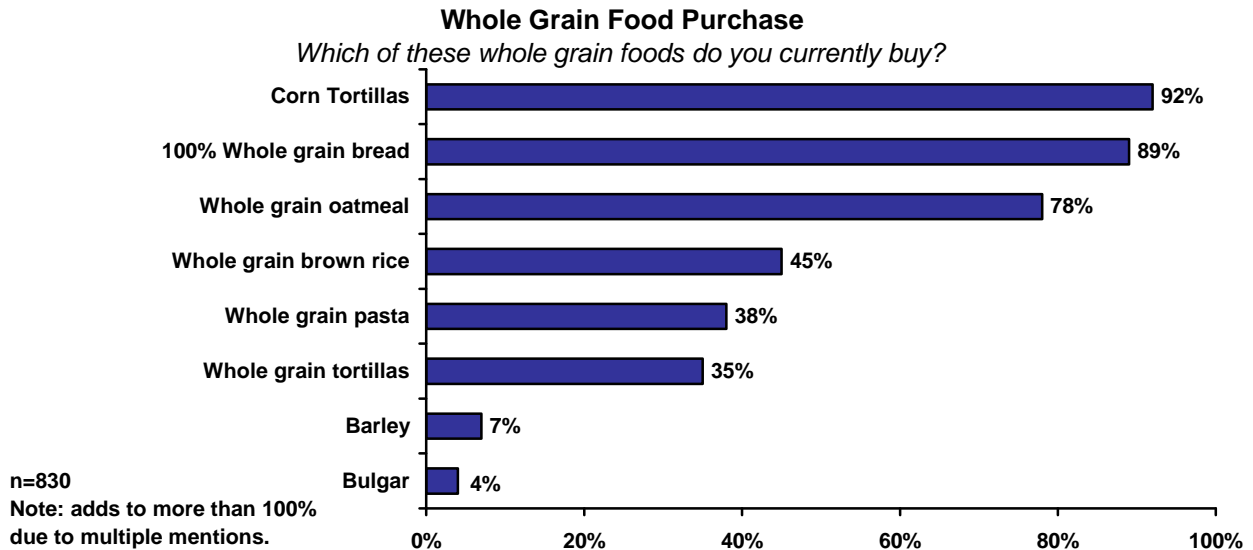
When asked how or why these discussions come up, the top reasons were *talking about which milk is better* (11%) and *discussing eating habits* (10%). Interestingly, one in ten women said they were talking about how *whole milk is not good for you*.



E. Whole Grain Food Habits

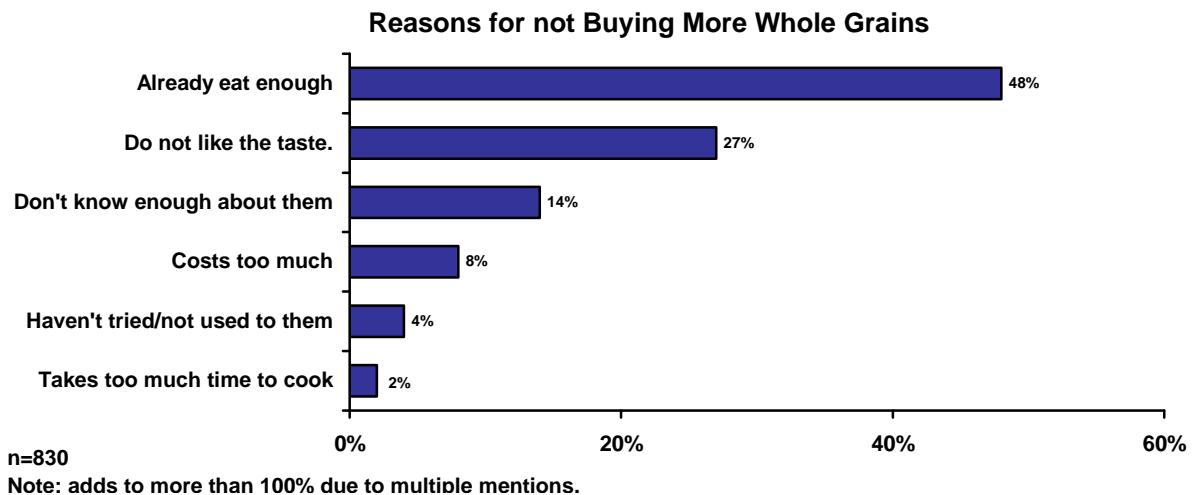
1. Whole Grain Food Purchase Behavior

Study participants were asked which whole grain foods they currently buy. Nine in ten (92%) said they purchase corn tortillas with approximately the same portion saying they buy 100% whole grain bread (89%). Slightly fewer – 78% - purchase oatmeal. The portion purchasing whole grain rice (45%), pasta (38%), and tortillas (35%) is significantly lower.



2. Reasons for not Buying More Whole Grains

When asked why they don't buy more whole grain foods, 48% said they feel they *already eat enough*. Nearly three in ten moms (27%) said they *do not like the taste* and 14% said they *don't know enough about the importance of eating whole grain foods*. One in twelve (8%) said they *cost too much*. One in twenty-five (4%) said they *haven't tried/not used to them* and 2% said they *take too much time to cook*.

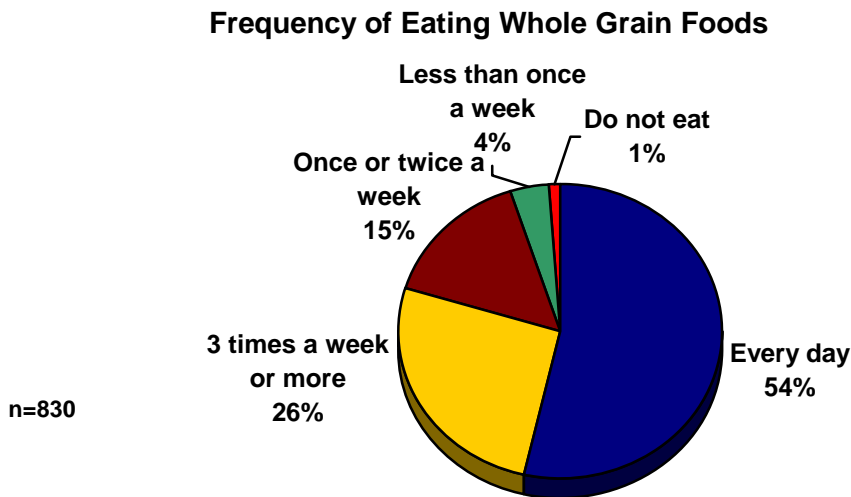


Demographic Differences:

While non-Hispanics were significantly more likely than Hispanics to say they *already eat enough* whole grains (55% compared to 45%), and *whole grains cost too much* (12% compared to 7%), Hispanics were more likely than non-Hispanics to say they don't buy more whole grain foods because they *don't like the taste* (29% compared to 19%).

3. Frequency of Eating Whole Grain Foods

Over half of moms (54%) state that their family eats whole grain foods *every day*, with an additional 26% saying they eat them *at least three times a week*. Fifteen percent (15%) report eating whole grain foods *at least once a week*, and 4% say they eat them *less than once a week*. Just 1% of those interviewed say they *do not eat whole grain foods at all*.

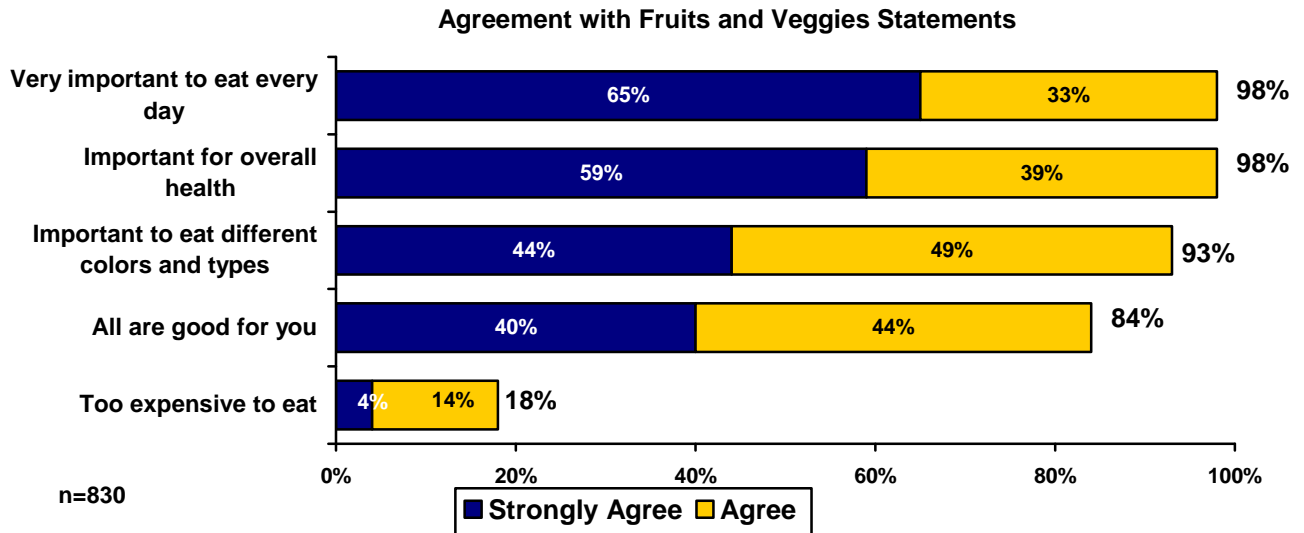


There were no statistically significant differences by demographic group.

F. FVMM Pretest

1. Agreement with Fruits and Veggies Statements

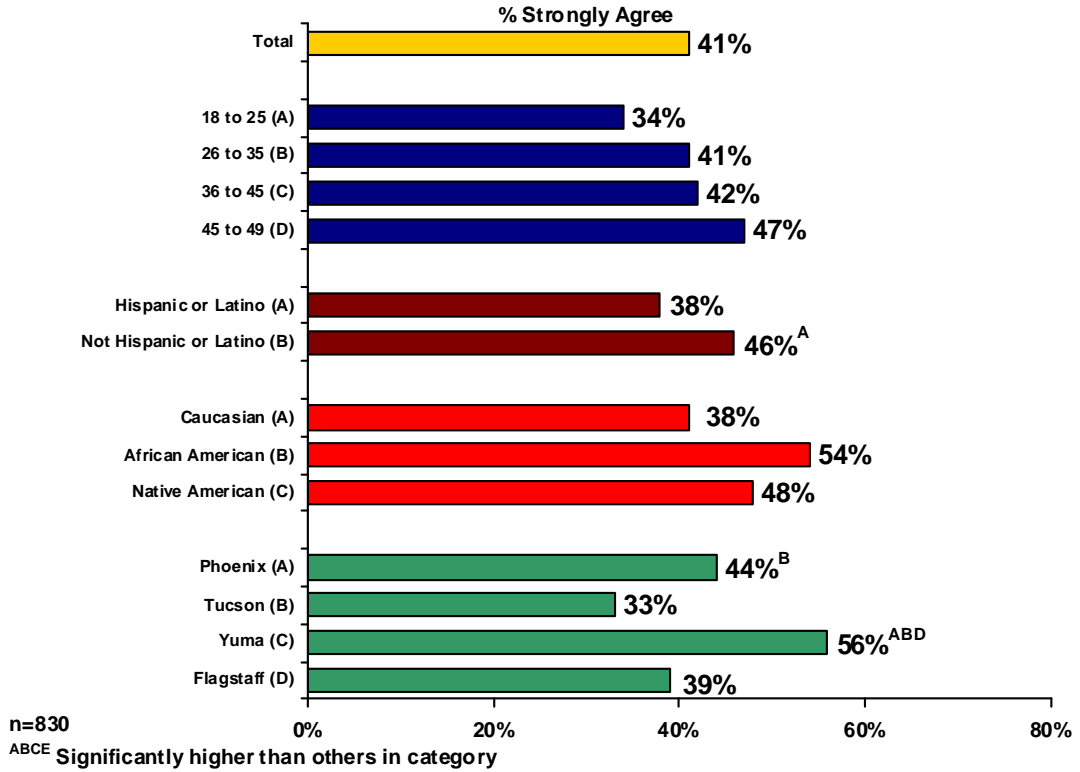
The overwhelming majority of women interviewed said they strongly agree or agree with four of the five fruits and veggies statements, with fewer than two in ten (18%) saying they strongly agree or agree that *it is too expensive to eat fruits and vegetables*. The portion saying they are too expensive to eat decreased significantly from 2009 (24%).



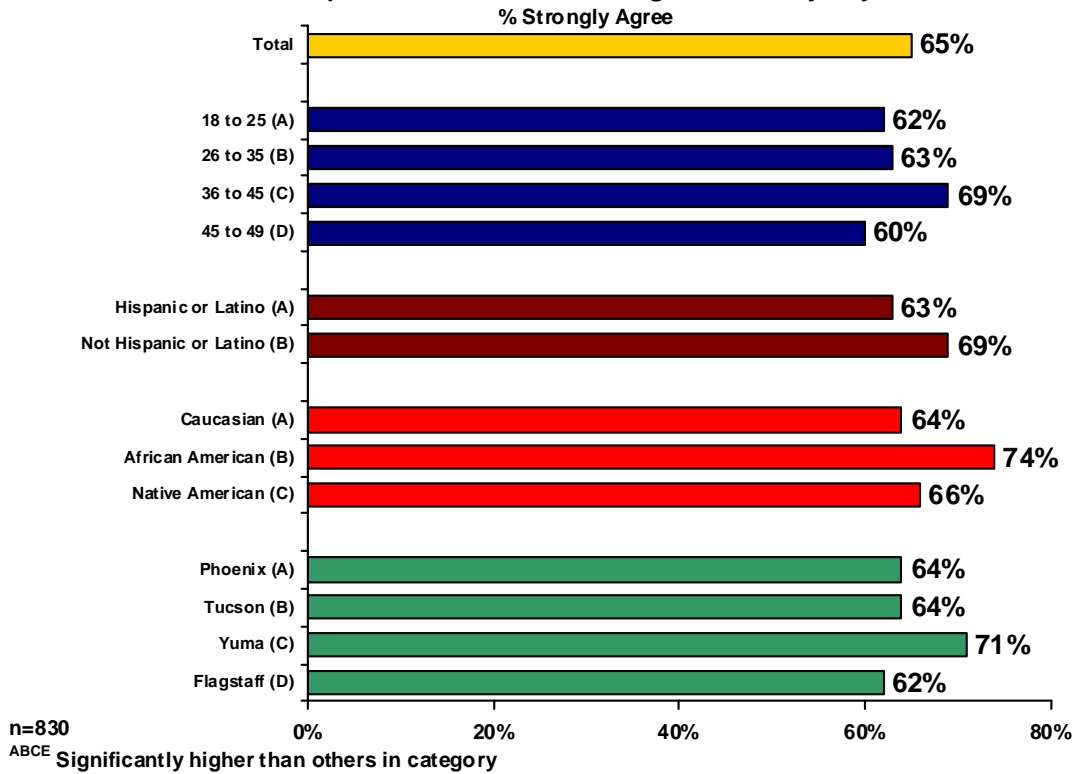
Demographic Differences:

As seen in the following charts, Yuma moms are significantly more likely to *strongly agree* with the fruits and veggies statements than are mothers in Phoenix and Tucson.

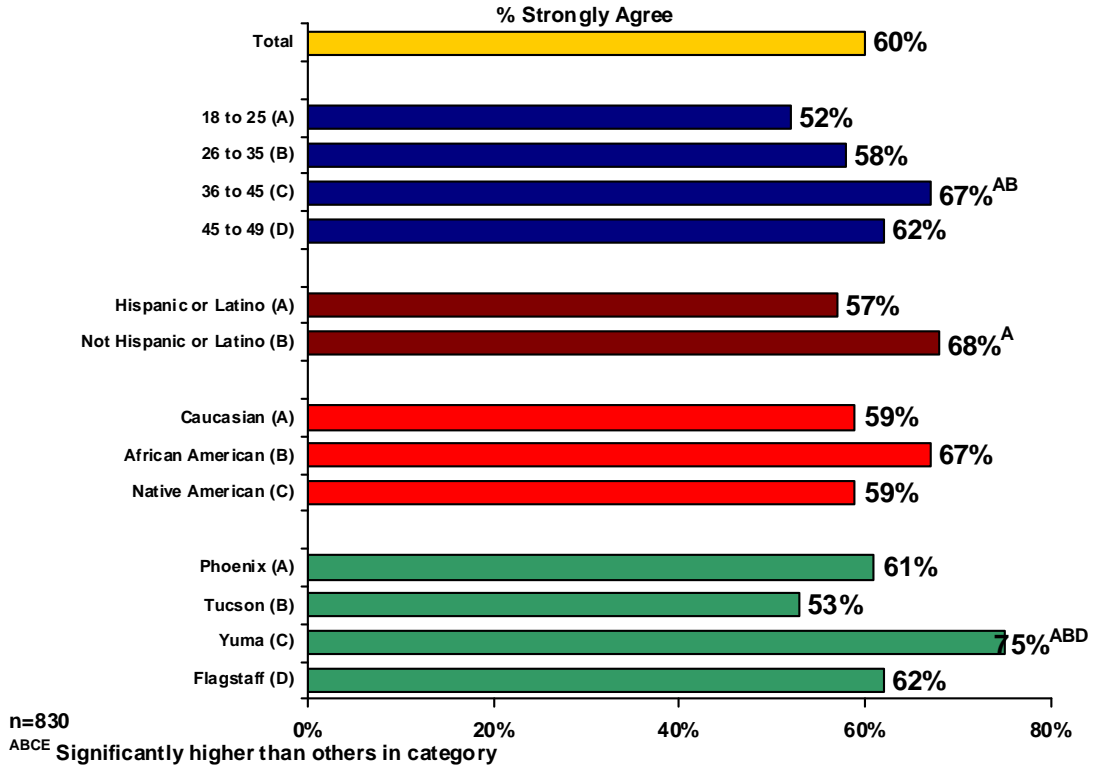
All Forms of Fruits & Vegetables Are Good For You



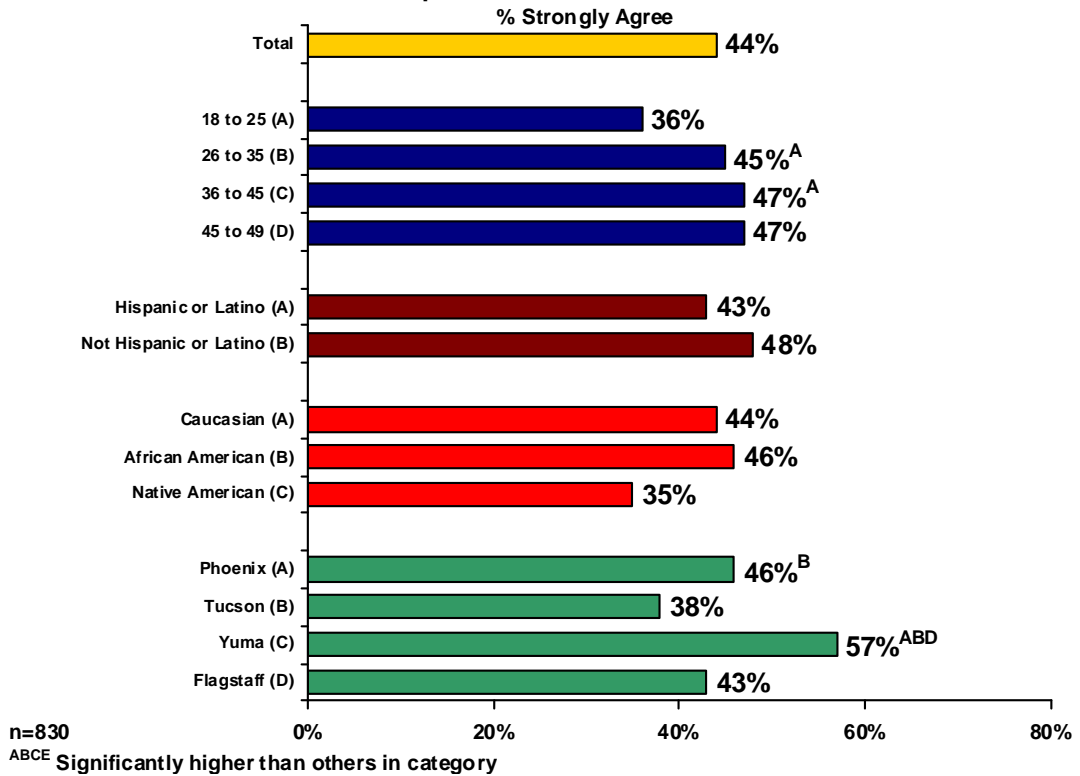
Important to Eat Fruits and Vegetables Every Day



Eating Fruits and Veggies - Important for Overall Health

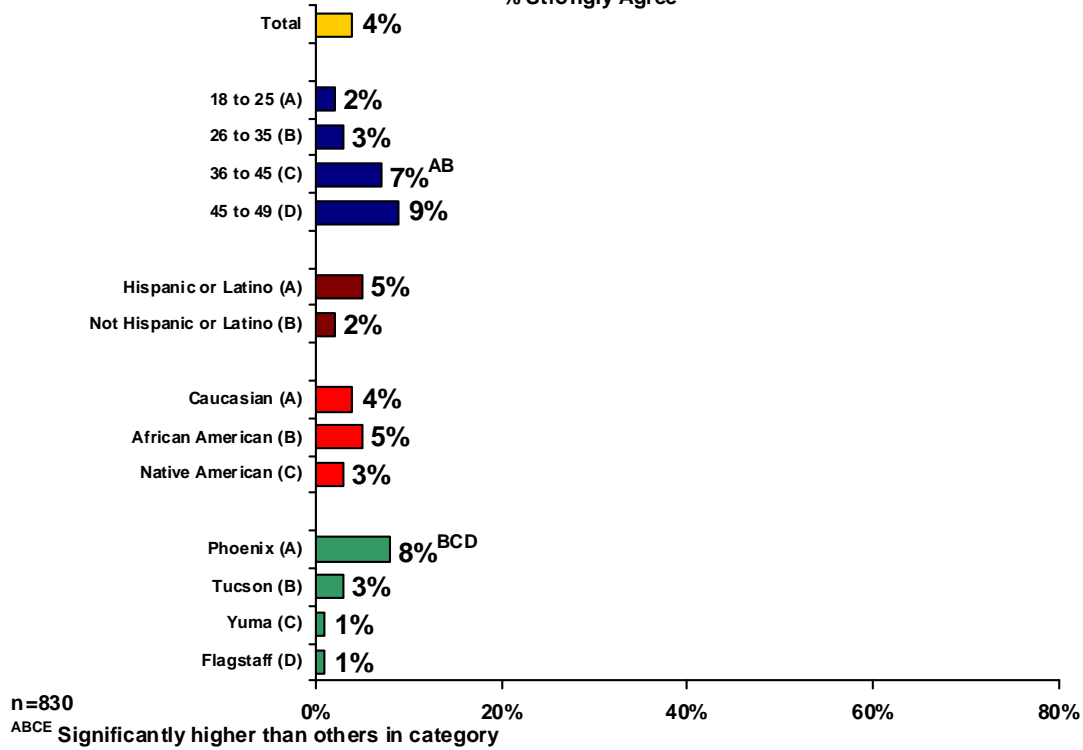


Important to Eat Different Colors



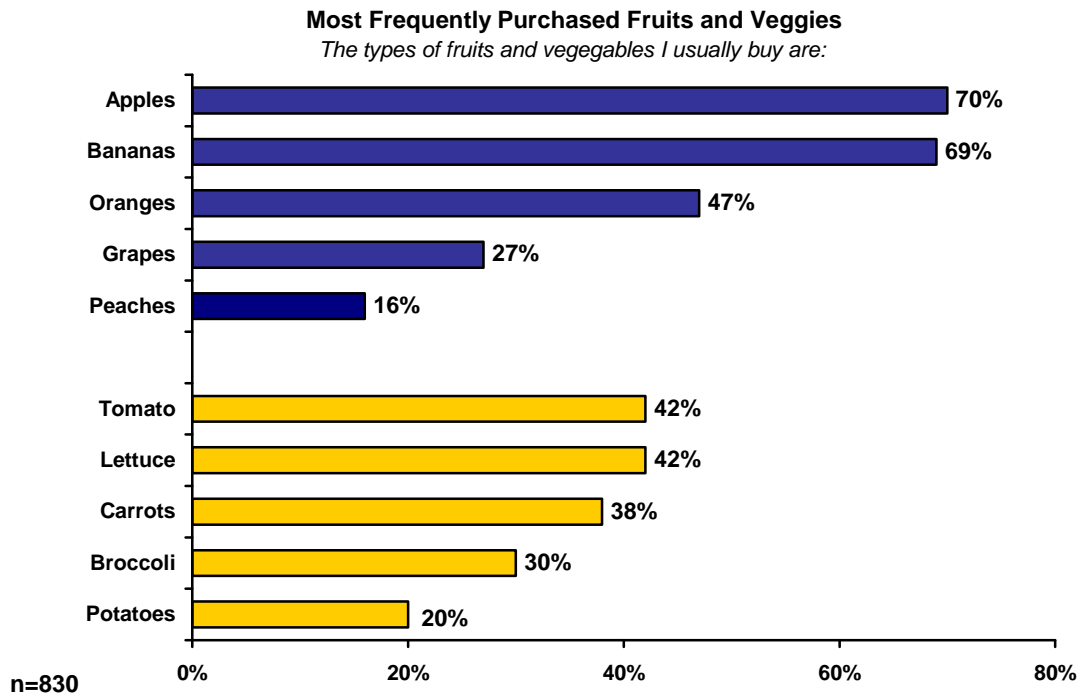
It's Too Expensive to Eat Fruits and Vegetables

% Strongly Agree



2. *Fruits & Veggies Purchased Most Frequently*

When asked which fruits they usually buy, moms were most likely to say apples and bananas. Oranges are next most popular. When asked which veggies they typically buy, tomatoes, lettuce, and carrots were named most frequently.

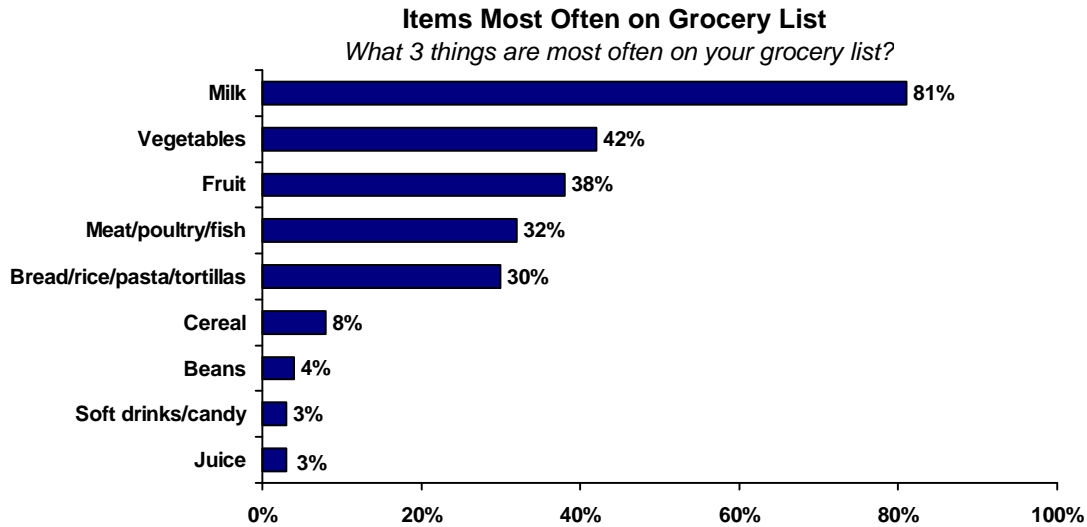


Demographic Differences:

Hispanic mothers are significantly more likely to purchase apples than are non-Hispanic mothers. In addition, Hispanic moms are more likely to buy tomatoes and lettuce than are non-Hispanic moms, while non-Hispanics are more likely to purchase corn, green beans, and spinach.

G. Items on Grocery List

At the beginning of the interview, participants were asked what three things are most likely to be on their grocery lists. Over eight in ten (81%) mothers mentioned milk. This is followed by vegetables (42%), fruit (38%), meat/poultry/fish (32%), and bread/rice/pasta/tortillas (30%).



n=830

Note: adds to more than 100% due to multiple mentions.

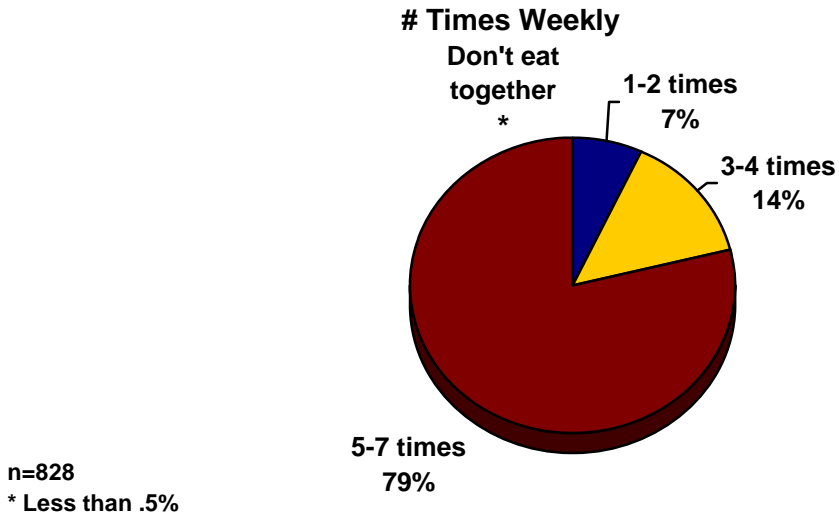
Demographic Differences:

Hispanics mothers are more likely than non-Hispanics to include milk on their grocery lists (83% compared to 76%). Mothers residing in Flagstaff and Cottonwood are less likely to include milk on their lists than are women in the other three markets. However, these moms are more likely than those in other cities to include fruit on the lists. Similarly, Flagstaff/Cottonwood moms – along with moms in Yuma – are more likely than those in Phoenix and Tucson to report purchasing veggies.

H. Additional Respondent Information

1. Frequency of Eating Dinner Together

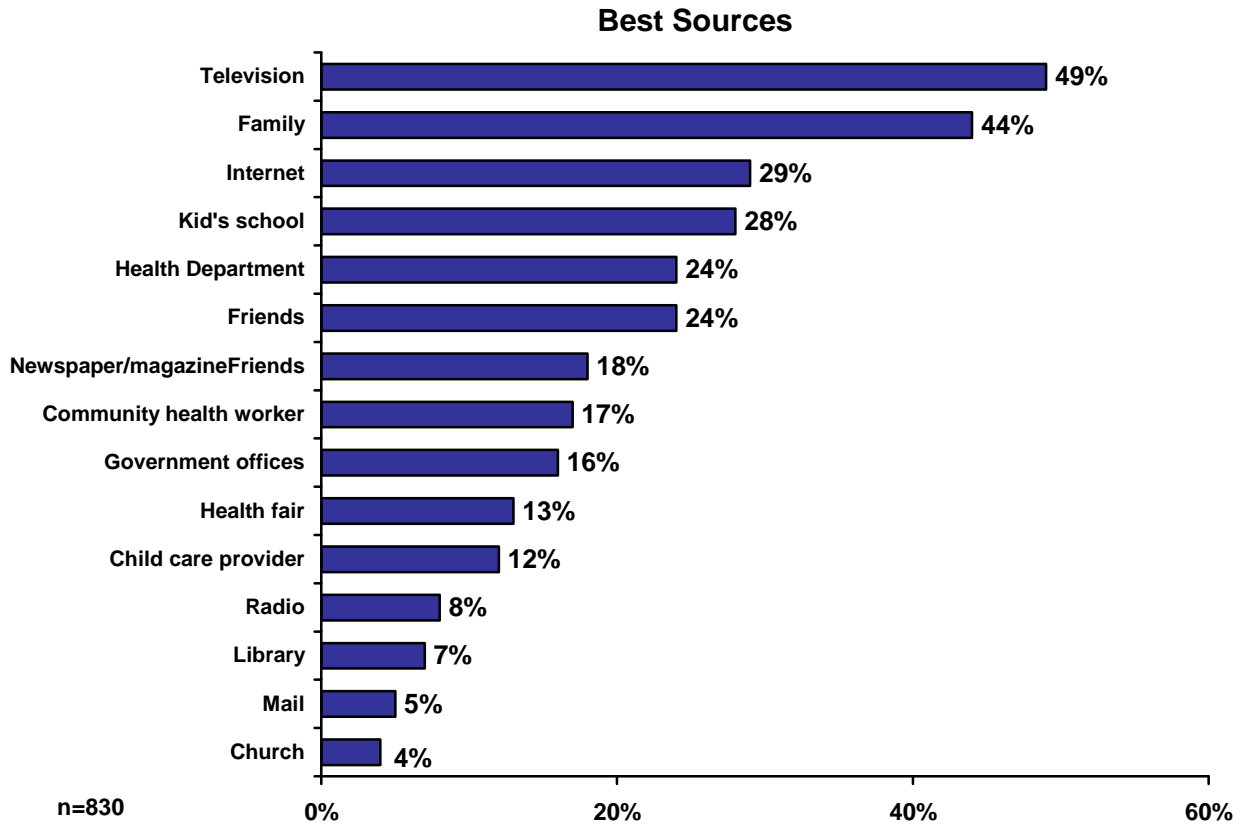
Eight in ten (79%) mothers report eating together as a family 5 to 7 times each week, with an additional 14% maintaining they eat together 3 to 4 times every week. Fewer than 8% of all moms interviewed say their family eats together just 1 or 2 times during the week.



There were no statistically significant differences by demographic group.

2. *Best Sources for Health and Nutrition Information*

When asked to name the three best sources of health and nutrition information, moms gave a wide variety of responses. Overall, the most frequently cited information sources were television (49%), family (44%), the Internet (29%), and schools (28%). The Health Department and friends round out the top six “best sources” of information (both at 24%).



3. Household Usage Profile

Study participants report the following:

Table 4: Household Usage Profile

	Total		Total		Total
Sample Size	831	Sample Size	831	Sample Size	831
	%		%		%
Technology		Appliances		Spices Used	
Cell phone	86	Refrigerator	99	Salt	78
DVD Player	80	Stove	97	Pepper	77
Computer	67	Microwave	94	Garlic	74
CD Player	66	Blender	86	Onion	73
Digital Cable TV	52	Regular oven	85	Cilantro	66
Landline Phone	39	Freezer	73	Seasoned salt	52
Satellite TV	31	Crockpot/slow cooker	68	Oregano	50
Source of Internet Access		Mixer	62	Chili Powder	41
Home	62	Food chopper	29	Cinnamon	38
Cell phone/smartphone	29	Food processor	28	Mustard	36
Public Library	22	Transportation		Bay Leaves	32
Work	22	Your own car	86	Basil	27
Family/friend's house	3	Bus/Light Rail	6	Cloves	26
School	1	Ride with friend	6	Parsley	26
Other	3	Walk	4	Paprika	21
No Internet access	15	Bicycle	1	Cayenne	18
				Allspice	13
				Nutmeg	12
				Other	37
				All of these	16

Demographic Differences:

Non-Hispanics are significantly more likely than Hispanics to have a computer in their homes – 75% and 64% respectively. Similarly, non-Hispanics are more likely than Hispanics to have access to the Internet at home – 70% compare to 59%.

While Hispanics are more likely than non-Hispanics to use salt, garlic, cilantro, oregano, cinnamon, and bay leaves, non-Hispanics are more likely to use basil, paprika, and cayenne.

Appendix G
“Grow a Healthy Child”
Post Campaign Research Report



**Arizona Department of Health Services
(ADHS)/
Arizona Nutrition Network (AzNN)
“Grow a Healthy Child”
Post Campaign Research Report**



Report Prepared for:
Arizona Department of Health Services / AzNN

June 2010

Table of Contents

I. Background & Methodology	2
II. Executive Summary.....	6
III. Summary of Findings	9
A. Aided Ad Awareness – <i>GHC</i>	9
B. Main Message – <i>GHC</i>	13
C. Media Recall	16
D. Evaluation of Advertising.....	19
E. “Stage of Change”	26
F. Influence of <i>GHC</i> Advertising	29
G. Family Activities	30
H. Milk Consumption.....	35
I. Whole Grain Foods	38
J. Grocery Shopping	44
K. Additional Respondent Information	45

Appendices:

A. Questionnaire

B. Data Tables

I. Background & Methodology

The Arizona Nutrition Network (AzNN), a public and private partnership led by the Arizona Department of Health Services' Bureau of USDA Nutrition Programs, was developed to educate all Arizonans, especially lower income residents, on the importance of nutrition and physical activity. The organization's mission is to shape food consumption in a positive way, promote healthy behaviors, and reduce disease among specific target groups – in this case, Supplemental Nutrition Assistance Program (SNAP) applicants and participants living in Arizona. AzNN accomplishes this by promoting basic, consistent messages that help the target audience choose diets rich in nutrients, which include increased consumption of fruits and vegetables, drinking 1% low fat and fat free milk, and family togetherness.

Moses Anshell has developed social marketing campaigns around the three messages of increased consumption of fruits and vegetables, drinking 1% low fat or fat free milk, and family togetherness. These campaigns are designed to inform and educate the target market about the importance and benefits of living a healthier lifestyle with a goal to influence their nutrition choices. When appropriate, campaign materials are in both English and Spanish.

The primary target for this campaign is women ages 18 to 49 with children ages 2 to 11, with household income equal to or less than 130% of federal poverty level. The secondary target is children 2 to 11.

The subject of this research report is the *Grow a Health Child* campaign, which focuses on family togetherness. The campaign, which ran January through April 2010, was statewide and included the following media and projects:

- Television
- Radio
- Grocery store cart ads
- Direct mail
- Door hangers
- Website (www.eatwellbewell.org)
- Educational reinforcements (e.g., nutrition-based games and toys)
- Collateral items (e.g., recipe cards, Fun Food News Newsletter)
- Posters in government offices
- Partner events (Event in a Box)

To test awareness and effectiveness of this campaign, Moses Anshell contracted with WestGroup Research to conduct a study with the target population. The research objectives were as follows:

- Measure awareness of the campaign
- Evaluate exposure to the campaign
- Gauge effectiveness of the advertising

Intercept interviews were conducted with 801 women between the ages of 18 and 49 who have children ages 2 to 11. The study was conducted at Food City locations in Phoenix, Tucson, Yuma, and Cottonwood, at a Bashas location in Flagstaff, and at the DES office in Winslow. In addition, 79 interviews were completed at AzNN partner locations. All interviews were completed between May 12 and June 4.

The following table lists the specific locations of the intercepts and the number of completed interviews at each location. (These locations were selected based on the demographics of the zip codes in which they reside.)

City	Location/Address	Sample Size	Interview Dates
Phoenix	Food City: <ul style="list-style-type: none"> • 1450 N. Dysart • 9020 W. Thomas • 12321 N. West Grande Avenue • 725 W. Baseline Desert Mission Food Bank (Partner)	300	May 12 – June 4
Tucson	Food City: <ul style="list-style-type: none"> • 1221 W. Irvington • 1740 Ajo Way • 428 West Valencia • 200 E. Irvington 	291	June 1 - 4
Yuma	Food City: <ul style="list-style-type: none"> • 1240 W. 8th Street • 2600 W. 16th Street 	111	May 25 - 26
Flagstaff	Bashas: 1000 N. Humphreys Coconino County Health Dept. (Partner)	99	May 17 - 19
Winslow	DES Office: 319 E. Third Street		
Cottonwood	Food City: 1502 E. Highway 89A		

All survey participants met the following screening criteria:

- S1. Do you have any children between the ages of 2 and 11?
 _____ Yes
 _____ No (THANK & TERMINATE)
- S2. Which of the following categories best describes your age?
 _____ 18 to 25
 _____ 26 to 35
 _____ 36 to 45
 _____ 45 to 49
 _____ over 49 (THANK & TERMINATE)
- S3. How many people are there living in your household?
 _____ 2
 _____ 3
 _____ 4
 _____ 5
 _____ 6 or more
- S4. What is your household income? You can give that to me as a weekly income, every 2 weeks, monthly, or yearly income. *(Must be under these to qualify.)*

Family Size	Weekly Income	2-Week Income	Monthly Income	Yearly Income
1	\$ 385	\$ 770	\$1,670	\$20,036
2	\$ 518	\$1,036	\$2,246	\$26,955
3	\$ 651	\$1,302	\$2,823	\$33,874
4	\$ 784	\$1,568	\$3,399	\$40,793
5	\$ 917	\$1,834	\$3,976	\$47,712
6	\$1,050	\$2,101	\$4,553	\$54,631

Participants had the option of completing the interview in English or Spanish and were given a \$5 Food City/Bashas gift certificate as a “thank you.”

It is important to note that although this information is quantitative, it is not necessarily representative of all low-income women between 18 and 49 years old in Arizona. To be representative of that population, respondents would have to have been selected at random. That is, each person in the population would have had an equal chance of being included in the sample. These intercepts were conducted using a convenience sample (e.g., those who shop at Food City/Bashas or who were in the DES office at a particular time). Though this sampling technique is appropriate to meet the study objectives (within the budget guidelines), it does introduce a sampling bias and should be considered when interpreting the findings.

Respondent Profile

	Total n=801	Phoenix n=300	Tucson n=291	No. AZ n=99	Yuma n=111
Age					
18 – 25	18%	19%	16%	22%	21%
26 – 35	45%	39%	54%	35%	45%
36 – 45	30%	35%	24%	33%	29%
46 – 49	<u>7%</u>	<u>7%</u>	<u>6%</u>	<u>10%</u>	<u>5%</u>
Total	100%	100%	100%	100%	100%
Race					
Hispanic	77%	74%	89%	45%	83%
Not Hispanic	<u>23%</u>	<u>26%</u>	<u>11%</u>	<u>55%</u>	<u>17%</u>
Total	100%	100%	100%	100%	100%
Ethnicity					
Caucasian	62%	58%	53%	73%	85%
Native American	6%	5%	5%	16%	1%
African American	3%	8%	0%	0%	2%
Other	4%	4%	3%	8%	0%
DK/Refused	<u>25%</u>	<u>25%</u>	<u>39%</u>	<u>3%</u>	<u>12%</u>
Total	100%	100%	100%	100%	100%
Education					
8 th Grade or less	8%	9%	8%	7%	6%
Some High School	17%	19%	17%	14%	14%
GED/HS Grad	36%	33%	38%	34%	42%
Some College+	<u>39%</u>	<u>39%</u>	<u>37%</u>	<u>45%</u>	<u>38%</u>
Total	100%	100%	100%	100%	100%
Marital Status					
Single	20%	19%	22%	20%	19%
Married	55%	59%	55%	48%	52%
Divorced/widowed	10%	12%	7%	9%	13%
Living with sign. other	<u>15%</u>	<u>10%</u>	<u>16%</u>	<u>23%</u>	<u>16%</u>
Total	100%	100%	100%	100%	100%
Food Assistance*					
Yes	63%	63%	64%	55%	65%
No	<u>37%</u>	<u>37%</u>	<u>36%</u>	<u>45%</u>	<u>35%</u>
Total	100%	100%	100%	100%	100%
Food Stamps**	67%	64%	72%	69%	60%
School lunch/breakfast	53%	45%	62%	47%	54%
WIC	48%	43%	56%	43%	44%
Other	5%	10%	2%	2%	4%

* Do you or anyone in your family participate in food assistance programs?

** If yes, which ones? Summer Food Service Program, Food Stamps, School Lunch/School Breakfast, WIC, CSFP, Other (Multiple responses allowed.)

II. Executive Summary

GHC Advertising

- Nearly three in ten mothers interviewed (29%) recalled the *GHC* campaign on an aided basis. (Refer to page 12.)
 - *This is similar to awareness of the 2008 GHC campaign, in which 32% of participants said they were aware.*
- **The dominant message respondents recall** once they have seen the *GHC* materials is to *eat together as a family/spend time together as a family*, with nearly three-quarters (73%) saying this is the main message. This is followed distantly by *eat healthy/kids need to eat healthy to grow healthy*, which was mentioned by 27%. (Refer to page 13.)
- **Most mothers (93%) like the advertising and do so for a variety of reasons** with the largest proportion appreciating the *family eating together/family togetherness* aspect of the advertising (40%). *Spend more time with kids* (12%), *bonding with children in the garden* (10%), *teaches kids/family to eat healthy* (9%) and *good message* (7%) follow distantly and round out the top five reasons. (Refer to pages 19, 21.)
- **Overwhelmingly, women find the advertising easy to understand, with 98% rating it as such.** In addition, more than four in ten (44%) agree it is better than other advertising about the importance of spending time together as a family. (Refer to pages 23, 24.)
- **TV is the #1 medium, with 77% of those who had seen or heard *GHC* advertising saying they had seen the ads on TV.** Government office was mentioned by two-thirds, followed by radio, door hangers, mail, and after school programs. (Refer to page 16.)

Stages of Change

- **When asked which of five *Stages of Change* statements best describes them, three-quarters (75%) of the women interviewed said they already spend time together as a family every day (Maintenance stage).** An additional 21% said they are trying to spend more time together as a family now (*Action stage*). Four percent (4%) say they definitely *plan to spend more time together as a family in the next month (Preparation-3%)*, or are *thinking about spending more time together as a family within six months (Contemplation-1%)*. Just one study participant said she is not thinking about it, putting her in the *Pre-contemplation Stage*. (Refer to page 26.)

- **More than eight in ten (84%) of those aware of the advertising and who are currently trying, planning or thinking about trying to spend more time together in the near future maintain the *GHC* campaign positively influenced their behavior or thought process to do so.** *(Refer to page 29.)*

Family Activities

- Eating meals is the #1 indoor activity moms and children do together – 96% say they do this. This is followed closely by housework (91%) and playing video/board games (88%). Two-thirds (65%) say they bake or cook with their children. *(Refer to page 30.)*
- Walking is the most popular outdoor activity mothers do with their children, with 89% of moms saying they do this. Playing ball (84%), running/chasing (75%), swimming (73%) and yard work (67%) round out the top-five outdoor activities. *(Refer to page 32.)*
- Nearly one half of mothers indicate their children have significant involvement in helping to plan meals - 22% always + 26% often help plan them. An additional 29% report their children sometimes help plan meals. About one in four say their kids are rarely (13%) or never (10%) involved in meal planning. *(Refer to page 34.)*

Milk Consumption

- Mothers are most likely to report they and their children drink 2% milk (44% of moms and 43% of children). Whole milk and 1% low fat milks are equally popular among moms (both at 23%). Kids are next most likely to drink whole milk (29%), followed by 1% low fat milk (24%). *(Refer to page 35.)*
- **Consumption of whole milk and 2% reduced fat milk decreased slightly again this year compared to last year and 2008** (whole milk: 23%, down from 25% in 2009 and 31% in 2008, 2% reduced fat milk: 44%, down from 49% in 2009 and 50% in 2008), **while consumption of fat free milk has increased** (5%, up from 2% last year and 4% in 2008). *(Refer to page 37.)*

Whole Grain Foods

- Whole grain bread and corn tortillas are the most common whole grain foods purchased by mothers (86% and 85%), followed by oatmeal (66%). Generally, purchase behavior has remained constant over the past couple of years with the exception of oatmeal this year which can probably be attributed to the change in the wording of the question. *(Refer to pages 38, 40.)*

- The main reasons women do not buy more whole grain food are because they feel they already eat enough of them (35%) and/or they do not like the taste (31%). *(Refer to page 41.)*
- A majority of moms (81%) report that their families eat whole grains either every day (42%) or at least three times a week (39%). *(Refer to page 43.)*

Grocery Shopping

- Participants were asked what three things are most likely to be on their grocery lists. Seven in ten (72%) mentioned milk. This is followed by vegetables (42%), fruit (39%), meat/poultry/fish (33%), eggs (33%), and bread/rice/pasta (32%) *(Refer to page 44.)*

Additional Information

- When asked to name the three best sources of health and nutrition information moms gave a wide variety of responses. Overall, the most frequently cited information sources were television (44%), Internet (35%), and family (33%). *(Refer to page 45.)*
- Cell phones and DVD players are the two technology items moms indicate they are most likely to have in their home (affirmed by 85% and 84%, respectively). A majority also have a computer (71%), CD player (71%), and Internet access (61%) at home. *(Refer to page 47.)*
- Nearly nine in ten of the mothers say they get to and from places by using their own car (87%). Others report using the bus (5%) or riding with a friend (5%). *(Refer to page 49.)*
- Regarding appliances in their homes, virtually all mothers indicate they currently have a refrigerator and stove in their home (98% each). Microwave ovens are also almost universal (93%). Food choppers (28%) and processors (27%) are the two appliances least likely to be in homes. *(Refer to page 50.)*
- Outside of salt (95% use) and pepper (92% use), the top three spices used to prepare foods in the home include garlic (89%), onion (88%), and cilantro (83%). *(Refer to page 52.)*

III. Summary of Findings

A. Aided Ad Awareness – *GHC*

Respondents were shown a DVD of the thirty-second TV ad as well as a picture of the campaign's door hanger and poster in either English or Spanish, depending on their language preference.




CHILDREN NEED ATTENTION AND CARE TO GROW.

"The time we spend together is an opportunity for us to bond. I make sure my kids are eating healthy and staying active. That's what makes me a Champion for Change." - Julie, Champion Mom from Arizona




For healthy recipes, visit eatwellbewell.org or call 1-800-695-3335.







LOS NIÑOS NECESITAN ATENCIÓN Y CUIDADO PARA CRECER.
"Desarrollar una estrecha relación con mis niños, es importante. Pasamos tiempo juntos todos los días y les enseño lo que significa tener un estilo de vida saludable. Eso es lo que me hace una Campeona del Cambio". - Esther, Mamá Campeona de Arizona



Para recetas saludables, visite comesanovivemejor.org o llame al 1-800-695-3335.



They were then asked “Do you recall seeing any of these advertisements?” A total of 29% of all women interviewed said they had, with 69% saying they had not and 3% indicating they were unsure.

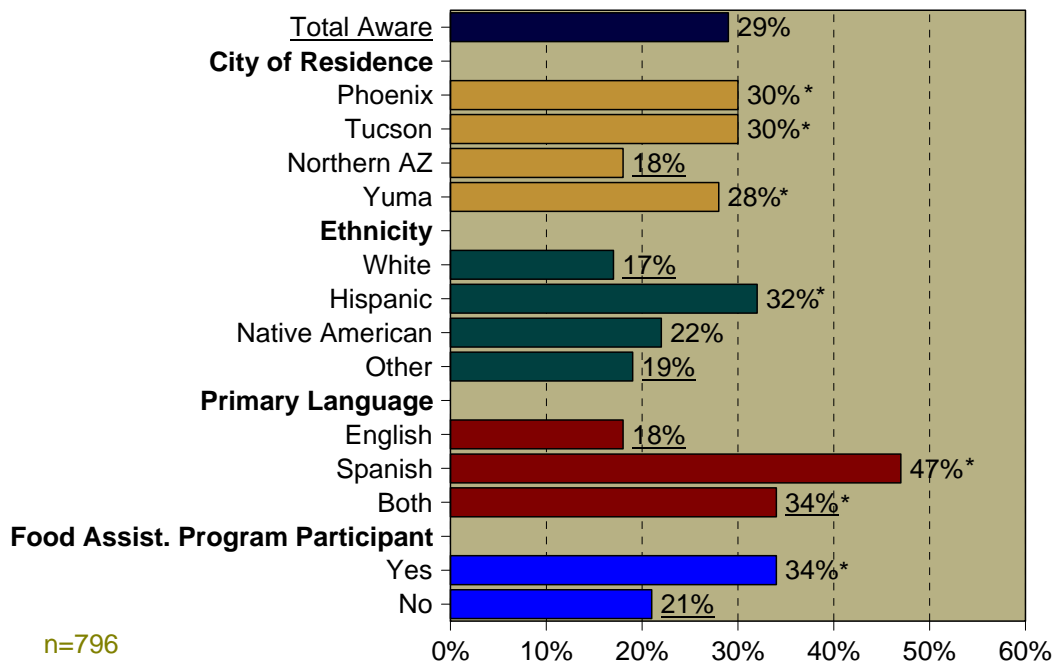
Demographic Differences:

Phoenix, Tucson and Yuma moms are significantly more likely than moms in Northern Arizona to recall any of the advertising (28% to 30% vs. 18%). Hispanics are significantly more likely than Caucasians and “other” minority moms to recall seeing or hearing the advertising (32% vs. 17% and 19% respectively). Moms who speak Spanish, either predominantly or equally as often as English, are significantly more likely than those who are English dominant to recall any of the Grow a Healthy Child advertising (47% Spanish and 34% both vs. 18% English).

Mothers whose families participate in a food assistance program are significantly more likely than those who do not recognize some element of the advertising (34% vs. 21%).

Aided Recall of Advertising

Do you recall seeing or hearing any of these advertisements?



* indicates statistically higher percentage than underlined comparative group(s).

B. Main Message – *GHC*

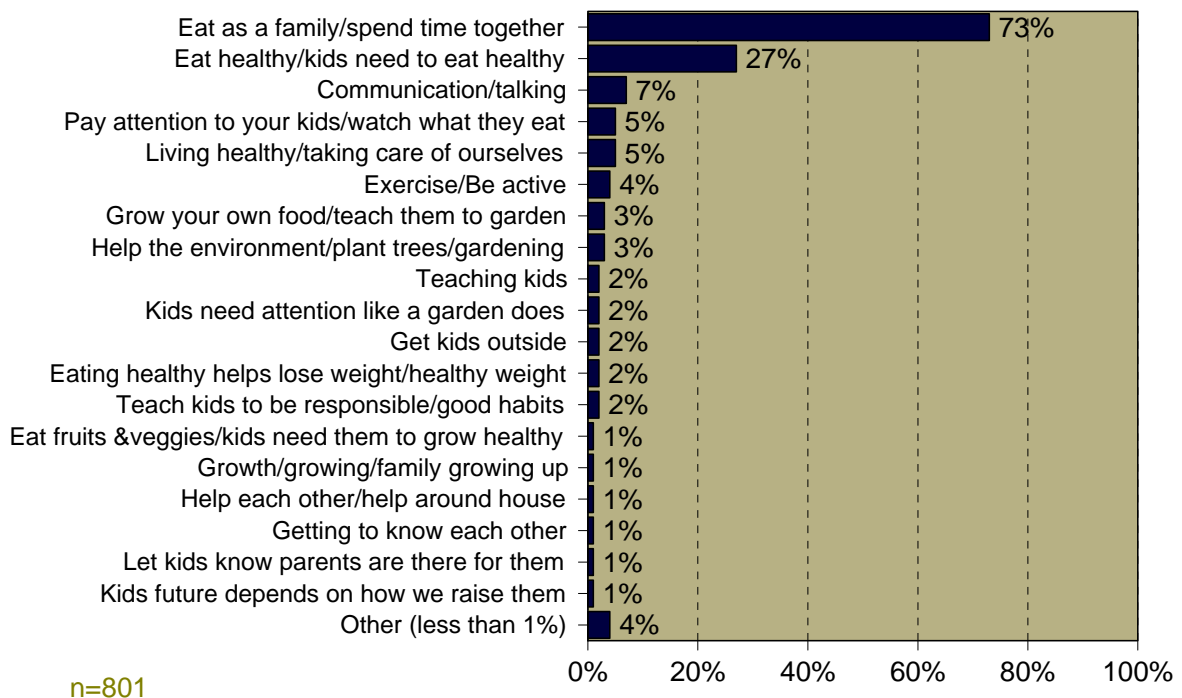
1. Main Message of Advertising

Once they had viewed the TV spot, poster and door hanger, women were asked what they consider to be the main message of the advertising. Overwhelmingly, women believe the primary message of the advertising is to *eat together as a family/spend time together as a family*, with nearly three-quarters (73%) saying this is the main message. This is followed distantly by *eat healthy/kids need to eat healthy to grow healthy*, which was mentioned by 27%.

Additional messages relating to the importance of spending time together as a family include: communication/talking (7%), paying attention to your kids and watching what they eat (5%), kids need attention like a garden does (2%), get to know each other (1%), and let kids know parents are there for them (1%). Some moms mentioned messages about teaching children as well - teach to garden (3%), teaching in general (2%), and teach kids responsibility and good habits (2%).

Main Message

What would you say is the main message of this advertising?



Demographic Differences:

The primary message recalled by mothers overall – *eat as a family/spend time together as a family* – is significantly less likely to be mentioned by moms in Phoenix (62% vs. 77% in Yuma and Tucson and 87% in Northern Arizona). Phoenix and Tucson moms are significantly more likely than those in Yuma to think the main message of the advertising is *to eat healthy/ kids need to eat healthy to grow healthy* (28% and 33% vs. 15% in Yuma and 20% in Northern Arizona). Caucasian respondents are significantly more likely than Hispanics to think the main message is about *eating together as a family/spending time together as a family* (81% vs. 72%).

Interestingly, only 1% of Northern Arizona moms feel the main message is related to *communication/talking* compared to 7% to 10% in the other markets. Phoenix moms were essentially the only ones to think the primary message was about *living healthy/taking care of ourselves* (12% vs. 0% in Yuma and Northern Arizona and 1% in Tucson).

The only other notable difference is that moms who either primarily speak Spanish at home or are bilingual at home (both at 31%) are significantly more likely than those who primarily speak English at home (23%) to feel the main advertising message is to *eat healthy/kids need to eat healthy to grow healthy*.

The table below summarizes the primary differences by city.

**Table 1: Top Five Main Messages – GHC
By City**

Message	Total n=801	Phoenix n=293	Yuma n=111	Tucson n=287	No. AZ n=99
Eat as a family/spend time together	73%	<u>62%</u>	77%	77%	87%
Eat healthy/kids need to eat healthy to grow healthy	27%	28%	<u>15%</u>	33%	20%
Communication/talking	7%	9%	10%	7%	<u>1%</u>
Pay attention to your kids/watch what they eat	5%	4%	5%	5%	8%
Living healthy/taking care of ourselves	5%	12%	-	<u>1%</u>	-

BOLD indicates statistically higher percentage than underlined comparative group(s).

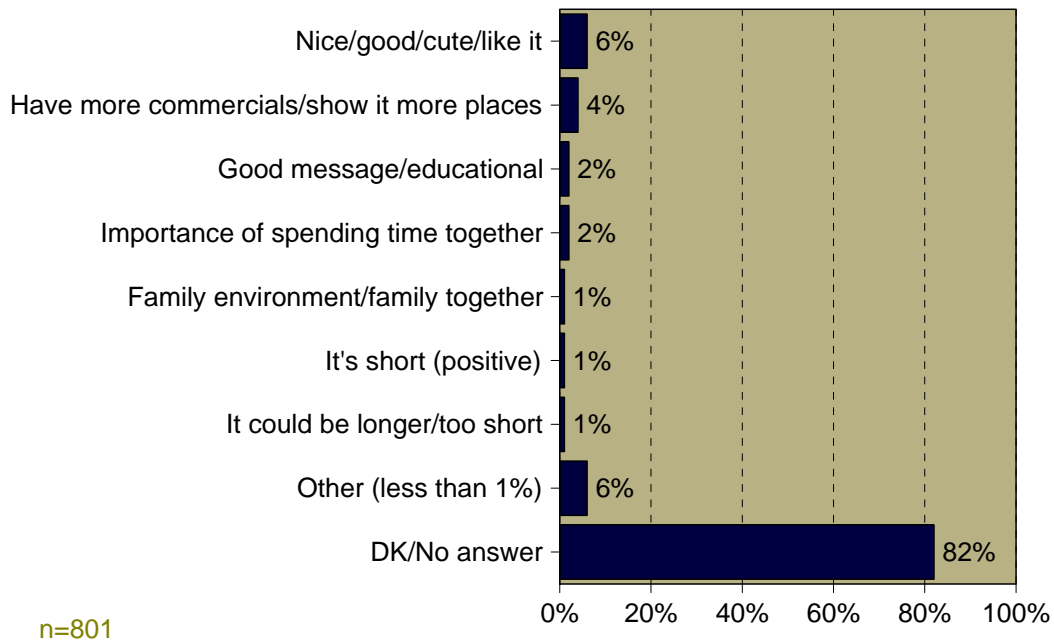
* Will add to more than 100% due to multiple responses.

2. Additional Comments about Advertising

Participants were asked to share additional comments and opinions about the advertising. While more than eight in ten (82%) had no comments, the remaining 18% offered comments such as - the ad was *nice or good and that they liked it* in general (6%), *they should have more commercials/show it in more places* (4%), *it had a good message or was educational* (2%), or simply emphasized that it was about *the importance of spending time together* (2%).

Other Comments about Advertising

What other comments do you have about this advertising?



C. Media Recall

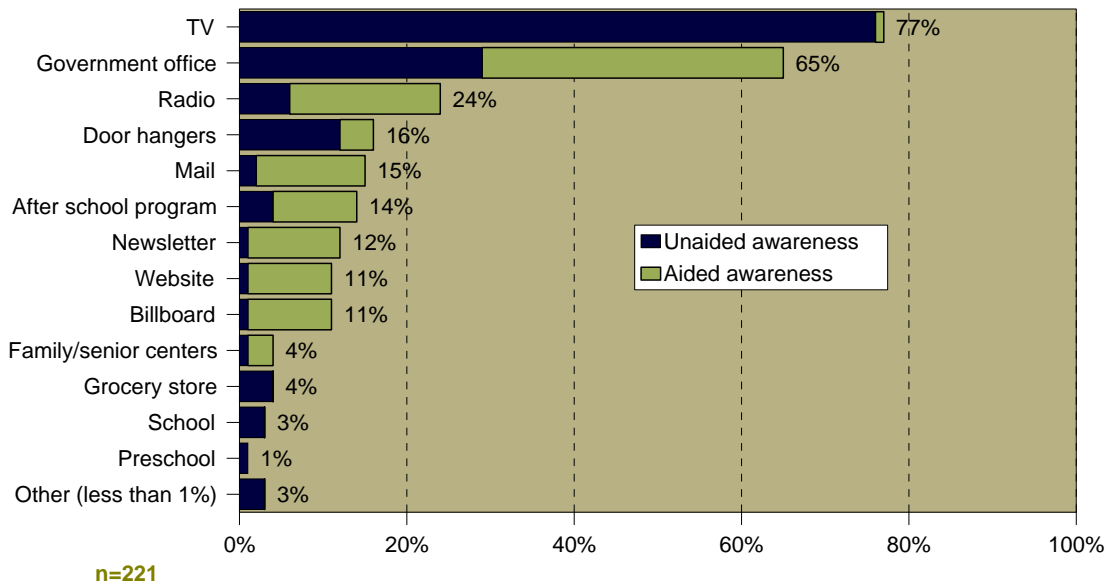
Respondents most often recalled seeing advertising on TV (77%) or at a government office (65%). Over three-quarters of those interviewed (76%) volunteered seeing the advertising on TV (unaided) with just 1% mentioning it after being prompted. One in three (29%) mentioned government office on an unaided basis with an additional 36% recalling this source when being asked directly.

Radio was mentioned by 24% (6% unaided + 18% aided), followed by door hangers (16%, 12% unaided + 4% aided), mail (15%, 2% unaided + 13% aided), and after school program (14%, 4% unaided + 10%). Just over one in ten remembered seeing GHC messaging in a newsletter (12%), on a website (11%), or on a billboard (11%), all with only 1% unaided recall. An additional 4% recalled seeing messaging at a family center with 1% recalling this source on an unaided basis.

(Note: It is important to keep in mind that respondents of all ages tend to default to TV when they are unsure of where they have seen or heard advertising.)

Source of GHC Advertising

Among those who had seen/heard Advertising



Demographic Differences:

Participants in Yuma are significantly less likely than those in the other three markets to say they saw the *Grow a Healthy Child* advertising on TV. Awareness of TV advertising is significantly higher among those who either primarily speak Spanish at home or both English and Spanish at home compared to those who mainly speak English at home.

Radio advertising awareness was highest in Phoenix and Tucson, with both being significantly higher than in Northern Arizona. Phoenix and Tucson moms are also most likely to recall receiving GHC advertising in the mail -- significantly more likely than moms in Yuma.

Moms who consider their primary language to be Spanish are more likely than those who primarily speak English at home to recall hearing advertising on the radio. Those who report being bilingual at home are significantly more likely than moms who mainly speak English to report receiving something in the mail.

**Table 2: Source of Advertising – Combined Unaided & Aided
By City and Primary Language**

Source	City of Residence				Primary Language		
	Phx n=91	Yuma n=31	Tucson n=87	No. Az n=18	Eng n=69	Span n=73	Both n=83
Television	80%	<u>42%</u>	85%	78%	<u>57%</u>	88%	83%
Govt. office	63%	61%	69%	61%	68%	60%	66%
Radio	26%	16%	28%	<u>6%</u>	<u>13%</u>	34%	24%
Door hangers	<u>10%</u>	61%	<u>10%</u>	--	19%	16%	13%
Mail	19%	<u>3%</u>	17%	--	<u>7%</u>	15%	19%
After school program	16%	10%	<u>9%</u>	33%	10%	15%	17%
Newsletter	14%	--	16%	6%	10%	8%	17%
eatwellbewell.org	16%	7%	9%	6%	13%	7%	13%
Billboard	11%	13%	10%	6%	9%	10%	12%
Family centers	3%	3%	2%	17%	4%	1%	6%

BOLD indicates statistically higher percentage than underlined comparative group(s).

A total of 168 respondents said they had seen the advertising on TV. As expected, there were significant differences by city in the TV stations mentioned. Following is a list of those named most frequently. (*Note the small sample size for Northern Arizona and Yuma.*)

**Table 3: Top TV Stations
By City**

Phoenix n=89	Tucson n=85	No. AZ n=17	Yuma n=30
Television 78% Univision/Ch.33 – 25% KTVK/Ch.3 – 3%	Television 86% Univision/Ch. 46 – 36% ABC-affiliate/Ch. 5 – 8% Telemundo/Ch. 40 – 6%	Television 76% Univision/Ch. 6 – 41% Univision/Ch. 33 – 18% KAFL/Ch. 45 – 6%	Television 43% Univision/Ch. 7 – 20% Telemundo/Ch. 30 – 3% NBC-affiliate/Ch.11 – 3% Nickelodeon/Ch. 26 – 3% MTV/Ch. 44 – 3%

Among those who recall seeing or hearing advertising.

D. Evaluation of Advertising

1. Overall Opinion of Advertising

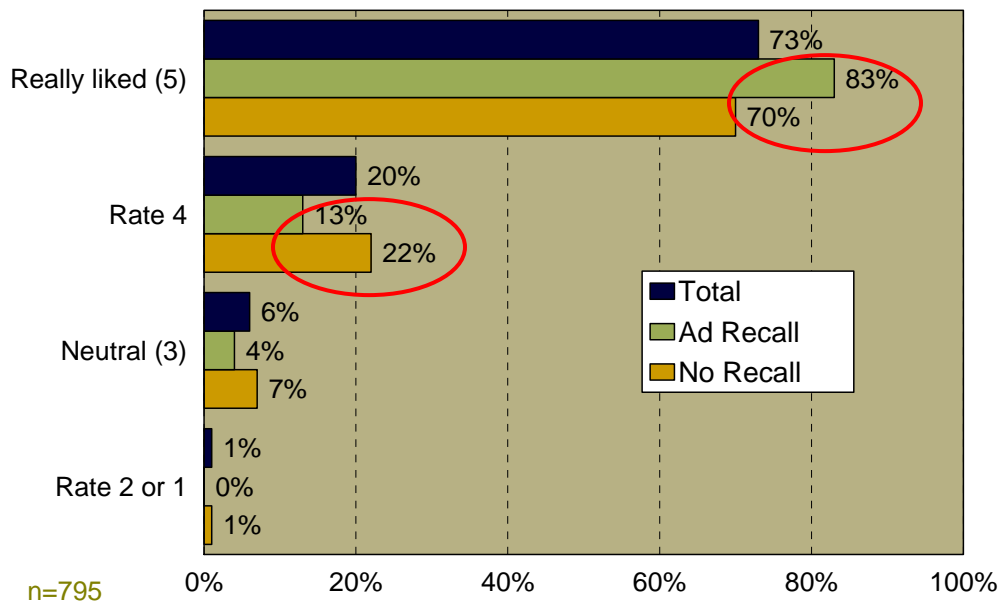
Moms were asked to rate the advertising on a 5-point scale, with “5” meaning they really liked the ad and “1” meaning they did not like it at all. More than nine in ten (93%) indicated they liked the ad, with 73% rating it a “5” and 20% giving the ad a “4” rating. Six percent (6%) are neutral and only 1% rated the ad a “2” or “1.”

Mothers who recalled seeing the advertising prior to the interview are significantly more likely to say they “really liked” it (83% vs. 70% with no previous recall). Those with no prior recall are significantly more likely to give a rating of “4” (22% vs. 13% who said they had seen or heard the advertising).

Overall Opinion of GHC Advertising

Among All Moms with an Opinion

Using a 5-point scale, with 1 being did not like it at all and 5 being really liked it, how much did you like this advertising?



Demographic Differences:

The most notable demographic differences are among those indicating they “really liked” the ad (5 rating). Yuma moms are significantly more likely than those elsewhere to say they “really liked it.” Hispanics are significantly more likely than American Indian moms to give the advertising the highest rating. Mothers who primarily speak Spanish or are bilingual are more likely than English-dominant mothers to rate the ad highly. *(Note: it is important to keep in mind the “courtesy bias” often seen in research with Hispanics. This theory maintains that some cultures are predisposed to giving positive responses so that the interviewer is not distressed or disappointed in any way.)*

In addition, those who participate in a food assistance program are significantly more likely than those who do not to give a rating of “5” (77% vs. 66%).

**Table 4: Overall Opinion of GHC Advertising
By City, Ethnicity, and Primary Language**

Rating	City of Residence				Ethnicity			Primary Language		
	Phx n=296	Yuma n=111	Tucson n=290	No Az n=98	White n=96	Hisp n=602	Am Ind n=44	Eng n=382	Span n=153	Both n=246
5- Really liked it	<u>69%</u>	84%	<u>74%</u>	<u>72%</u>	69%	76%	<u>59%</u>	<u>66%</u>	84%	77%
4	23%	<u>13%</u>	19%	20%	21%	<u>18%</u>	32%	23%	<u>12%</u>	19%
3	7%	<u>2%</u>	6%	7%	9%	5%	9%	10%	<u>3%</u>	<u>4%</u>
2 or 1	1%	1%	1%	1%	1%	1%	--	1%	1%	--

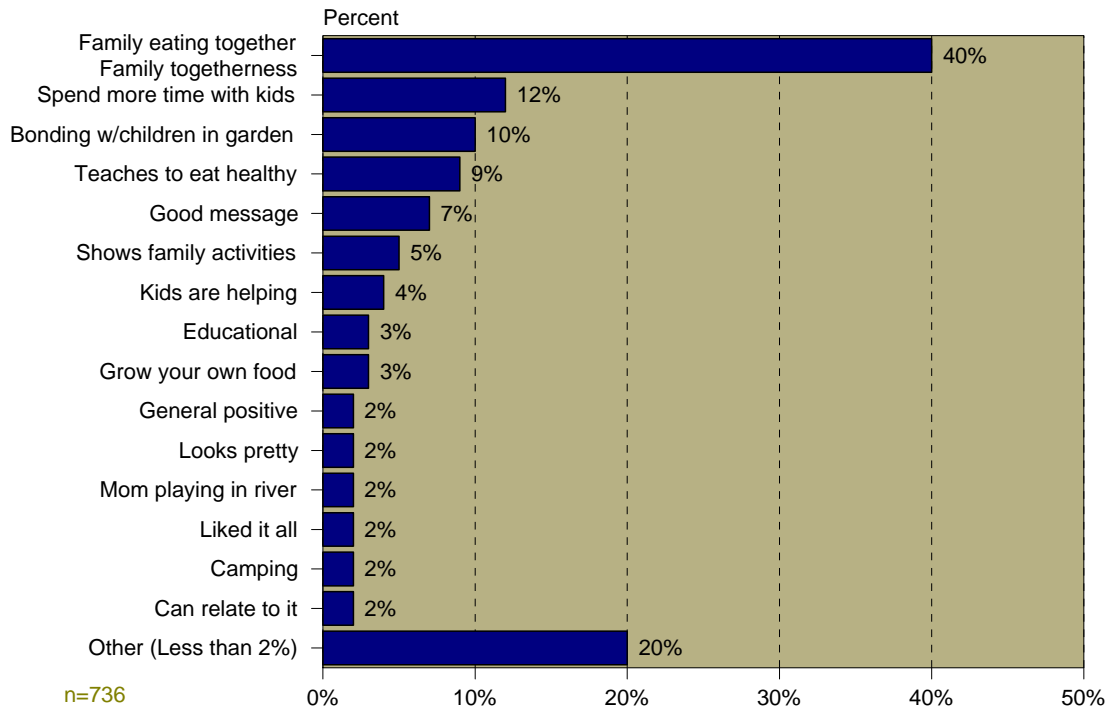
Among those with an opinion.

BOLD indicates statistically higher percentage than underlined comparative group(s).

2. *Reasons Like Advertising*

Mothers who rated the ad highly (“4” or “5” rating) liked the ad for a variety of reasons, with the largest proportion appreciating the *family eating together/family togetherness* aspect of the advertising (40%). *Spend more time with kids* (12%), *bonding with children in the garden* (10%), *teaches kids/family to eat healthy* (9%) and *good message* (7%) follow distantly and round out the top five reasons.

Reasons Why Moms Like Advertising Among Mothers Rating Ad a 4 or 5



Demographic Differences:

Yuma moms are significantly more likely than moms who reside in Phoenix and Tucson to like that the advertising promotes *spending more time with your kids*. Mothers in Northern Arizona stand out over moms residing in other cities for their appreciation of moms *bonding with children in a garden setting*. Phoenix moms are significantly more likely than those living elsewhere to like that it *teaches healthy eating habits*.

The message of *family togetherness/eating together* resonates more with women ages 18 to 25 than among those 36 to 45. Moms under the age of 45 are more likely to mention liking the emphasis of *spending more times with your kids*. *Spending more time with your kids* is also mentioned more often by those who primarily speak English or are bilingual. English-dominant moms are more likely than others to mention the *garden setting*.

The only notable difference between ethnicities is that Caucasian moms (27%) are significantly more likely than Hispanic moms (7%) and those of other ethnicities (excluding American Indians) (11%) to volunteer liking the idea of bonding with children through gardening.

**Table 5: Reasons Why Moms Like Advertising
Among Those Rating a 4 or 5
Top Mentions by City, Age, and Primary Language**

Message	City of Residence				Age				Primary Language		
	Phx n=270	Yuma n=107	Tucson n=269	No Az n=90	18-25 n=135	26-35 n=332	36-45 n=219	45-49 n=50	Eng n=341	Span n=147	Both n=235
Family eating together	41%	37%	41%	33%	48%	39%	<u>35%</u>	42%	41%	36%	40%
Spend more time with kids	<u>9%</u>	22%	<u>9%</u>	16%	14%	13%	11%	<u>4%</u>	13%	<u>5%</u>	15%
Set in a garden	<u>6%</u>	<u>10%</u>	<u>9%</u>	26%	6%	10%	11%	14%	18%	--	<u>5%</u>
Teaches healthy eating habits	16%	<u>3%</u>	<u>6%</u>	<u>7%</u>	8%	9%	9%	14%	<u>7%</u>	11%	12%

BOLD indicates statistically higher percentage than underlined comparative group(s).

3. Reasons Do Not Like Advertising

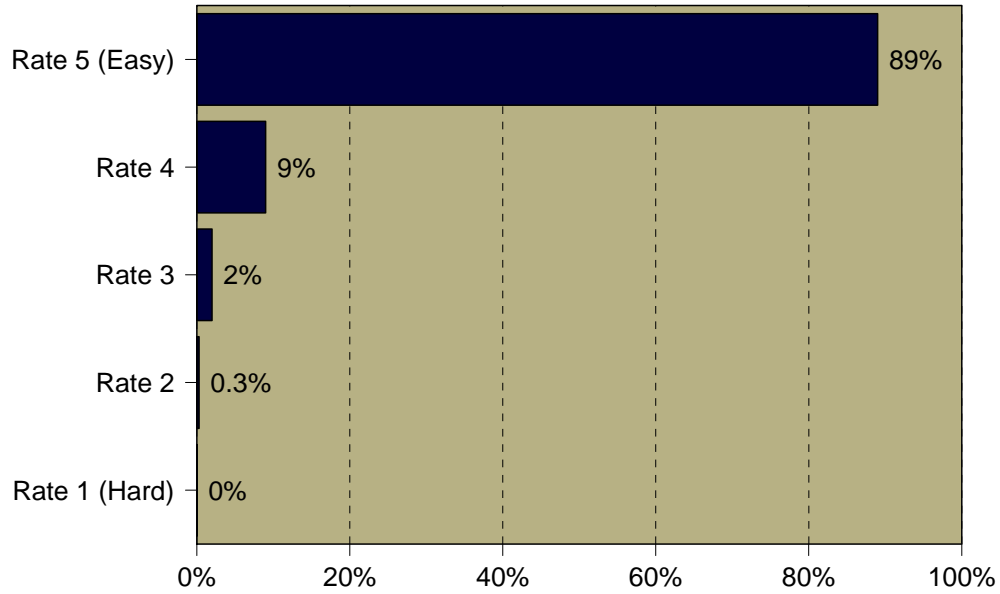
Only seven moms rated the ad poorly (1 or 2 rating). When asked why they disliked it, only five (5) respondents gave a negative answer (two said positive things about the ad). The top response was because *it was not eye catching* (3 mentions). Others commented that it is just another commercial (1 mention) and there is no man in the commercial (1 mention).

4. *Ease of Understanding*

Nearly all mothers interviewed (98%) indicate the advertising is *easy to understand*, with 89% rating it “5” and an additional 9% rating it “4.” Just two respondents rated the ad “2.”

Ease of Understanding

On a scale of 1 to 5, with 1 being hard to understand and 5 being easy to understand, would you say the advertising was...



n=794

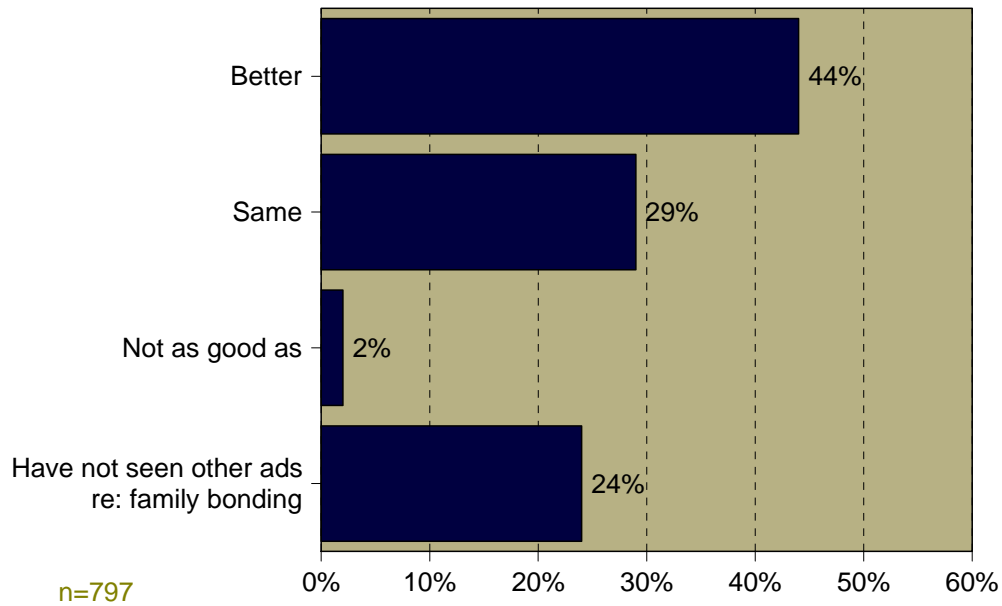
5. Comparison of GHC to Other Family Togetherness Advertising

More than four in ten moms (44%) say the *GHC* advertising is *better than* other advertising about the importance of spending time together as a family. Three in ten (29%) feel the ad is *about the same as* others. Only 2% rated *GHC not as good as* other advertising promoting family bonding.

Moms with prior awareness of the advertising are significantly more likely to think the advertising is “better” than other advertising on the same topic (52% vs. 41% with no previous awareness).

Comparison of GHC/Family Advertising

Thinking about other advertising you have seen or heard about the importance of spending time together as a family and bonding with your kids, would you say this is better than, about the same as, or not as good as other advertising?



Demographic Differences:

Phoenix, Yuma and Tucson are significantly more likely than Northern Arizona moms to say the advertising is “better” than other advertising on the same subject. In contrast, women in Northern Arizona are more likely than moms in other cities to report they have not seen advertising on this subject matter.

**Table 6: Comparison of GHC Advertising
By City**

Evaluation	City of Residence			
	Phx n=299	Yuma n=111	Tucson n=289	No AZ n=98
Better	48%	41%	48%	<u>25%</u>
Same	30%	30%	27%	33%
Not as Good	<u>1%</u>	<u>1%</u>	4%	3%
Have not seen other ads regarding importance of family/bonding with kids	<u>20%</u>	28%	<u>20%</u>	39%
DK/refused	1%	--	1%	--

BOLD indicates statistically higher percentage than underlined comparative group(s).

E. “Stage of Change”

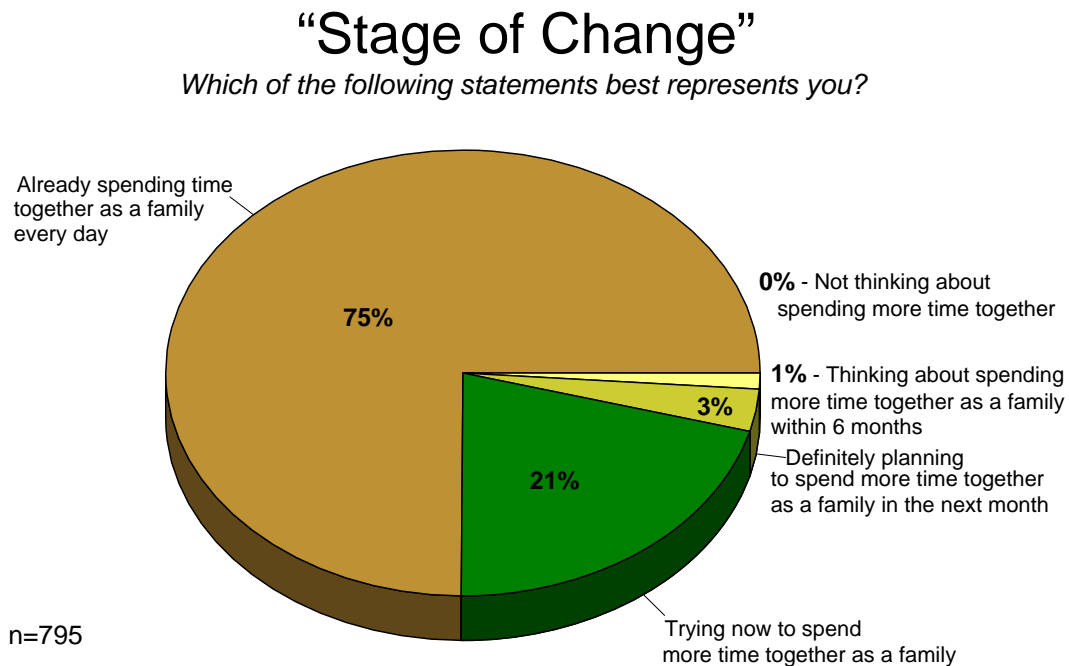
GHC study participants were asked a question to help determine their *Stage of Change (readiness)* with regard to spending more time together as a family.

The question was as follows:

Which of the following statements best represents you?

- I am not thinking about spending more time together as a family.
- I am thinking about spending more time together as a family. . . planning to start within six months.
- I am definitely planning to spend more time together as a family in the next month.
- I am trying to spend more time together as a family now.
- I am already spending time together as a family every day.

As seen below, three in four (75%) mothers interviewed indicate they *are already spending time together as a family every day*, with another 21% saying they are *trying to spend more time together as a family now*. Three percent (3%) say they *definitely plan to spend more time together as a family in the next month*, while 1% report *thinking about spending more time together as a family within six months*. Just one study participant said she was *not thinking about spending more time together as a family*.



Following are responses to the *Stage of Change* question by advertising awareness. Moms who are not familiar with the advertising are significantly more likely to say they are *already spending time together as a family every day* (77% vs. 69% among those aware of the advertising), while those with recall are more likely to say they are *trying to spend more time together as a family now* (26% vs. 19% with no recall).

**Table 7: “Stage of Change”
By Advertising Awareness**

Stage	Advertising Awareness	
	Total Awareness (n=227)	No Recall (n=541)
I am not thinking about spending more time together as a family	--	.2%
I am thinking about spending more time together as a family... planning to start within six months.	1%	1%
I am definitely planning to spend more time together as a family in the next month.	4%	2%
I am trying to spend more time together as a family now.	26%	<u>19%</u>
I am already spending time together as a family every day.	<u>69%</u>	77%

BOLD indicates statistically significant differences from others in category/row.

Demographic Differences:

Northern Arizona moms are significantly more likely than moms in Phoenix to say they are *already spending time together as a family every day*. Yuma moms are more likely than those in Northern Arizona to say they are *trying to spend more time together as a family now*. Phoenix moms are most likely to indicate they are *thinking about it and planning to start within six months*.

Table 8: “Stage of Change” By City

Evaluation	Phx n=297	Yuma n=110	Tucson n=290	No AZ n=98
I am not thinking about spending more time together as a family	.3%	--	--	--
I am thinking about spending more time together as a family... planning to start within six months.	3%	2%	<u>.3%</u>	--
I am definitely planning to spend more time together as a family in the next month.	5%	--	2%	2%
I am trying to spend more time together as a family now.	20%	25%	22%	<u>14%</u>
I am already spending time together as a family every day.	<u>72%</u>	73%	75%	84%

BOLD indicates statistically higher percentage than underlined comparative group(s).

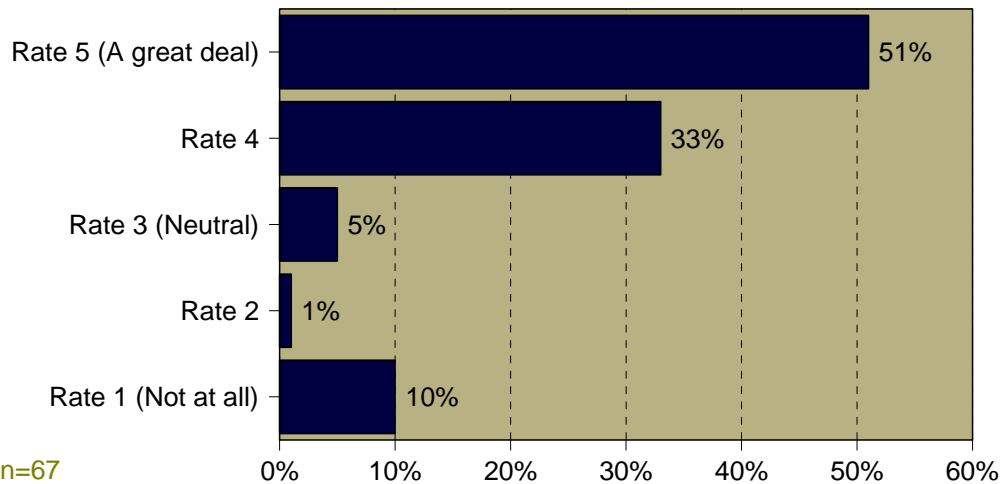
F. Influence of *GHC* Advertising

Women who recalled seeing the advertising prior to the interview and are trying to spend more time together as a family now or plan to spend more time together as a family either in the next month or next six months were asked how much the TV commercials, posters, billboards and other materials helped them think about spending more time together.

More than eight in ten women (84%) aware of the advertising and who are trying, planning to try in the next month or thinking about trying within six months to spend more time together as a family indicate the *GHC* advertising positively influenced them to do so (“4” + “5” rating). One-half (51%) say it influenced them *a great deal* (“5” rating). One in ten (10%) say the advertising has *not influenced them at all* to think about spending more time together as a family (“1” rating).

Advertisement Influence

On a scale of 1 to 5, with 1 meaning not at all and 5 meaning a great deal, how much have these TV commercials, posters, billboards and other materials helped you think about spending more time together as a family?



n=67
(Those aware of *GHC* advertising who are trying now or plan to try in the next month or next six months to spend more time together as a family)

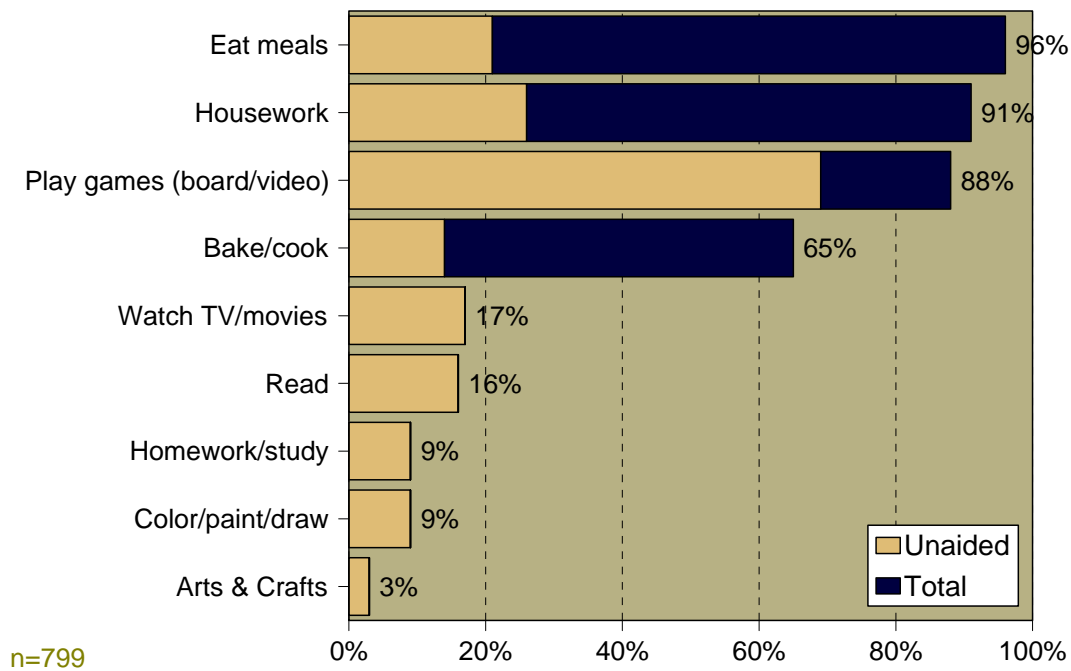
G. Family Activities

1. Indoor Activities

As might be expected, eating meals is the #1 indoor activity that moms and children do together, with virtually all moms (96%) saying they participate in this activity. This is followed closely by housework (91%) and playing video/board games (88%). Nearly two-thirds of mothers report baking and cooking with their children (65%). A sizeable segment volunteers that they watch TV or movies with their kids (17%) and/or read with them (16%)

Indoor Activities with Children: Top Mentions

What indoor/outdoor activities do you do with your children?



Demographic Differences:

All of the mothers interviewed in Northern Arizona report eating meals with their children – which makes it a significantly higher proportion than those living in other communities (95% to 96%). Northern Arizona mothers are also significantly more likely than moms in other cities to say their children participate in housework with them and that they do homework or study with their kids.

Moms and kids living in Phoenix stand out for playing games together. Baking or cooking together is most prevalent in Phoenix and Northern Arizona. While Yuma moms and kids are least likely to read together, they are significantly more likely to color or draw together than residents of other cities.

Caucasian moms and kids are significantly more likely than Hispanic moms and kids to play video or board games, read or do arts and crafts together. While Spanish speaking and bilingual moms and kids are more likely than those who primarily speak English to eat meals together, they are less likely to play video/board games, read or do arts and crafts together.

**Table 9: Participation in Indoor Activities – Moms and Children Together
Top Mentions by City, Ethnicity, and Primary Language**

Activity	City of Residence				Ethnicity			Primary Language		
	Phx n=298	Yuma n=111	Tucson n=291	No AZ n=99	White N=96	Hisp n=606	Am.In. n=45	Eng n=384	Span n=154	Both n=248
<i>Combined unaided and aided</i>										
Eat meals	<u>96%</u>	<u>95%</u>	<u>96%</u>	100%	94%	97%	91%	<u>94%</u>	98%	98%
Play games (board/video)	92%	86%	<u>85%</u>	90%	94%	<u>87%</u>	89%	92%	<u>82%</u>	<u>86%</u>
Housework	<u>88%</u>	<u>90%</u>	<u>91%</u>	98%	93%	90%	93%	<u>90%</u>	<u>87%</u>	94%
Bake/cook	68%	<u>55%</u>	64%	69%	71%	65%	56%	67%	61%	64%
<i>Unaided only</i>										
Watch TV, movies	18%	17%	14%	21%	13%	17%	24%	18%	18%	16%
Read	15%	<u>9%</u>	17%	26%	31%	<u>14%</u>	22%	21%	<u>10%</u>	<u>12%</u>
Color, draw	<u>8%</u>	20%	<u>8%</u>	<u>9%</u>	12%	9%	13%	10%	8%	10%
Homework/study	<u>7%</u>	12%	<u>6%</u>	22%	14%	9%	11%	8%	11%	9%
Play	2%	--	1%	1%	1%	1%	2%	1%	2%	.4%
Arts & Crafts	2%	2%	2%	7%	8%	<u>2%</u>	4%	5%	2%	<u>1%</u>

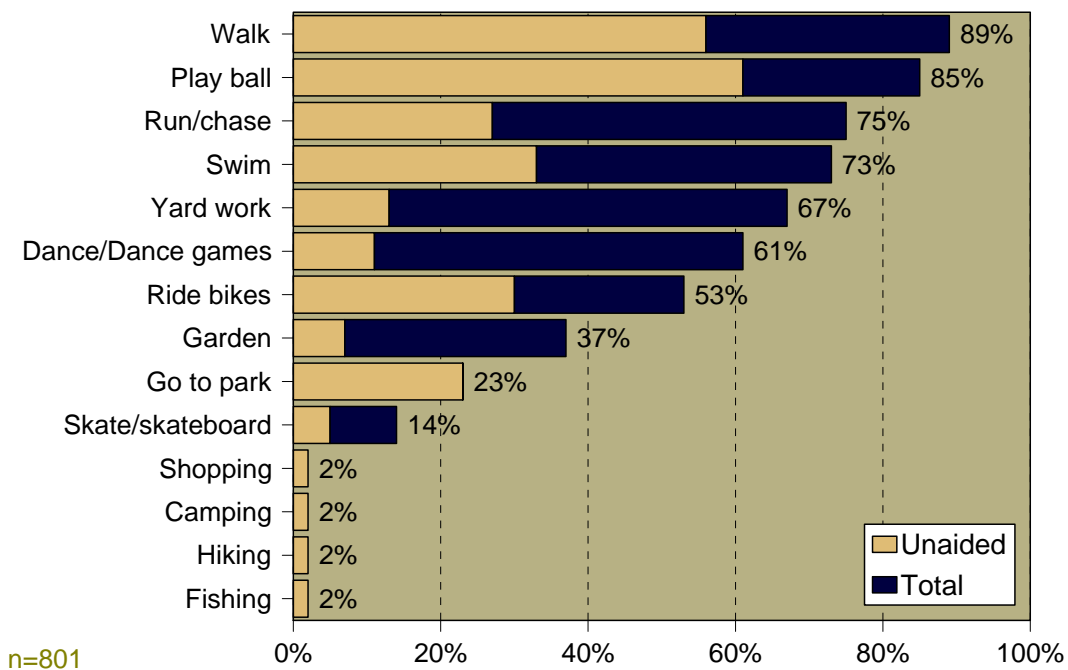
BOLD indicates statistically higher percentage than underlined comparative group(s).

2. Outdoor Activities

Walking is the most popular outdoor activity that mothers do with their children, with 89% reporting they walk with their kids. Playing ball is the next most common activity (85%), and running/chasing (75%), swimming (73%) and yard work (67%) round out the top-five outdoor activities. (Note: “Go to park” was not included in the aided list, so the 23% seen below is unaided only.)

Outdoor Activities with Children: Top Mentions

What indoor/outdoor activities do you do with your children?



Demographic Differences:

Northern Arizona moms and kids are most likely to walk, do yard work, and garden together. While Yuma moms and kids are significantly less likely to swim together than those in other cities, moms and kids in Tucson are significantly less likely to dance together than families residing in other communities. Phoenix moms and kids are more likely to skate or skateboard than families in other cities.

Mothers ages 26 to 49 are more likely than younger moms to say they do yard work, ride bikes, and garden with their children. Younger moms (18 to 35) are more likely to play ball and run and chase their children. Dancing with their kids is an activity most popular among the youngest moms (18 to 25). Interestingly, moms 36 and older are more likely to report skating or skate boarding with their kids than are younger moms.

Caucasian moms are more likely to report swimming with their children than are Hispanic mothers. Caucasians are more likely than all other ethnicities to say they garden with their kids. English-speaking moms and those who speak English and Spanish equally are more likely than those who predominantly speak Spanish to walk, swim and do yard work with their children. Riding bikes as a family is significantly more popular among mothers who primarily speak English at home.

**Table 10: Participation in Outdoor Activities – Moms and Children Together
Top Mentions by City, Age, and Primary Language**

Activity	City of Residence				Age				Primary Language		
	Phx n=300	Yuma n=111	Tucson n=291	No AZ n=99	18-25 n=147	26-35 n=359	36-45 n=240	45-49 n=55	Eng n=384	Span n=155	Both n=248
Walk	<u>89%</u>	90%	<u>88%</u>	95%	91%	91%	88%	84%	91%	<u>82%</u>	91%
Play ball	84%	84%	86%	88%	90%	86%	<u>83%</u>	82%	88%	83%	84%
Run/chase	75%	78%	73%	79%	80%	77%	73%	<u>60%</u>	74%	75%	76%
Swim	75%	<u>59%</u>	77%	73%	74%	74%	72%	71%	77%	<u>59%</u>	76%
Yard work	<u>64%</u>	74%	<u>64%</u>	76%	<u>48%</u>	69%	75%	69%	68%	<u>60%</u>	70%
Dance	69%	65%	<u>48%</u>	72%	70%	<u>58%</u>	<u>58%</u>	67%	60%	57%	65%
Ride bikes	49%	51%	57%	52%	<u>46%</u>	57%	50%	58%	57%	<u>47%</u>	<u>49%</u>
Garden	<u>34%</u>	<u>34%</u>	<u>34%</u>	61%	<u>24%</u>	35%	47%	45%	35%	41%	38%
Skate/skate-board	19%	<u>7%</u>	<u>11%</u>	15%	<u>9%</u>	<u>11%</u>	20%	18%	16%	11%	13%

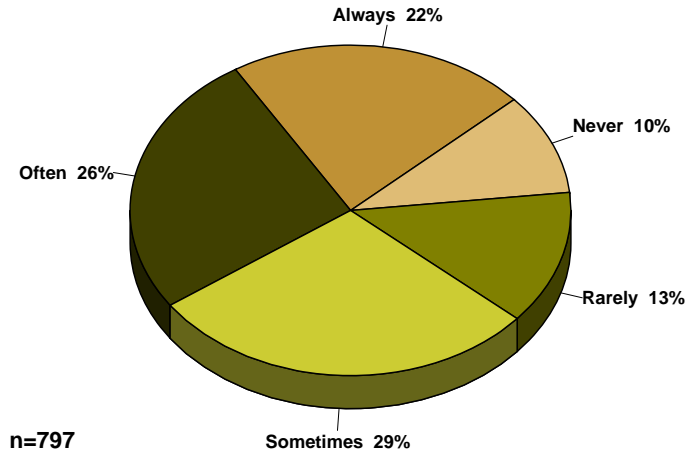
BOLD indicates statistically higher percentage than underlined comparative group(s).

3. Frequency of Kids Helping Plan Meals

Nearly one half of mothers indicate their children have significant involvement in helping to plan meals - 22% always + 26% often help plan them. An additional 29% report their children sometimes help plan meals. About one in four say their kids are rarely (13%) or never (10%) involved in meal planning.

Frequency of Kids Helping Plan Meals

How often would you say your kids help you plan the meals? Would you say they . . . help?



Demographic Differences:

Those who are Spanish-dominant are significantly more likely than those who mainly speak English at home to say their kids always help plan meals and English-dominant moms are significantly more likely to say their kids help sometimes or rarely.

Table 11: Frequency of Kids Helping Plan Meals

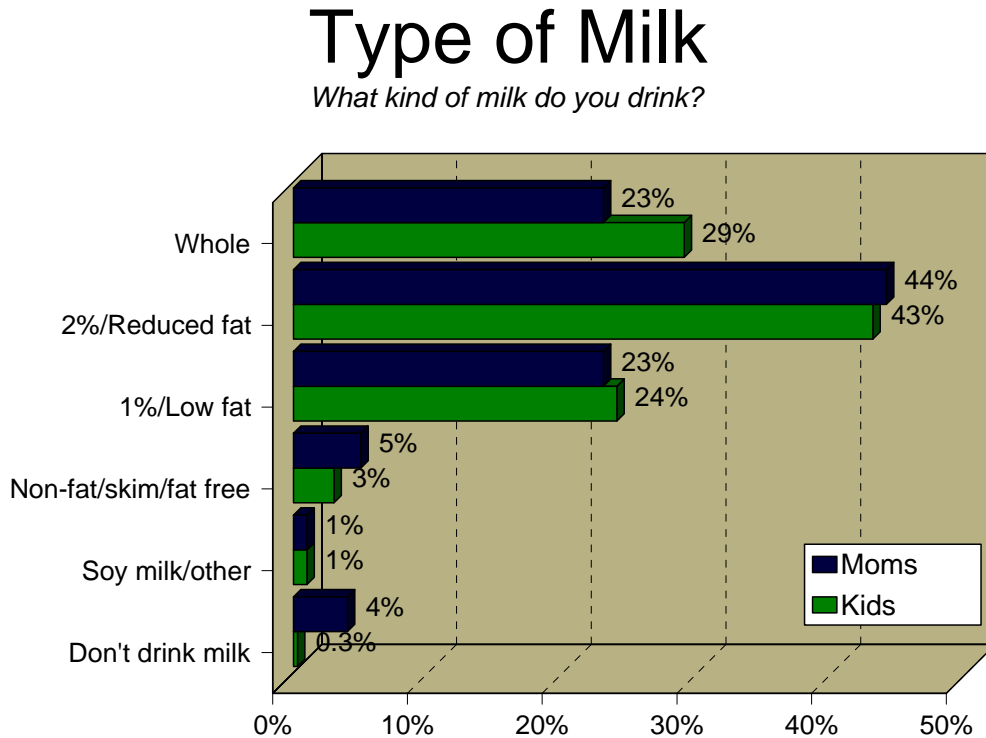
Source	Primary Language		
	Eng n=382	Span n=154	Both n=247
Always	<u>20%</u>	29%	23%
Often	25%	24%	29%
Sometimes	30%	<u>21%</u>	30%
Rarely	16%	<u>10%</u>	<u>10%</u>
Never	9%	16%	<u>8%</u>

BOLD indicates statistically higher percentage than underlined comparative group(s).

H. Milk Consumption

1. Current

Mothers are most likely to report they and their children drink 2% milk (44% of moms and 43% of children). Whole milk and 1% low fat milks are equally popular among moms (both at 23%). Kids are next most likely to drink whole milk (29%), followed by 1% low fat milk (24%). A few moms (5%) and kids (3%) drink non-fat/skim milk. A few moms (1%) and kids (1%) drink soy milk/other. A few moms (4%) and kids (0.3%) don't drink milk.



n=799

Demographic Differences:

Women in the “other” ethnic category are significantly more likely to report drinking whole milk than are Caucasian moms. In contrast, these women are significantly less likely than Caucasians, Hispanics and American Indians to report drinking 1% low fat milk personally and are significantly less likely than Hispanics to give it to their children.

Moms who speak Spanish either primarily or equally as often as English are more likely than those who primarily speak English at home to drink 1% low-fat milk or to give it to their children. In contrast, English-dominant moms are more likely to both personally drink fat free milk and give it to their children.

Phoenix moms are the most likely to drink whole milk (28%) and significantly more likely than Yuma (18%) and Northern Arizona (14%) moms to drink it. Moms in Tucson are significantly more likely than Yuma moms to give their kids whole milk (33% vs. 23%).

Table 12: Type of Milk Consumed by Ethnicity and Primary Language

Type of Milk	Primary Language			Ethnicity			
	Eng n=383	Span n=154	Both n=248	White n=96	Hisp n=605	Am Ind n=45	Other n=53
Whole							
<i>Mom</i>	23%	23%	23%	<u>16%</u>	23%	22%	36%
<i>Child</i>	32%	25%	27%	27%	28%	31%	40%
2% reduced fat							
<i>Mom</i>	43%	49%	42%	43%	44%	44%	42%
<i>Child</i>	45%	43%	42%	45%	43%	47%	40%
1% low fat							
<i>Mom</i>	<u>19%</u>	25%	27%	23%	24%	24%	<u>6%</u>
<i>Child</i>	<u>17%</u>	28%	30%	19%	26%	20%	<u>13%</u>
Non-fat/skim/fat-free							
<i>Mom</i>	8%	<u>3%</u>	<u>3%</u>	10%	4%	9%	6%
<i>Child</i>	4%	2%	<u>1%</u>	6%	2%	2%	4%
Soy milk/other							
<i>Mom</i>	2%	--	2%	2%	1%	--	4%
<i>Child</i>	2%	1%	1%	3%	1%	--	4%
Don't drink milk							
<i>Mom</i>	6%	<u>1%</u>	<u>3%</u>	6%	4%	2%	8%
<i>Child</i>	--	1%	--	--	--	--	--

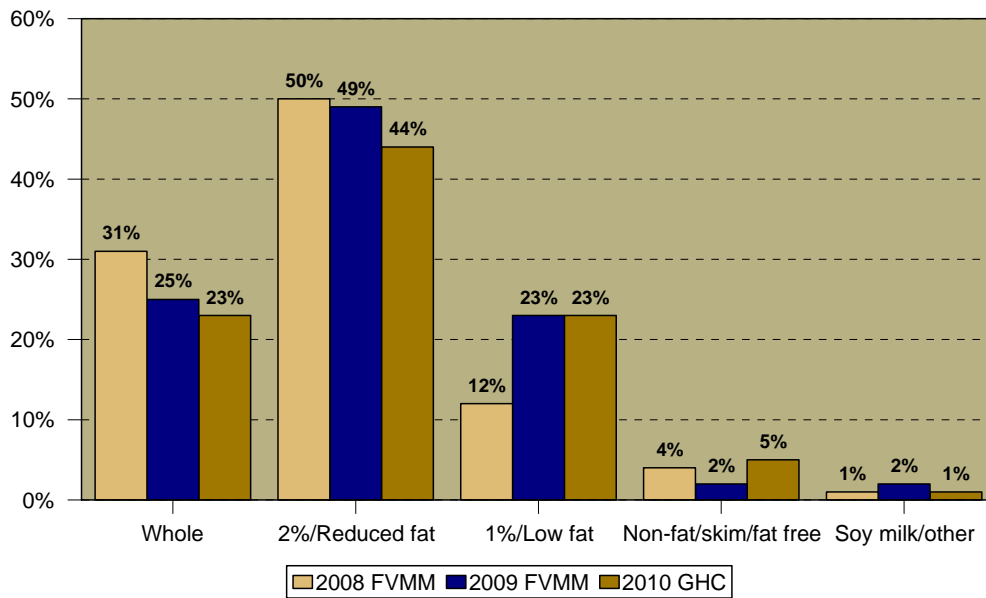
BOLD indicates statistically higher percentage than underlined comparative group(s).

2. Milk Consumption Comparison

Comparing milk consumption this year to last year, we see a decrease in whole milk and 2% reduced fat milk consumption. Consumption of 1% low fat milk has remained the same, which suggests the dramatic increase noted last year was a real increase. Mothers are slightly more likely to report drinking fat free milk this year than in the past two years.

Type of Milk

What kind of milk do you drink?



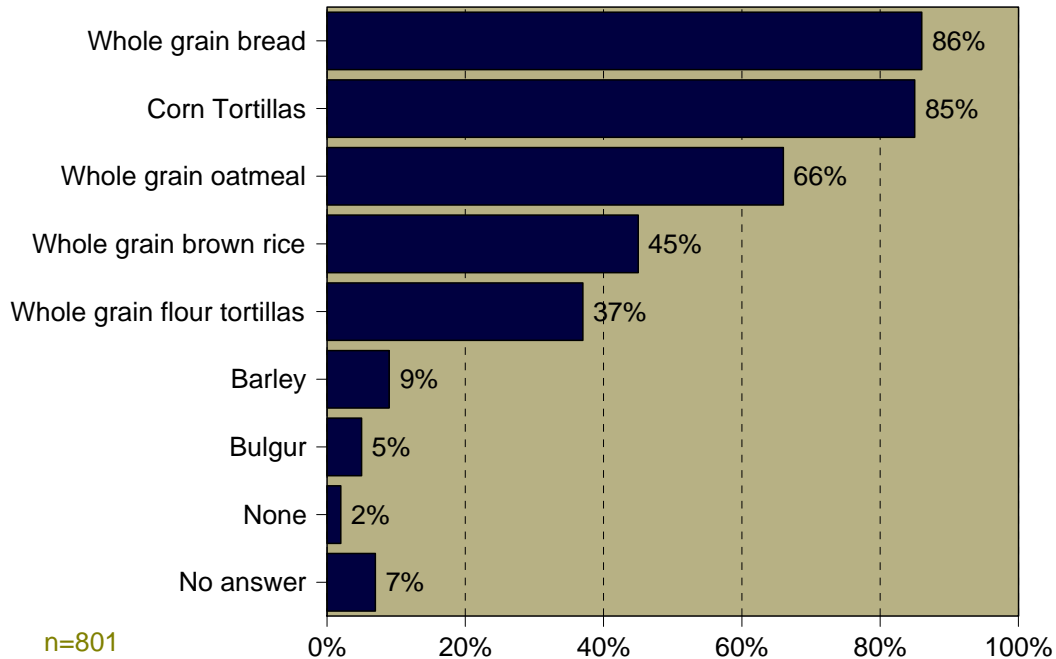
I. Whole Grain Foods

1. Purchase Behavior

Whole grain bread and corn tortillas are the most common whole grain foods purchased by mothers, with close to nine in 10 (86% and 85%) indicating they currently buy these items. The next most popular item is oatmeal, with two-thirds reporting their families consume this whole grain. Whole grain brown rice (45%) and flour tortillas (37%) round out the top five whole grains purchased. Only 2% of moms say their family does not purchase any of these whole grains.

Whole Grain Food Purchase

Which of these whole grain foods do you currently buy?



Demographic Differences:

Women living in Northern Arizona are the most likely to purchase all of the whole grain foods discussed except for whole grain bread, which is most often purchased by Yuma moms. Generally, mothers in Phoenix and Tucson are the least likely to purchase whole grain foods, with the exception of whole grain tortillas among Phoenix moms and corn tortillas and oatmeal among Tucson moms.

Caucasians and Hispanics are significantly more likely than American Indians to purchase whole grain bread and whole grain flour tortillas. Caucasian moms are significantly more likely than Hispanic and American Indian moms to report buying barley or bulgur. Whole grain brown rice is significantly more popular among Caucasians (compared to Hispanics) and similarly among those who primarily speak English at home (compared to bilingual or Spanish-dominant moms). English-dominant moms and bilingual moms are more likely than those who primarily speak Spanish to buy barley and bulgur.

Table 13: Whole Grain Food Purchase by City, Ethnicity, and Primary Language

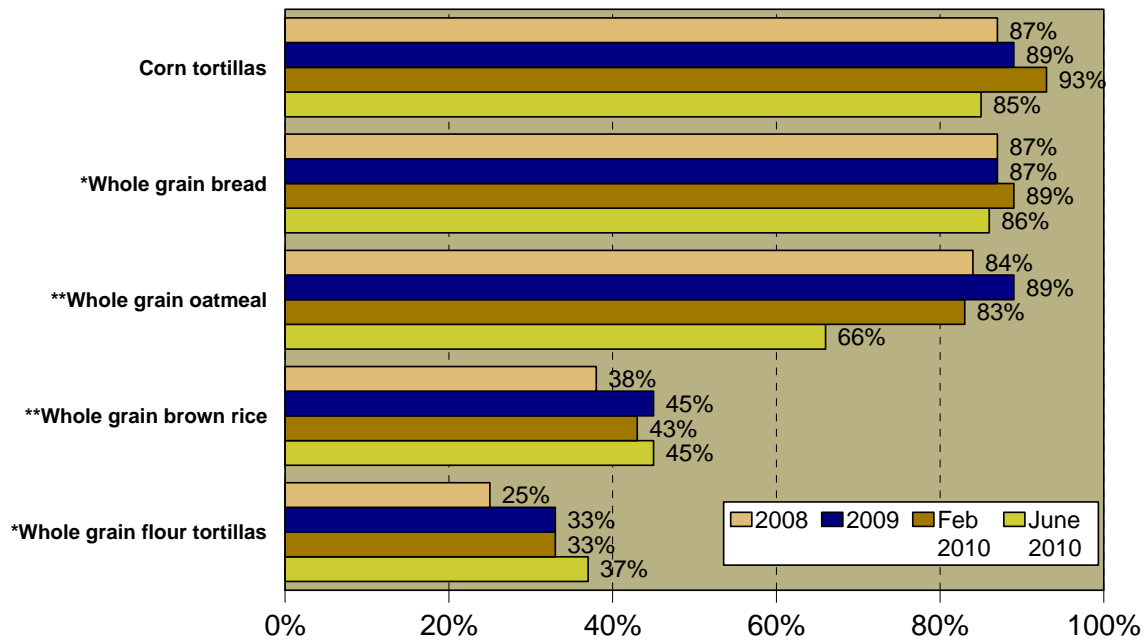
Food	City of Residence				Ethnicity			Primary Language		
	Phx n=300	Yuma n=111	Tucson n=291	No AZ n=99	White n=96	Hisp n=607	Am Ind n=45	Eng n=384	Span n=155	Both n=248
Whole grain bread	<u>83%</u>	93%	<u>85%</u>	90%	89%	87%	<u>73%</u>	85%	89%	85%
Corn tortillas	<u>77%</u>	91%	89%	93%	84%	87%	87%	86%	85%	84%
Whole grain oatmeal	<u>54%</u>	75%	70%	80%	73%	65%	73%	66%	64%	66%
Whole grain brown rice	<u>36%</u>	56%	<u>43%</u>	63%	58%	<u>42%</u>	53%	51%	<u>34%</u>	<u>43%</u>
Whole grain flour tortillas	43%	39%	<u>27%</u>	44%	43%	37%	<u>22%</u>	35%	41%	36%
Barley	<u>7%</u>	<u>10%</u>	<u>7%</u>	20%	22%	<u>7%</u>	11%	11%	<u>3%</u>	9%
Bulgur	<u>4%</u>	<u>4%</u>	<u>5%</u>	13%	15%	<u>4%</u>	<u>4%</u>	7%	<u>3%</u>	5%

BOLD indicates statistically higher percentage than underlined comparative group(s).

As seen in the chart below, purchase of corn tortillas, whole grain bread, whole grain tortillas, and brown rice remain virtually the same over the past couple of years. Two-thirds report purchasing whole grain oatmeal compared to 83% to 89% previously. This may be due to the wording change from just “oatmeal” to “whole grain oatmeal.” However, the wording change did not impact the percentage reporting purchasing brown rice.

Whole Grain Food Purchase

Which of these whole grain foods do you currently buy?



*In June 2010, wording was changed to "whole grain" from "100% whole wheat".

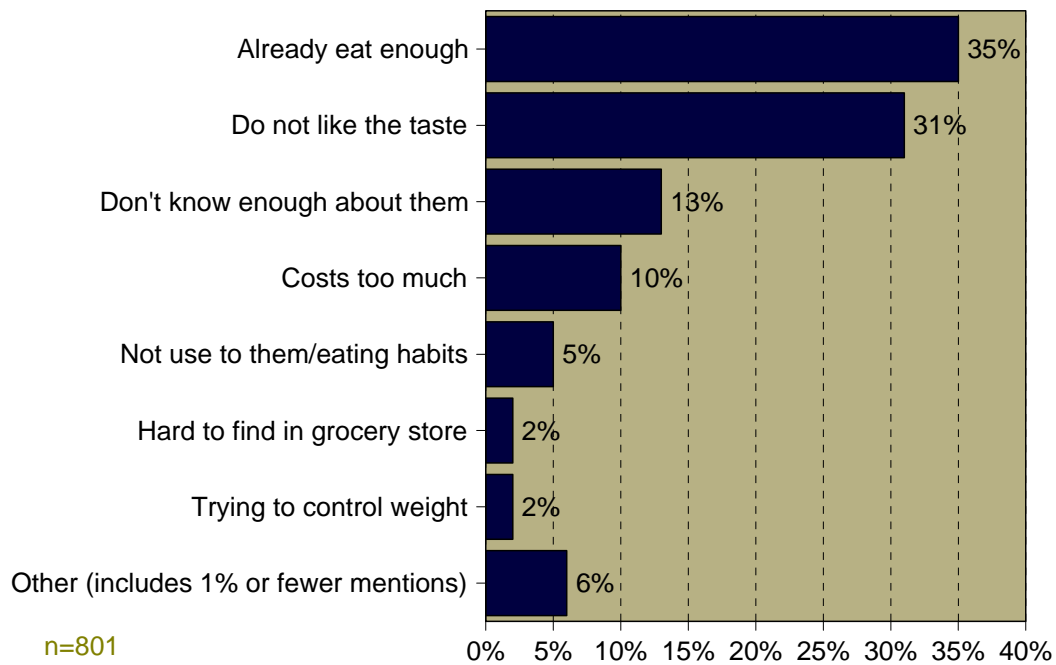
**In June 2010, "whole grain" was added to the description.

2. *Reasons Do Not Purchase More Whole Grain Foods*

The main reasons women do not buy more whole grain food are because they feel they *already eat enough of them* (35%) and/or they *do not like the taste* (31%). Approximately one in ten women indicate they do not buy more whole grains because they *don't know enough about them* (13%) and/or because of the *cost* associated with purchasing them.

Reasons do not Buy More Whole Grains

What is the reason you don't buy more whole grain foods?



Demographic Differences:

Moms in Yuma are significantly more likely than Phoenix moms to feel they *already eat enough whole grain foods*, while those in the other cities are slightly more likely to say they *do not like the taste*. Tucson moms are more likely than moms elsewhere to say not purchasing more whole grain foods is a matter of their *eating habits*. Younger moms (45 and younger) are significantly more likely than older ones to say they do not know enough about whole grains as a reason for not purchasing more of them.

Table 14: Reasons Do Not Purchase More Whole Grain Foods by City and Age

Food	City of Residence				Age			
	Phx n=300	Yuma n=111	Tucson n=291	No AZ n=99	18-25 n=147	26-35 n=359	36-45 n=240	45-49 n=55
Already eat enough	<u>31%</u>	44%	34%	39%	32%	33%	37%	45%
Don't like taste	31%	27%	33%	32%	32%	32%	31%	24%
Don't know enough about whole grains	13%	17%	10%	14%	17%	13%	12%	<u>4%</u>
Costs too much	11%	9%	8%	15%	<u>6%</u>	12%	9%	15%
Not used to them/ Eating habits	<u>3%</u>	2%	9%	--	3%	6%	3%	8%
Hard to find in grocery store	2%	2%	3%	2%	2%	1%	3%	6%
Trying to control weight	2%	--	3%	1%	3%	2%	3%	--

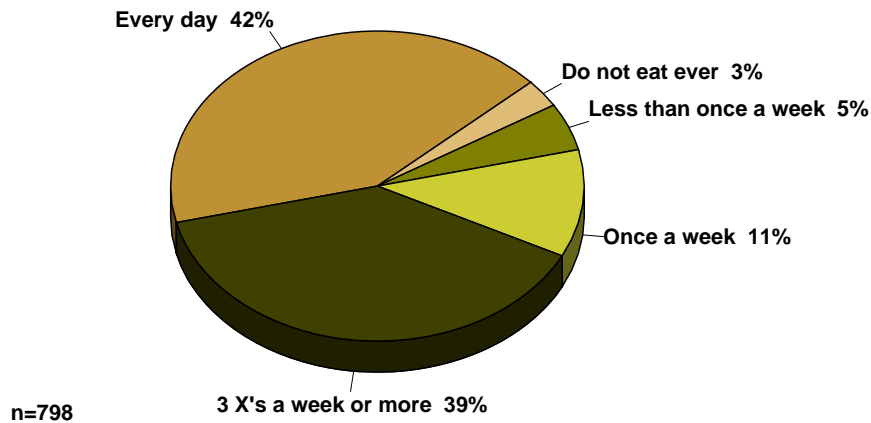
BOLD indicates statistically higher percentage than underlined comparative group(s).

3. Frequency of Eating Whole Grain Foods

A majority of moms (81%) report that their families eat whole grains either every day (42%) or at least three times a week (39%). About one in ten (11%) say it is included in their family’s diet once a week. While 5% consume whole grains less than once a week, 3% say their families never eat whole grain foods.

Frequency of Eating Whole Grain Foods

How often does your family eat whole grain foods?



Demographic Differences:

Older moms (36 to 49) are significantly more likely than the youngest moms (18 to 25) to report their family eats whole grain foods every day. In contrast, the younger moms (18 to 25) are significantly more likely to say they serve their family whole grains once a week.

Table 15: Reasons Do Not Purchase More Whole Grain Foods by Age

Frequency	Age			
	18-25 n=147	26-35 n=357	36-45 n=240	45-49 n=54
Every day	<u>33%</u>	41%	47%	52%
At least 3 times a week	39%	39%	39%	33%
Once a week	20%	<u>11%</u>	<u>7%</u>	<u>7%</u>
Less than once/week	6%	5%	4%	4%
Do not eat them at all	1%	3%	3%	2%
Don't know	1%	1%	--	2%

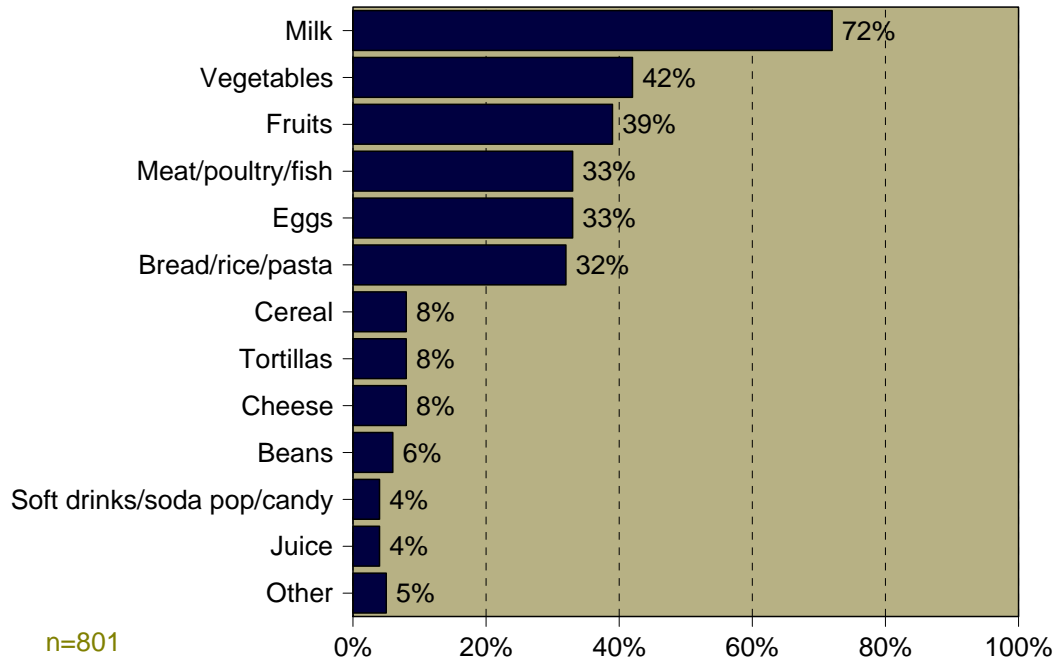
BOLD indicates statistically higher percentage than underlined comparative group(s).

J. Grocery Shopping

Participants were asked what three things are most likely to be on their grocery lists. Seven in ten (72%) mentioned milk. This is followed by vegetables (42%), fruit (39%), meat/poultry/fish (33%), eggs (33%), and bread/rice/pasta (32%).

Items Most Often on Grocery List

What 3 things are most often on your grocery list?



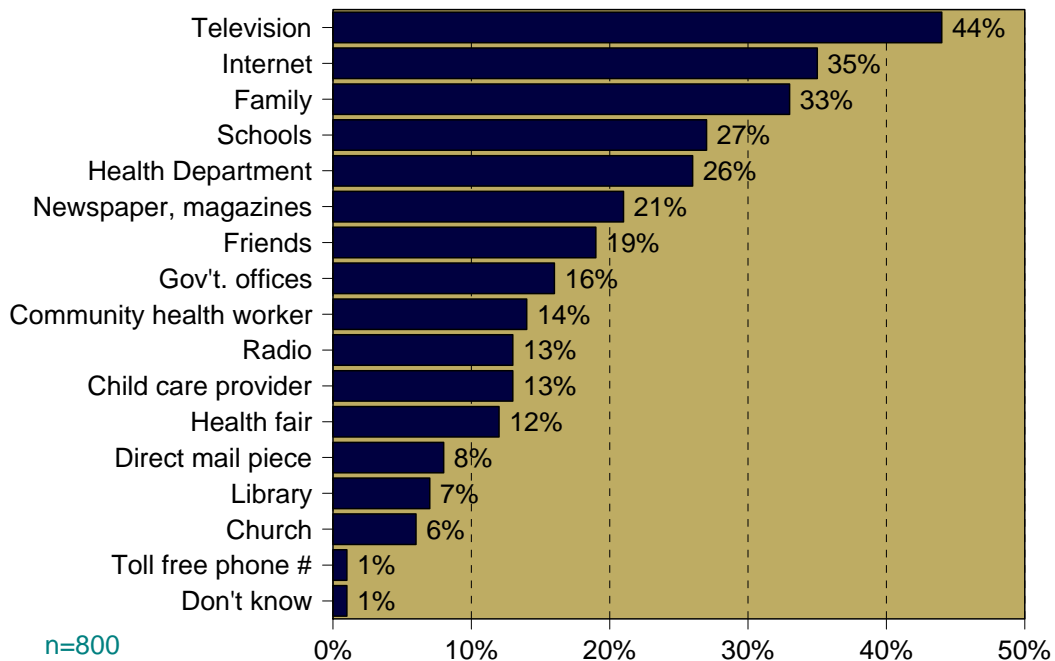
K. Additional Respondent Information

1. Best Sources for Health and Nutrition Information

When asked to name the three best sources of health and nutrition information moms gave a wide variety of responses. Overall, the most frequently cited information sources were television (44%), Internet (35%), and family (33%). Schools and the Health Department round out the top five “best sources” of information (27% and 26%, respectively).

Best Sources of Information

What are the 3 best sources for health and nutrition information?



Demographic Differences:

While television and government offices are more trusted sources among Spanish speakers (dominant and bilingual), the Internet, family and schools are mentioned significantly more often among those who primarily speak English at home (compared to those who predominantly speak Spanish.) Those who speak both Spanish and English at home are also significantly more likely than Spanish-dominant moms to think schools are one of the best sources of information for health and nutrition information. Moms who usually speak Spanish at home are significantly more likely than English-dominant and bilingual mothers to find child care providers to be trustworthy sources.

The oldest mothers interviewed stand out for their belief that television and schools are among the best sources for information about health and nutrition. In contrast, the youngest moms rely more on family and the Health Department for this kind of information.

Table 16: Top 10 Mentioned Sources of Health and Nutrition Information by Primary Language and Age

Source	Primary Language			Age			
	Eng n=383	Span n=155	Both n=248	18-25 n=147	26-35 n=358	36-45 n=240	45-49 n=55
Television	<u>34%</u>	50%	54%	<u>36%</u>	44%	45%	55%
Internet	39%	<u>30%</u>	32%	34%	34%	39%	33%
Family	37%	<u>26%</u>	31%	41%	33%	<u>29%</u>	<u>27%</u>
Schools	28%	<u>19%</u>	30%	<u>17%</u>	31%	25%	35%
Health Department	27%	25%	27%	35%	<u>25%</u>	<u>25%</u>	<u>18%</u>
Newspaper, Magazines	23%	23%	17%	21%	18%	24%	29%
Friends	17%	19%	21%	19%	18%	18%	25%
Gov't. Offices	<u>10%</u>	27%	18%	18%	15%	15%	13%
Radio	15%	12%	11%	10%	15%	14%	<u>7%</u>
Child care provider	<u>12%</u>	20%	<u>10%</u>	12%	15%	12%	9%

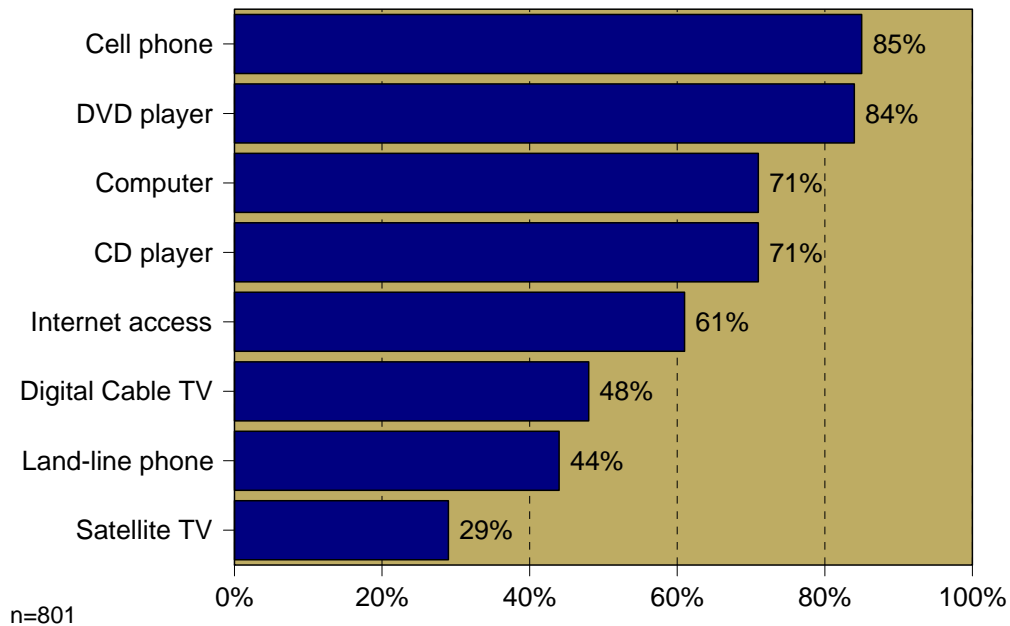
BOLD indicates statistically higher percentage than underlined comparative group(s).

2. *Technology in the Home*

Cell phones and DVD players are the two technology items moms indicate they are most likely to have in their home (affirmed by 85% and 84%, respectively). A majority also have a computer (71%), CD player (71%), and Internet access (61%) at home. Fewer than one-half report subscribing to digital cable TV or having land-line phone service. Fewer than three in ten (29%) have satellite TV. Caucasians and Hispanics are more likely than American Indians to have all of these technologies, though the disparity is not significant for cell phones, DVD players or Satellite TV.

Technology in the Home

Which of these do you have in your home?



Demographic Differences:

Cell phone ownership is significantly higher among Yuma and Tucson moms compared to Phoenix moms. Those who reside in Tucson and Northern Arizona are more likely to have DVD players than those in Phoenix or Yuma. Residents of Northern Arizona stand out for the highest ownership of CD players and land-line phones. While Tucson participants stand out for subscribing to digital cable TV, they are significantly less likely to have Satellite TV than those living in others cities.

Cell phone ownership is the highest among those ages 26 to 35. Younger moms (under 35) are significantly more likely than the oldest moms interviewed to have DVD players. As might be expected, moms 26 and older are more likely than those ages 18 to 25 to have computers, Internet access or land-lines at home. The oldest women interviewed (45 to 49) are significantly more likely than younger ones to have digital cable TV.

**Table 17: Technology in the Home
by City and Age**

	Total Sample n=801	City of Residence				Age			
		Phx n=300	Yuma n=111	Tucson n=291	No AZ n=99	18-25 n=147	26-35 n=359	36-45 n=240	45-49 n=55
Cell phone	85%	<u>78%</u>	87%	92%	81%	<u>80%</u>	89%	<u>82%</u>	80%
DVD player	84%	<u>80%</u>	<u>78%</u>	88%	87%	87%	86%	82%	<u>71%</u>
Computer	71%	73%	74%	68%	76%	<u>63%</u>	73%	72%	78%
CD player	71%	<u>70%</u>	<u>68%</u>	<u>68%</u>	82%	67%	71%	73%	64%
Internet access	61%	64%	63%	57%	66%	<u>50%</u>	63%	64%	71%
Digital cable TV	48%	<u>45%</u>	47%	54%	<u>41%</u>	<u>46%</u>	<u>47%</u>	<u>48%</u>	62%
Land-line phone	44%	47%	<u>37%</u>	<u>41%</u>	55%	<u>29%</u>	44%	51%	55%
Satellite TV	29%	32%	33%	<u>23%</u>	35%	32%	27%	31%	29%

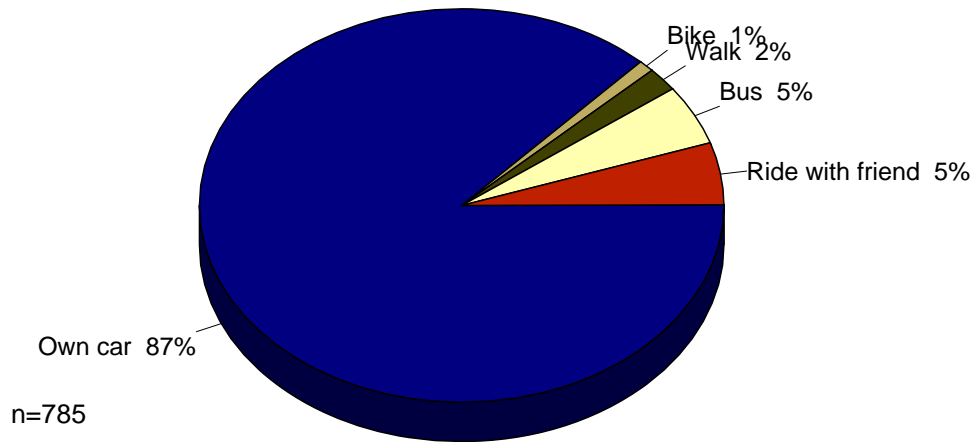
BOLD indicates statistically higher percentage than underlined comparative group(s).

3. *Getting from Place to Place*

Nearly nine in ten of the mothers say they get to and from places by using their own car (87%). Others report using the bus (5%) or riding with a friend (5%).

Getting From Place to Place

How do you usually get to and from places?



Demographic Differences:

Caucasian and Hispanic mothers are significantly more likely than American Indian moms to report using their own cars to get from place to place. In contrast, American Indian participants are more likely to report riding the bus or riding with a friend.

Table 18: Primary Transportation Method by Ethnicity

Transportation	Ethnicity		
	White n=92	Hisp n=597	Am Ind n=44
Own car	90%	89%	<u>59%</u>
Bus	<u>7%</u>	<u>4%</u>	21%
Ride with friend	<u>1%</u>	<u>4%</u>	18%
Walk	1%	2%	--
Bicycle	--	1%	--
Other	1%	--	2%

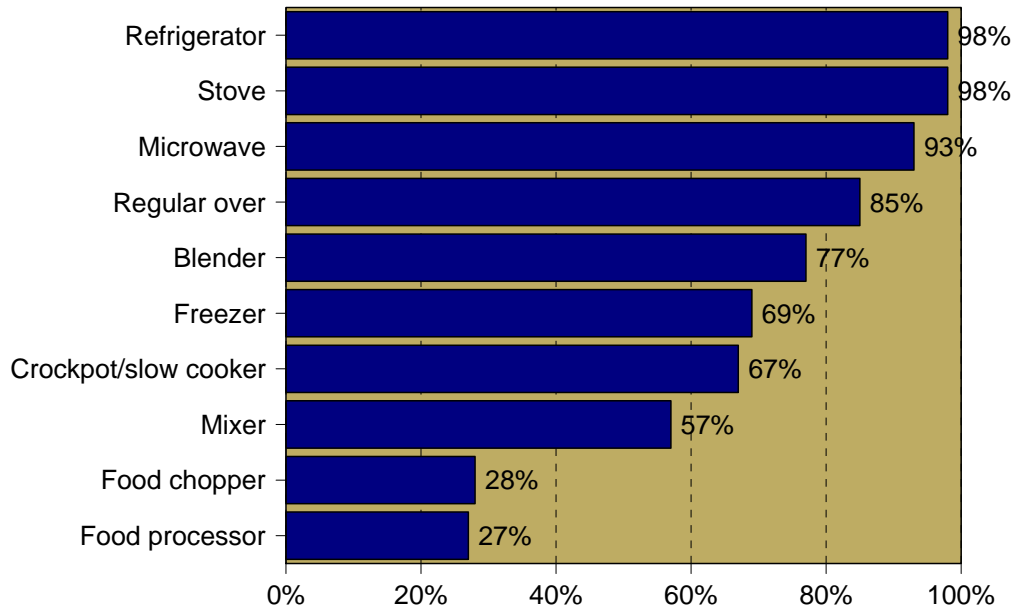
BOLD indicates statistically higher percentage than underlined comparative group(s).

4. *Kitchen Appliances in Home*

Virtually all mothers indicate they currently have a refrigerator and stove in their home (98% each). Microwave ovens are also almost universal (93%). Food choppers (28%) and processors (27%) are the two appliances least likely to be in homes.

Kitchen Appliances in Home

Which of these do you have in your kitchen?



n=796

Demographic Differences:

Although virtually all mothers report having a refrigerator and stove in their home, because 100% of older moms (45 to 49), Caucasian and American Indian moms have them, these groups measure statistically significantly more likely to have them than comparative groups. Hispanic moms are more likely than American Indian moms to own microwave ovens. Caucasian moms are significantly more likely than Hispanic and American Indian moms to have regular ovens, crockpots, food choppers and food processors in their homes. Both Caucasians and Hispanics are significantly more likely than Native Americans to own blenders and mixers. The disparities are greatest for blenders, mixers, food choppers and processors.

While a vast majority of all moms own microwaves, moms aged 36 to 45 are significantly more likely than younger and older moms to report owning a microwave. Older mothers (36+) are significantly more likely than younger ones to report having a regular oven in their kitchens. And as might be expected, those 26+ are more likely than the youngest moms to crockpots, mixers and food processors at home.

Table 19: Kitchen Appliances in Home

Message	Age				Ethnicity		
	18-25 n=146	26-35 n=357	36-45 n=238	45-49 n=55	White n=96	Hisp n=604	Am Ind n=45
Refrigerator	99%	<u>98%</u>	<u>98%</u>	100%	100%	<u>98%</u>	100%
Stove	99%	<u>98%</u>	<u>98%</u>	100%	100%	<u>98%</u>	98%
Microwave	<u>92%</u>	<u>94%</u>	<u>92%</u>	98%	93%	94%	<u>82%</u>
Regular oven	<u>80%</u>	<u>83%</u>	89%	91%	97%	<u>83%</u>	<u>78%</u>
Blender	<u>68%</u>	79%	78%	78%	74%	82%	<u>40%</u>
Freezer	66%	70%	67%	71%	77%	68%	62%
Crockpot/slow cooker	<u>55%</u>	68%	69%	84%	85%	<u>64%</u>	<u>67%</u>
Mixer	<u>38%</u>	59%	63%	71%	66%	59%	<u>27%</u>
Food chopper	24%	28%	27%	38%	40%	<u>27%</u>	<u>20%</u>
Food processor	<u>18%</u>	29%	27%	31%	41%	<u>26%</u>	<u>16%</u>

BOLD indicates statistically higher percentage than underlined comparative group(s).

5. *Spices Used in Preparing Foods*

Outside of salt (95% use) and pepper (92% use), the top three spices used to prepare foods in the home include garlic (89%), onion (88%), and cilantro (83%). Mothers who report they are Caucasian were significantly more likely to note they use many of the spices listed, especially in comparison to American Indian moms and/or those from another ethnic background.

**Table 20: Spices Used in Preparing Foods in the Home
By Ethnicity**

Spice	Total Sample n=792	Ethnicity			
		White n=96	Hisp n=601	Am Ind n=44	Other n=51
Salt	95%	94%	96%	95%	92%
Pepper	92%	97%	<u>91%</u>	91%	94%
Garlic	89%	89%	91%	<u>73%</u>	<u>75%</u>
Onion	88%	92%	88%	89%	<u>71%</u>
Cilantro	83%	81%	85%	77%	<u>65%</u>
Oregano	71%	80%	72%	<u>61%</u>	<u>51%</u>
Seasoned salt	69%	83%	<u>67%</u>	68%	73%
Chili powder	48%	65%	<u>45%</u>	50%	<u>45%</u>
Mustard	44%	51%	42%	48%	41%
Cinnamon	43%	58%	42%	<u>18%</u>	47%
Parsley	43%	70%	<u>38%</u>	<u>43%</u>	<u>43%</u>
Basil	41%	76%	<u>35%</u>	<u>45%</u>	<u>39%</u>
Bay leaves	37%	51%	<u>36%</u>	<u>23%</u>	<u>27%</u>
Cloves	31%	44%	<u>30%</u>	<u>20%</u>	<u>24%</u>
Paprika	31%	53%	<u>26%</u>	<u>34%</u>	43%
Allspice	27%	49%	<u>23%</u>	<u>32%</u>	<u>27%</u>
Cayenne	24%	45%	<u>20%</u>	30%	<u>25%</u>
Nutmeg	19%	44%	<u>14%</u>	<u>18%</u>	31%
Bullion	1%	--	1%	--	--
Lemon pepper	1%	--	1%	2%	--
Other	2%	2%	1%	5%	4%

BOLD indicates statistically higher percentage than underlined comparative group(s).

Appendix H

Media Usability Report



**Arizona Department of Health Services
(ADHS)/
Arizona Nutrition Network (AzNN)
Media Usability Report**



Report Prepared for:
Arizona Department of Health Services / AzNN

Draft Date: June 2010

Table of Contents

I. Background & Methodology.....	3
II. Executive Summary	7
III. Study Implications and Marketing Opportunities	14
IV. Target Audience Women.....	17
A. Computer and Printer Access	17
1. <i>Computer Access</i>	17
2. <i>Printer Access</i>	19
B. Internet Use.....	20
1. <i>Internet Access, Connection Type, and Frequency of Use</i>	20
2. <i>Internet Activities</i>	22
3. <i>Reasons for Seeking Health-Related Information Online</i>	25
4. <i>Websites Most Often Visited</i>	26
5. <i>Internet Advertising Awareness</i>	28
6. <i>Likelihood to Notice Online Advertising Compared to other Methods</i>	29
C. Cell Phones	30
1. <i>Cell Phone Ownership and Type of Phone</i>	30
2. <i>Cell Phone Activities</i>	33
3. <i>Cell Phone Applications</i>	36
4. <i>Cell Phone Advertising</i>	37
5. <i>Likelihood to Notice Cell Advertising Compared to other Methods</i>	38
D. Social Media Use.....	39
E. Eat Well Be Well Website	42
1. <i>Visited www.eatwellbewell.org</i>	42
2. <i>List Best about www.eatwellbewell.org</i>	43
3. <i>Dislike about www.eatwellbewell.org</i>	44
V. Kids	45
A. Computer Use at Home and School.....	45
1. <i>Computer Access</i>	45

2.	<i>Computer Activities</i>	46
B.	Internet Use.....	47
1.	<i>Internet Access and Frequency of Use</i>	47
2.	<i>Internet Destinations</i>	49
3.	<i>Websites Most Often Visited</i>	52
C.	Cell Phones.....	54
1.	<i>Cell Phone Ownership and Type of Phone</i>	54
2.	<i>Cell Phone Activities</i>	55
D.	Social Media Use.....	57
E.	Eat Well Be Well Website.....	59
1.	<i>Use and Opinion of www.eatwellbewell.org</i>	59
2.	<i>Favorite Things about www.eatwellbewell.org</i>	60
3.	<i>Dislike about www.eatwellbewell.org</i>	61

Appendices:

A. Questionnaire

B. Data Tables

I. Background & Methodology

The Arizona Nutrition Network (AzNN) is a public and private partnership led by the Arizona Department of Health's Bureau of USDA Nutrition Programs. Through an interagency agreement with the Department of Economic Security Family Assistance Administration, AzNN provides common nutrition messages to persons who are Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program) participants or whose income falls within the eligible guidelines for the SNAP program.

In its continuing effort to determine the most effective ways to communicate the nutrition message to the target audience, AzNN and Moses Anshell commissioned WestGroup Research to conduct a study of media use among this population.

The overall objective of the **Media Usability Study** is to measure the target audiences' use of computers, the Internet, cell phones, and social media. Specific study objectives include the following:

- Measure computer use among moms and kids in the target demographic.
- Determine how and where moms and kids connect to the Internet.
- Determine how moms and kids get to specific websites and which sites they visit.
- Measure cell phone use and use of various cell phone features.
- Gauge attitudes toward, and behavior relating to, various social media tools.
- Gauge awareness of, and reactions to, the Eat Well Be Well website.

To reach these objectives, WestGroup recommended a combination of qualitative and quantitative research. The subject of this report is the *quantitative phase* of the research.

Intercept interviews were conducted with 885 women (685 aged 18 to 45 and 200 aged 46 and over) and 255 kids between the ages of 5 and 17. The study was conducted at WIC clinics, DES offices, grocery and retail stores (referred to as “non-partner” sites throughout this report) and Arizona Nutrition Network “partner”¹ sites in Phoenix, Tucson, Flagstaff, Winslow, and Sierra Vista. All interviews were completed between February 21 and May 5, 2010.

¹ AzNN administers a funding opportunity for local agencies to contribute matching funds to AzNN that qualifies those agencies for additional dollars to expand and enhance their existing nutrition education programs. This is called the Local Incentive Award (LIA) Program. The LIA Program is available to qualified agencies to support nutrition education activities among low-income populations. AzNN also uses other funding sources to provide nutrition education. Partners come from across the state and represent a range of organizations. Examples of AzNN partners are county health departments, tribal governments and organizations, school districts, food banks, etc.

The following table lists the specific locations of the intercepts and the number of completed interviews at each location.

Women's Interviews

City	Non-Partner/Partner Locations	# of Completes		
Phoenix N=371	Non-Partner Locations (N=194) WIC – Chandler WIC – Maryvale WIC – South Phoenix DES – 7 th Street & Bell Road Gonzales Tax & Insurance – 19 th St. & Indian School*	30 41 50 35 38		
	Partner Locations (N=177) Desert Mission Food Bank Fresh Start Women's Resource Center Senior Centers Foothills Housing	75 20 58 24		
	Tucson N=298	Non-Partner Locations (N=253) WIC – Abrams WIC – Eastside WIC – Westside	85 104 64	
		Partner Locations (N=45) St. Elizabeth's Health Center United Way of Tucson	44 1	
		Flagstaff Winslow N=101	Non-Partner Locations (N=92) WIC Farmers Market	65 27
			Partner Locations (N=9) Coconino County Health Department	9
			Sierra Vista N=115	Non-Partner Locations (N=115) WIC Farmers Market/DES

** Gonzalez Tax & Insurance is a tax preparation and filing service owned by Rocio Gonzalez. In addition to owning this business, Ms. Gonzalez occasionally recruits participants for Spanish-speaking focus groups on behalf of WestGroup Research. Since we were not able to use any grocery stores for this study, we included Gonzalez Tax & Insurance as a retail location. (There is a Food City grocery store at 19th Avenue and Indian School, across from Gonzalez' business.)*

Kids' Interviews:

Non-Partner: 152 (WIC, DES, grocery stores in the various communities)
Partner: 103 (Tempe Kid Zone, St. Elizabeth's Health Center)

All survey participants met the following screening criteria:

S1. Which of the following categories best describes your age?

- _____ 18 to 25
- _____ 26 to 35
- _____ 36 to 45
- _____ 46 or older

S3. How many people are there living in your household?

- _____ 2
- _____ 3
- _____ 4
- _____ 5
- _____ 6 or more

S4. What is your household income? You can give that to me as a weekly income, every 2 weeks, monthly, or yearly income. *(Must be under these to qualify.)*

Family Size	Weekly Income	2-Week Income	Monthly Income	Yearly Income
1	\$ 385	\$ 770	\$1,670	\$20,036
2	\$ 518	\$1,036	\$2,246	\$26,955
3	\$ 651	\$1,302	\$2,823	\$33,874
4	\$ 784	\$1,568	\$3,399	\$40,793
5	\$ 917	\$1,834	\$3,976	\$47,712
6	\$1,050	\$2,101	\$4,553	\$54,631

Participants had the option of completing the interview in English or Spanish and were given a \$5 bill as a “thank you.”

It is important to note that although this information is quantitative, it is not necessarily representative of all low-income women over 18 years old in Arizona. To be representative of that population, respondents would have to have been selected at random. That is, each person in the population would have had an equal chance of being included in the sample. These intercepts were conducted using a convenience sample (e.g., those who were at these specific locations during the hours in which interviews were conducted). Though this sampling technique is appropriate to meet the study objectives (within the budget guidelines), it does introduce a sampling bias and should be considered when interpreting the findings.

Respondent Profile

	Total n=885	Phoenix n=371	Tucson n=298	Flagstaff n=101	Sierra Vista n=115
Age					
18 – 25	30%	21%	37%	38%	33%
26 – 35	32%	27%	34%	38%	42%
36 – 45	15%	16%	15%	12%	11%
46 – 55	7%	8%	6%	10%	4%
55 +	<u>16%</u>	<u>28%</u>	<u>8%</u>	<u>2%</u>	<u>10%</u>
Total	100%	100%	100%	100%	100%
Ethnicity					
Hispanic	69%	46%	66%	25%	24%
Caucasian	11%	36%	22%	36%	53%
Native American	11%	3%	6%	35%	1%
African American	6%	8%	2%	1%	11%
Other	<u>3%</u>	<u>7%</u>	<u>4%</u>	<u>3%</u>	<u>11%</u>
Total	100%	100%	100%	100%	100%
Education					
8 th Grade or less	7%	12%	4%	2%	2%
Some High School	19%	18%	20%	23%	17%
GED/HS Grad	37%	39%	35%	32%	41%
Some College+	<u>37%</u>	<u>31%</u>	<u>41%</u>	<u>43%</u>	<u>40%</u>
Total	100%	100%	100%	100%	100%
Language at Home					
English	62%	61%	52%	77%	75%
Spanish	16%	17%	26%	4%	2%
Both	21%	21%	21%	17%	23%
Other	<u>1%</u>	<u>1%</u>	<u>1%</u>	<u>2%</u>	<u>0%</u>
Total	100%	100%	100%	100%	100%
Food Assistance*					
Yes	76%	66%	86%	70%	84%
No	<u>24%</u>	<u>34%</u>	<u>14%</u>	<u>30%</u>	<u>16%</u>
Total	100%	100%	100%	100%	100%
WIC**	70%	53%	90%	61%	69%
Food stamps	66%	71%	55%	70%	78%
Other	30%	40%	24%	14%	29%

* Do you or anyone in your family participate in food assistance programs?

** If yes, which ones? Summer Food Service Program, Food Stamp/SNAPs, School Lunch/School Breakfast, WIC, CSFP, Other

II. Executive Summary

Note: This study was conducted with 885 women (665 aged 18 to 45 and 200 aged 46 and over). 566 of the women interviewed have children between the ages of 2 and 11. Throughout this report, the designation “moms” or “mothers” refers to the 566 participants who have young children (to the exclusion of those who only have children 12 or older or have no children). The terms “women,” “respondents,” and “target audience” refer to all study participants.

Women/Moms

Computer and Printer Access

- More than eight in ten moms (85%) have access to a computer with two-thirds (67%) having a computer at home and two in ten (18%) able to use a computer elsewhere. (p.17)
 - Among all women interviewed, the numbers are very similar – 83% have access to a computer, with 64% saying they have a computer at home and 19% saying they have access to a computer somewhere else.
- Among those who use a computer at home or elsewhere, more than eight in ten (85%) say they have access to a printer. Nearly six in ten (59%) have a printer at home and one in four (26%) can use one somewhere else. This translates to more than seven in ten (72%) moms in the primary demographic (moms with children between 2 and 11 years old) have access to a printer – 50% at home and 22% some place else. (p.19)

Internet Use

- Two-thirds (66%) of mothers in the target audience have Internet access (78% of those with computer access). (p.20)
- Among those who use the Internet, nearly all report having some kind of high speed Internet access (only 4% say “dial up”). About four in ten (37%) have a cable connection, 29% use a wireless connection, and 15% have DSL. (p.20)
- Nearly one-half (48%) of all women interviewed who use the Internet go online every day and an additional 15% go online most days of the week (4-6 days per week). (p.20)
- Moms who use the Internet are most likely to use it to email friends and family (86%) or to read the news (72%). (p.22)

- Over six in ten (63%) seek health/nutrition/or disease related information online. (p.22)
 - When asked why they get information online rather than calling a number, going to the library, or using some other method, women who use the Internet to seek health/disease or nutrition related information online say they do so because it is easier, faster, and more convenient. (p.25)
- Similarly, two-thirds (68%) of the moms who go online use the Internet to get information for school or work and slightly fewer (65%) use social networking sites such as MySpace, Facebook, Twitter, etc. Approximately six in ten like to look for jobs (62%) or find recipes online (61%). More than one-half play or download music (57%), get information about hobbies or interests (53%), shop online (52%) or play games with their kids (51%). (p.22)
- The three most popular websites among the online target audience are Google (51%), Yahoo (39%) and Facebook (31%). MySpace, Craigslist and YouTube attract a significant percentage of respondents as well. WebMD, MSN, CNN and eBay complete the top 10 most visited websites. (p.26)
- Nearly one-half (45%) of the online target audience recalls seeing advertising on the Internet. Fifteen percent (15%) have actually clicked on Internet ads to get more information or to see an offer. (p.28)
 - Those who recall seeing advertising on the Internet most frequently name classmates.com, colleges/universities or Netflix as the sponsors (23%, 20% and 18%, respectively). A relatively high proportion also recalls noticing Internet ads for Wal-Mart (15%) and loan or finance companies (14%). (p.28)
- More than four in ten respondents say they are “more likely” to notice online ads than advertisements on TV (46%). This outweighs the percentage who say they are “less likely” to notice them (29%). (p.29)
 - When comparing Internet ads to direct mail advertising and ads seen in government offices, women are split in their opinions as to which they notice most. (p.29)
 - For radio, door hangers and billboards, a higher proportion say they would be less likely to notice Internet advertising compared to these mediums. (p.29)

Cell Phones

- Women in the target market are significantly more likely to have cell phones (81%) than landlines (47%). Nearly two in ten (17%) cell phone owners have a prepaid cell phone. *(p.30)*
- As expected, virtually all (99%) moms with cell phones use them to talk to family and friends. A majority also text message and take and send pictures on their cell phones (89%, 77% and 68%). *(p.33)*
 - Playing music and playing games are also popular cell phone activities among mothers (40% and 36%). *(p.33)*
 - One-third (33%) of moms access the Internet via their cell phone and 15% visit websites this way with a total of 3% logging on to MySpace and 2% onto Google (from their cell phone). *(pg. 33)*
 - Nearly three in ten moms record video clips (31%) and/or send and receive email messages (30%) on their cell phones. Approximately two in ten use their cell phones to instant message (22%) and watch videos (21%). One in ten has sent a text message to vote (11%) and/or have texted a promotional number (9%). *(p.33)*
- More than one in ten (13%) cell phone owners (15% of mothers) in the target market have applications on their cell phones. *(p.36)*
 - The five most popular apps are Facebook (23%), GPS/Navigation (18%), MP3s/songs or ringtones (16%), Games (13%), and MySpace (11%). *(p.36)*
- Women with cell phones were asked if they recalled seeing or hearing advertising, such as texts, voice messages, or banner ads, on their cell phones. Two in ten (19%) cell phone owners in the target market recall seeing or hearing such advertising and 4% report they have clicked on an advertisement to get more information. *(p.37)*
 - Nearly six in ten (58%) of those who have noticed this type of advertising on their cell phone, say the advertiser was their cell phone service provider. Ads for a company offering ring tones (14%) and advertising for some other cell phone provider (12%) come in a distant second and third. *(p.37)*
- The only advertising method where the percentage saying they are “more likely to notice” cell phone ads outweighs the percentage saying they are “less likely to notice” cell phone ads is television (44% more/37% less). *(p.38)*

- When comparing cell phone ads to advertising in government offices, and advertising received in the mail or heard on the radio, women are split in their opinions as to which they notice most. (p.38)
- For door hangers and billboards, a higher proportion say they would be less likely to notice cell phone advertising compared to these mediums. (p.38)

Social Media

- Overall, 64% of moms (nearly six in ten women in the target audience – 59%) use some kind of social media. (p.39)
 - The most popular are social networking sites Facebook, MySpace and YouTube. (p.39)

Eat Well Be Well Website

- Overall, 5% of moms/women in the target market have visited www.eatwellbewell.org (2% unaided + 3% aided). (p.42)
 - More than eight in ten target market women (82%) who have visited www.eatwellbewell.org rate the site highly – 53% rated it as excellent/“5” rating and 18% rated it a “4”. (p.42)
 - Women most appreciate the website because it helps them learn about healthy food (36%) and be informed (24%). Thirteen percent (13%) like the recipes best and 11% find it easy to access. (p.43)
 - Most women (80%) who have visited the website cannot think of anything they dislike about it (18% don’t know + 62% nothing/like everything). A few (4) feel it could give more information about eating healthy. One person each complained that: something was not in Spanish, that it is boring, it does not consider people with food allergies, and that it needs more pictures. (p.44)
- Other nutrition related sites visited (unaided) include WebMD (10%), Weight Watchers (4%), and MyPyramid.gov (3%). Of interest, 2% volunteered visiting www.fruitsandveggiesmorematters.gov. (p.42)

Kids

A total of 255 children ages 5 to 17 participated in the study.

Computer Use at Home and School

- Nearly all kids interviewed (99%) have access to a computer either at school (86%) or at home (76%). Among those who use a computer, 59% have a printer at home. *(p.45)*
- Kids are most likely to use computers to play games (75%), look up stuff on the Internet (61%) and to do homework (58%). A substantial percentage (45%) report they listen to music on the computer. *(p.46)*

Internet Use

- A strong majority of kids (86%) go on the Internet. *(p.47)*
- The vast majority of kids who use the Internet do so at least weekly (87%), with just over half using it most days of the week (28% every day and 24% using it 4-6 days per week). *(p.47)*
- A majority of kids say that when they are on the Internet they play games (85%), do school work (70%), and play or download music (67%). Just over half say they visit YouTube (53%). Four in ten use social networking sites such as MySpace, Facebook and Yahoo Groups (42%) and/or send email messages to family or friends (40%). Relatively few (8%) go to chat rooms when online. *(p.49)*
- The three most popular websites are YouTube (36%), Disney Channel (26%) and MySpace (23%). Google, PBS Kids, WebKinz and Yahoo Groups complete the top seven and are the only other sites regularly visited by more than 8% of kids. Of note: 2% of kids say www.eatwellbewell.org is among the sites they visit most often. *(p.52)*

Cell Phones

- Nearly one-third of the kids aged 5 to 17 (31%) who participated in the study have cell phones. *(p.54)*
- Nearly three in ten (28%) cell phone owners report they have a prepaid cell phone. *(p.54)*
- Virtually all kids (99%) with cell phones report using their cell phones to make calls to parents or friends. Nine in ten kids (90%) use text messaging. Nearly three in four (72%) take pictures with their phones and just over half (56%) play

music on their cell phones. Approximately four out of ten (41%) play games on their cell phones. Two in ten kids (20%) use their phone to access the Internet with 13% visiting websites. (p.55)

Social Media Use

- Most kids that use the Internet access social media websites. Just two in ten (20%) say they do not participate in social media. (p.57)
- YouTube and Disney Kids are the most popular social media sites with nearly one half of kids using them (48% and 47%). MySpace, Yahoo Groups and Facebook round out the top five (27%, 24% and 22%, respectively). (p.57)

Eat Well Be Well Website

- Two in ten (20%) kids that use the Internet have visited the Eat Well Be Well website. (p.59)
- A majority of kids (70%) who visited the site say they like it “a lot,” and an additional 26% report liking it “a little.” Only two indicate they dislike the site (4% - “not so much”). (p.59)
- Visitors to the Eat Well Be Well site most often say their favorite thing about it is the games and activities (61%). Learning about healthy food (29%) and the video showing how to eat in a healthy manner (22%) complete kids’ three favorite things about the website. (p.60)
- Most of the children who have visited the website could not think of anything they disliked about it (30 nothing/liked everything + 4 don’t know). Two kids said they do not like the games. Nothing else was mentioned by more than one child. (p.61)

Media Use Profile

	Moms N=566	Age 46+ N=200	English N=547	Spanish N=145	Both N=183
Computer Access	85%	68%	84%	73%	85%
At home	67%	48%	66%	57%	63%
Somewhere else	18%	20%	18%	16%	22%
Printer Access	72%	51%	69%	63%	67%
At home	50%	36%	49%	43%	45%
Somewhere else	22%	15%	20%	20%	22%
Internet Use	66%	48%	65%	50%	67%
% w/high speed connection	55%	36%	54%	41%	57%
Frequency – every day/most days	42%	29%	43%	34%	36%
Seek health-related info	39%	30%	44%	25%	34%
Most popular websites	Google, Yahoo, Facebook				
Recall online advertising	28%	15%	31%	17%	20%
Clicked on Internet ads	9%	8%	11%	5%	6%
Cell Phones					
Own cell phone	83%	68%	82%	77%	79%
Own landline	43%	65%	45%	49%	49%
Prepaid cell phone	14%	11%	13%	18%	11%
Send/receive text	74%	33%	66%	67%	70%
Access Internet	27%	9%	26%	21%	27%
Text to vote (e.g., Idol)	9%	4%	8%	6%	7%
Text promotional #	8%	4%	6%	6%	9%
Have “apps”	12%	5%	12%	8%	8%
Recall advertising on cell	16%	11%	14%	18%	16%
Social Media					
Use social media	64%	24%	61%	50%	59%
Most popular sites	FB, MS	FB	FB, MS	MS, YT	MS, FB
Eat Well Be Well					
Visited site	5%	2%	5%	3%	7%

III. Study Implications and Marketing Opportunities

Interact through social media

Among internet users, 65 percent of moms use social networking sites such as Facebook and MySpace. Those two websites are listed as the third and fourth most popular website in the survey.

- Social media is virtual community outreach and would allow the target to interact with AzNN or WIC and other fans in real time. AzNN could post questions like “What’s your trick to getting your kids to eat vegetables?” and receive feedback from the target or post weekly recipes.
- In addition to creating a Champions for Change or WIC presence in social media, ADHS can purchase ads on these sites to drive traffic to either the main website or the social networking page. Ads on social networking sites can be geo-targeted to reach just Arizonans and demo-targeted.

Continue to promote recipes and enhance website with SEO

Among internet users, 61 percent of moms find recipes online. And 63 percent seek health, nutrition or disease related information online. The search engines “Google” and “Yahoo” are listed as the top two most popular websites in the survey (51% and 39% respectively).

- “Free recipes” should continue to be the call to action on AzNN marketing materials and have a prominent place on the EWBW website.
- In addition, it is recommended that AzNN consider Search Engine Optimization, which generates and updates materials to set up AzNN for success with searches like “healthy recipes.” Moms use search engines to find information about subject matter when they do not know a specific website address to type into the address bar. Including efforts so that AzNN information appears on the first page of organic search positions AzNN to gain more traffic from moms who are seeking this information. And the higher rankings position AzNN as an authority on the subject and may turn the searchers into repeat visitors.

Connect in one click with online ads

Moms are connected to the internet. Two thirds of mothers surveyed have access to the internet and nearly all report having some kind of high speed internet access. Nearly one half go online every day and an additional 15 percent go online most days of the week. Nearly one half of those with internet access recall seeing ads online and 15 percent have clicked on Internet ads for more information or to see an offer. Furthermore, 46 percent of these women say they are “more likely” to notice online ads than TV commercials.

- Online ads are a great vehicle to extend the AzNN or WIC brand and allow the target to get to the main website within one click. For example, an ad for AzNN can promote a recipe and the user can click directly to the EWBW recipe page. Or a WIC online ad can link directly to the eligibility page of azwic.gov. Since they are online, they do not need to remember the web address or phone number to follow up later. Online ad reporting is extensive and informative including not only the number of impressions and clicks but also can track what happens immediately after the online user clicks on the ad. AzNN can then track website

activity using Google Analytics. The online ad reporting, in combination with Google Analytics, will provide useful information as to the online habits of the target audience after they reach the EWBW website.

- A benchmark click through rate for standard online ads is less than one percent with a well performing campaign a couple percent higher. Therefore the 15 percent of the moms that reported clicking on an online ad is an encouraging statistic.

Utilize texting to deliver the message

The majority (81%) of women (83% of moms) in the study have cell phones and 89 percent use them to send text messages.

- Text marketing can be either “push” or “pull.” Pushing means AzNN would purchase an opt-in list confined to phone numbers within the state and demographic target audience and send a text to those phones. This would ask the recipients to agree to receive future texts from AzNN that could be weekly tips on healthy eating and being active. Pulling means AzNN would list a text-in number in the call to action in all marketing materials like TV, door hangers and collateral, and ask the target audience to text in to receive nutrition information. A combination of push and pull is recommended to generate the list database and reach the widest possible portion of the target audience.
- Over a third of moms play games on their phones, however the majority do not use “smart phones” so they do not have the opportunity to download new games. They can play the games that come installed on their phones. For this reason, it is not recommended to develop mobile games for this target audience.

Go direct with door hangers and direct mail

Moms in the study say they are more likely to notice door hangers than text ads (61% vs 28%). And moms say they are more likely to notice door hangers than online ads (63% vs 23%).

- This demonstrates the impact of direct marketing as a successful communication tool to moms and it is recommended that AzNN continue with door hangers and direct mail efforts. It is recommended that WIC look into direct marketing opportunities as well.

Create online games for kids and parents

Nearly all kids interviewed have access to a computer and the internet. Their main activity online is playing games (85%). And they use the internet at least weekly with just over half using it most days of the week.

- Although they are not the primary target audience of marketing efforts, kids are encouraged to play the games on EWBW by partners, schools, or their parents. Having fun and exciting games available on EWBW will encourage their repeat visits, meaning exposure to new messaging, and retention of the nutrition message. It is recommended that the games on EWBW be divided into age-appropriate sections that can be tailored to younger or older children. New online games can correspond to offline games and group activities to leverage the effort of game design.

Among the mom internet users, 51 percent play games with their kids.

- This is an opportunity for AzNN to develop games that have parents playing with their kids in a competitive or collaborative format. The games can focus on a nutrition theme and encourage repeat playing for access to higher levels or other rewards.

Reach out to kids in the future

Kids are highly connected (cell phones, internet usage and social media usage). If kids become a higher marketing priority in the future, AzNN can use technology to reach them through texting, online ads, online games and social media connections. For example, Bobby B can have his own MySpace page to reach the younger kid audience.

IV. Target Audience Women and Moms

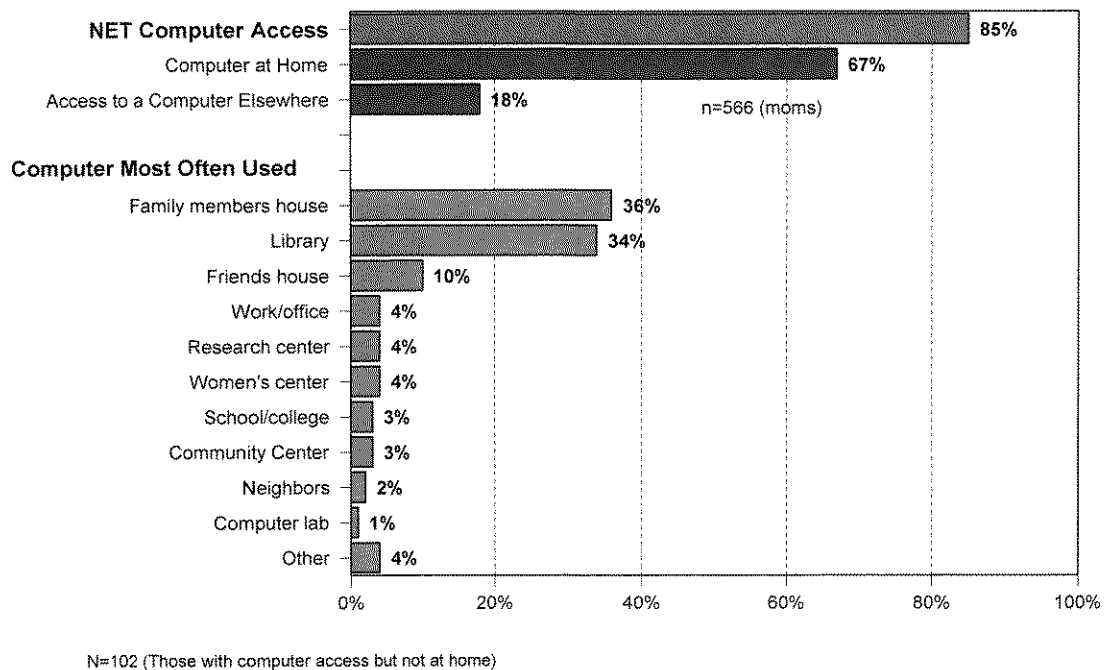
A. Computer and Printer Access

1. Computer Access

More than eight in ten moms (85%) of kids ages 2 to 11 have access to a computer, with two-thirds (67%) having a computer at home and nearly two in ten (18%) able to use a computer elsewhere. (*Note: Computer access does not constitute Internet access or use.*)

Mothers who use a computer that is not in their home most often use one at a family member's house (36%) or at the library (34%).

Computer Access at Home or Elsewhere - Moms

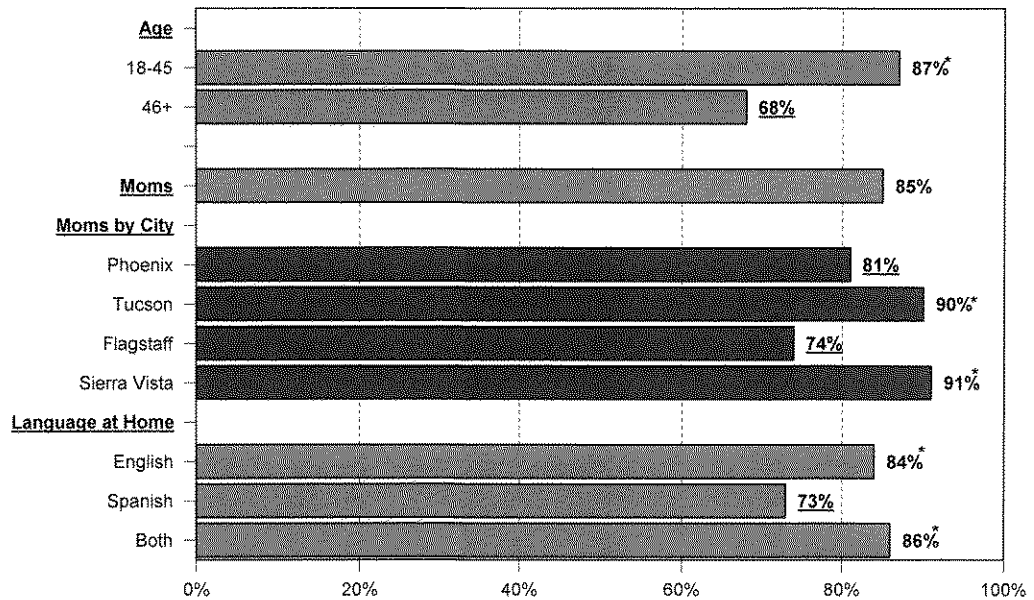


Demographic Differences among Moms and All Women:

Women ages 18 to 45 are significantly more likely than older women to have access to computers. Moms in the Tucson and Sierra Vista target markets are significantly more likely to have computer access than are those residing in Phoenix and Flagstaff. Women who only speak English at home and those who speak both languages are more likely than those who only speak Spanish at home to have access to a computer.

Computer Access at Home or Elsewhere

Demographic Differences



*Indicates a significantly higher percentage than the underlined comparative group(s).

2. *Printer Access*

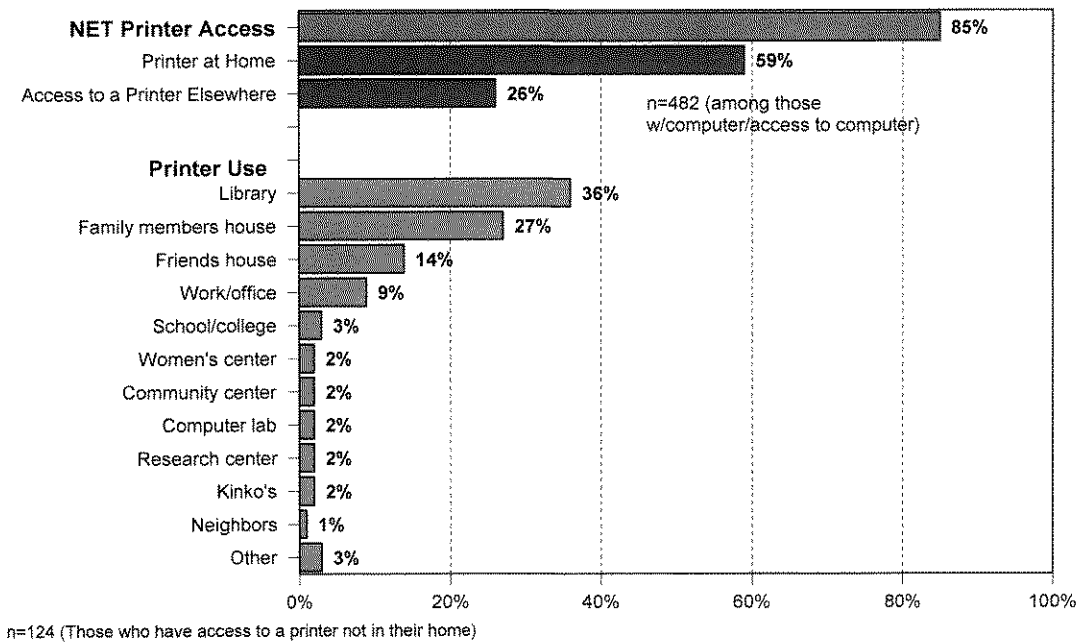
Among mothers who use a computer at home or elsewhere, more than eight in ten (85%) say they have access to a printer. Nearly six in ten (59%) have a printer at home and one in four (26%) can use one somewhere else. This translates to more than seven in ten (72%) moms in the primary demographic (moms with children between 2 and 11 years old) have access to a printer – 50% at home and 22% some place else.

Among those with computer access, moms in Tucson are significantly more likely than those in Phoenix to report having access to a printer (92% vs. 78%). Additionally, Caucasians and Hispanics are significantly more likely than Native Americans to have access to printers (86% and 84% vs. 73%).

Moms who use a printer located outside of the home are most likely to print things at the library (36%) or at family member’s house (27%). Approximately one in seven women (14%) use printers at a friend’s house with one in ten (9%) using them at work.

Printer Access at Home or Elsewhere - Moms

Among those with Computer Access



B. Internet Use

1. Internet Access, Connection Type and Frequency of Use

Nearly two-thirds (66%) of mothers with children between 2 and 11 years old have Internet access (78% of those with computer access).

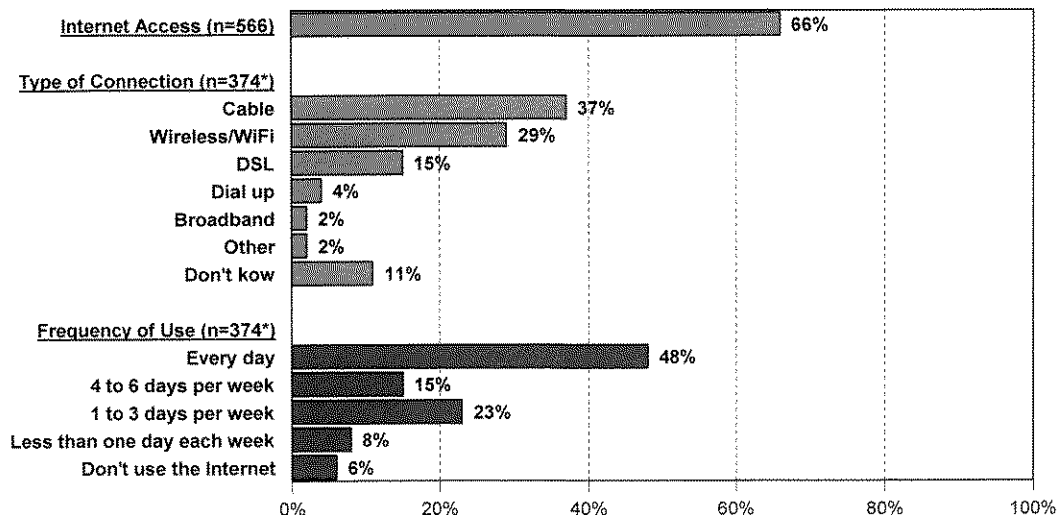
Among those who use the Internet, nearly all report having some kind of high speed Internet connection (only 4% say “dial up”). About four in ten (37%) have a cable connection, 29% use a wireless connection, and 15% have DSL.

Approximately one-half (48%) of moms who use the Internet go online every day and an additional 15% go online most days of the week (4-6 days per week). Just 6% who have access to the Internet say they do not use it.

Mothers in Phoenix (15%) are significantly more likely than those in Tucson (3%), Flagstaff (3%) and Sierra Vista (1%) to say they do not use the Internet, despite having access. Women with Internet access who speak only Spanish or are bilingual at home are significantly more likely than those who only speak English to say they do not go online (12% and 11% vs. 4%).

Internet Access, Connection Type and Frequency of Use

Do you have Internet access from your home computer or from the non-work computer you use most? What kind of Internet connection do you use? Approximately, how many days each week do you use the Internet?



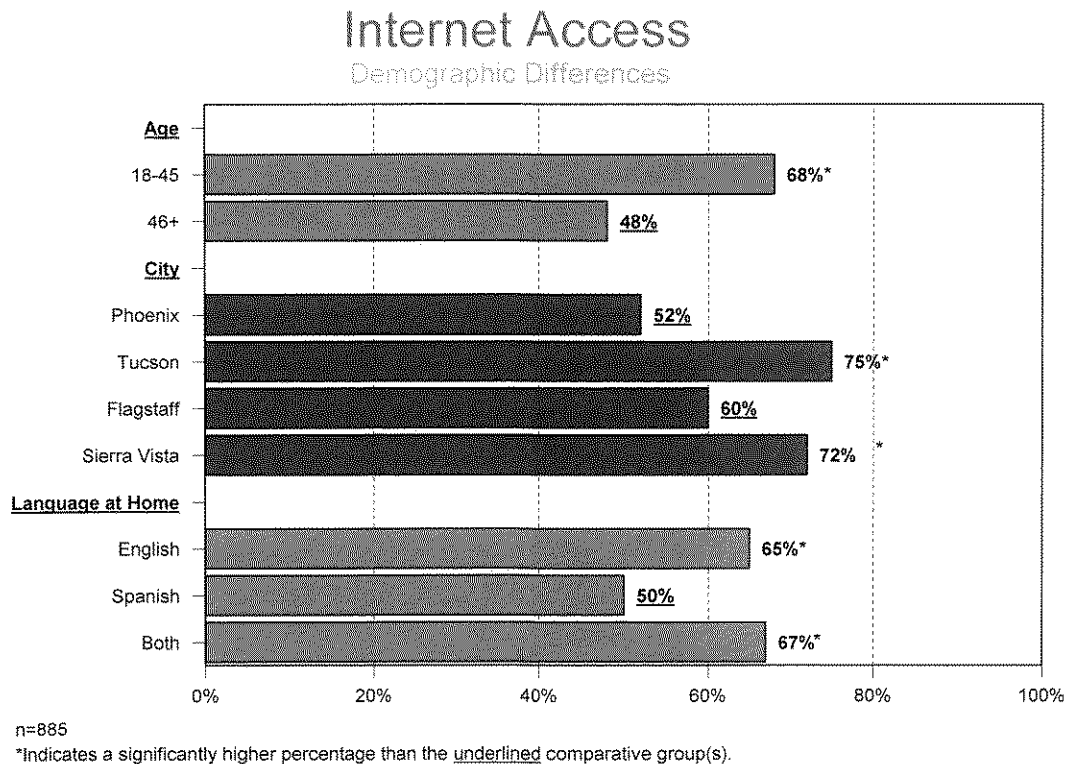
* n=374 - moms with Internet access

Demographic Differences among All Women:

These differences are consistent with the differences identified between respondents who have a computer in their home and those who do not.

Women ages 18 to 45 are significantly more likely than older women to have access to the Internet. The Phoenix target market is significantly less likely to have Internet access than mothers in Tucson, Flagstaff and Sierra Vista. Women who only speak English at home or speak both English and Spanish are significantly more likely than those who are less acculturated and only speak Spanish at home to have access to the Internet.

In addition, Caucasians are significantly more likely than Native Americans to have Internet access (67% vs. 53%).



2. Internet Activities

Mothers who use the Internet are most likely to use it to email friends and family (86%) or to read the news (72%). In addition, approximately two-thirds use the Internet to get information for school or work (68%) and slightly fewer use social networking sites such as MySpace, Facebook, Twitter, etc. (65%).

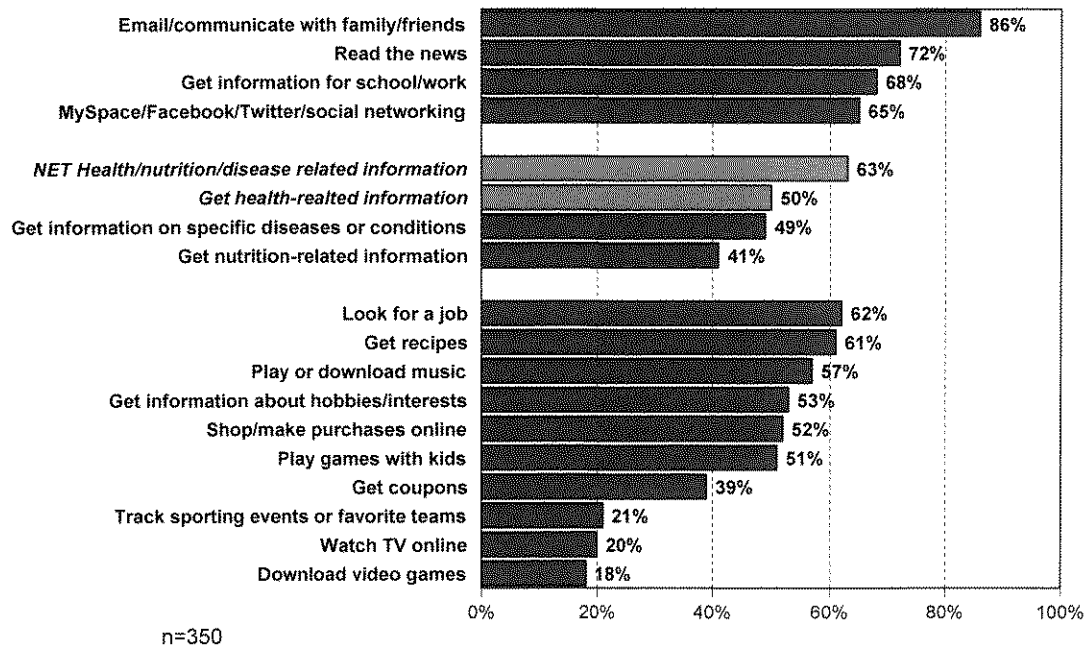
Over six in ten (63%) seek health/nutrition/disease related information online. Specifically, one-half (50%) say they use the Internet to find health-related information and/or for information about specific diseases or conditions (49%). About four in ten (41%) say they get nutrition-related information on line.

Approximately six in ten say they have looked for a job online (62%) with a similar portion saying they like to find recipes online (61%). More than one-half play or download music (57%), get information about hobbies or interests (53%), shop online (52%) or play games with kids (51%). Four in ten (39%) moms say they get coupons online.

Internet Activities - Moms

Among Internet Users

Following is a list of things some people do while on the Internet. Please tell me if you do any of these:



Demographic Differences among Moms and Women:

Generally, women ages 18 to 45 are more likely than older women to do all but a few of these Internet activities and six of these differences are significant (demonstrated below).

Among moms, there are numerous differences by city of residence. The only across the board difference of statistical significance is that Sierra Vista moms are significantly less likely to seek nutrition related information than moms in the other three markets evaluated.

Table 1a: Internet Activities among Internet Users: By Age and Moms by City

Internet Activities	Total n=521	Age		Moms by City			
		18-45 n=434	46+ n=87	Phoenix n=104	Tucson n=132	Flagstaff n=37	Sierra Vista n=77
Email/communicate with family/friends	86%	88%	<u>78%</u>	85%	86%	89%	88%
Read the news	71%	72%	70%	69%	69%	73%	81%
NET Health/ disease /nutrition related information	67%	66%	69%	71%	63%	65%	<u>53%</u>
Get health-related information	52%	53%	48%	59%	52%	49%	<u>36%</u>
Get information on specific diseases or conditions	52%	50%	59%	61%	<u>41%</u>	54%	<u>46%</u>
Get nutrition-related information	43%	45%	35%	47%	42%	51%	<u>27%</u>
Get information for school/work	66%	71%	<u>45%</u>	72%	64%	60%	74%
MySpace/Facebook/Twitter/social networking	63%	69%	<u>35%</u>	72%	<u>55%</u>	57%	74%
Get recipes	61%	62%	59%	<u>53%</u>	63%	78%	<u>58%</u>
Look for a job	59%	65%	<u>31%</u>	59%	62%	65%	64%
Play or download music	56%	62%	<u>29%</u>	63%	58%	46%	53%
Get information about hobbies/interests	54%	54%	55%	57%	46%	60%	56%
Shop/make purchases online	53%	51%	60%	<u>46%</u>	<u>49%</u>	68%	58%
Play games with kids	43%	47%	<u>23%</u>	61%	<u>43%</u>	46%	56%
Get coupons	38%	40%	31%	39%	41%	43%	35%
Watch TV online	21%	22%	17%	24%	17%	19%	22%
Track sporting events or favorite teams	21%	21%	17%	19%	22%	35%	<u>17%</u>
Download video games	18%	18%	15%	25%	18%	16%	<u>9%</u>

BOLD indicates statistically higher percentage than the underlined comparative group.

Women who only speak English at home are significantly more likely than those who only speak Spanish or are bilingual at home to seek health/disease/nutrition related information online. Social networking sites such as Facebook and MySpace are more popular among the English dominant target audience than among women who are bilingual. Women who are bilingual at home are more likely to play or download music online than are those who only speak English at home. Finally, tracking sporting events is more prevalent among English dominant than among those who are Spanish dominant.

Native Americans are more likely than Hispanics and Caucasians to use the Internet to email, look for a job, and track sporting events or favorite teams online. In addition, Native Americans are more likely to engage in playing games with kids on the Internet than are Caucasians and other non-Hispanic minority women. Caucasians are significantly more likely than Hispanics to look up health related information online and specifically to seek information on diseases or conditions. Caucasians are also more likely than Hispanics to shop and make purchases online. In contrast, Hispanics are more likely to play or download music than are Caucasian women. Non-Hispanic minority women are the least likely to look for coupons online.

**Table 1b: Internet Activities among All Internet Users
Significant Differences by Language Preference and Ethnicity
(Only Activities with Differences are Shown)**

Internet Activities	Language Preference			Ethnicity			
	English n=342	Spanish n=64	Both n=109	Hispanic n=239	Caucasian n=187	Native American n=33	Other n=62
Email/communicate with family/friends	88%	88%	81%	<u>82%</u>	<u>88%</u>	97%	90%
NET Health/ disease /nutrition related information	71%	<u>56%</u>	<u>58%</u>	<u>62%</u>	72%	76%	61%
Get health-related information	57%	47%	<u>41%</u>	51%	56%	58%	47%
Get information on specific diseases or conditions	54%	47%	48%	<u>48%</u>	58%	49%	48%
Get nutrition-related information	44%	41%	38%	42%	43%	55%	40%
MySpace/Facebook/Twitter/social networking	66%	63%	<u>55%</u>	59%	66%	64%	68%
Look for a job	62%	48%	55%	<u>59%</u>	<u>55%</u>	76%	61%
Play or download music	<u>54%</u>	69%	56%	61%	<u>50%</u>	55%	61%
Shop/make purchases online	55%	42%	53%	<u>47%</u>	58%	58%	55%
Play games with kids	45%	37%	42%	44%	<u>39%</u>	61%	<u>37%</u>
Get coupons	36%	43%	35%	41%	40%	39%	<u>24%</u>
Track sporting events/fav. teams	23%	<u>11%</u>	20%	<u>21%</u>	<u>17%</u>	46%	<u>19%</u>

BOLD indicates statistically higher percentage than the underlined comparative group.

3. Reasons Moms Seek Health-Related Information Online

When asked why they get information online rather than calling a number, going to the library, or using some other method, moms of young children (2-11 years old) who use the Internet to seek health/disease or nutrition related information online say they do so because it is easier, faster, and more convenient.

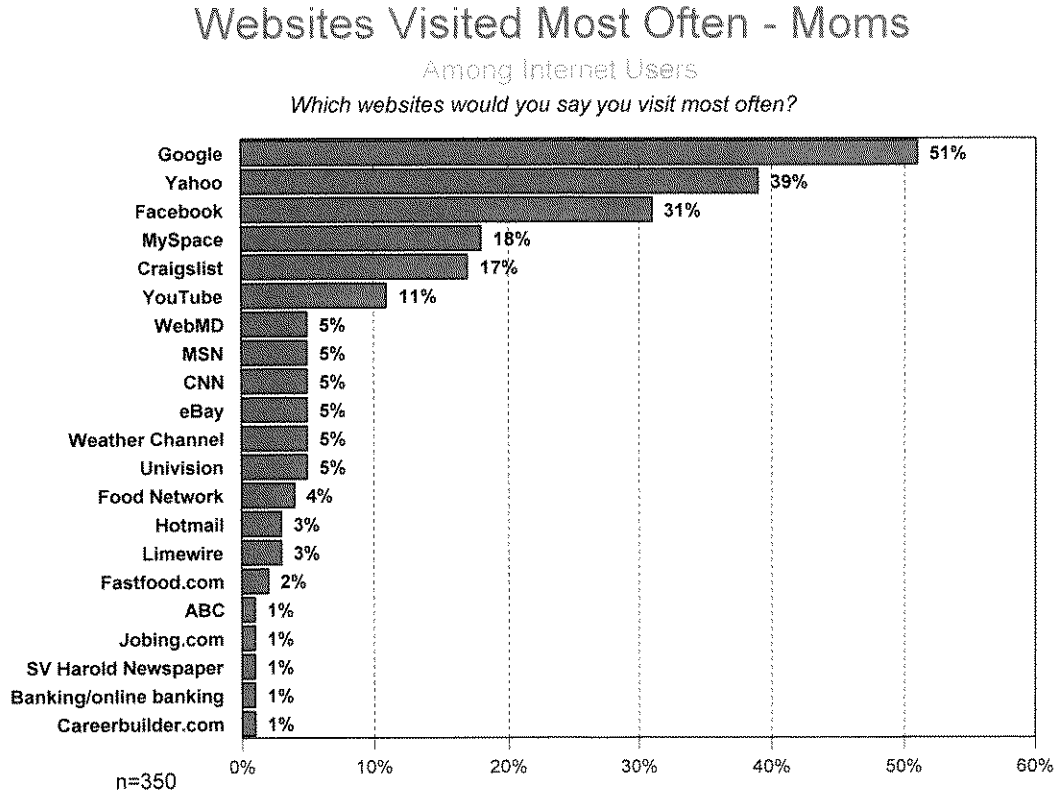
Table 2: Reasons Seek Health-Related Information Online - Moms

Reasons	Total n=222
Easy/easier access	41%
Quicker/faster	41%
NET Convenient (right at the fingertips, access from home, available 24/7)	28%
More information/can look more in depth/more options	9%
Do not have to talk to anyone/do not have to use phone	3%
Can take my time/read at my own pace	2%
Private/confidential/secure	2%
Understand more/easier to understand	1%
Cheaper	1%
Can print it	1%
Right in front of me/can see the words	1%
Other	3%
Don't know/no answer	3%

Why would you say you get information online rather than calling a phone number, going to the library or some other way of getting information?

4. *Websites Most Often Visited by Moms*

The three most popular websites among the online mom target audience are Google (51%), Yahoo (39%) and Facebook (31%). MySpace (18%), Craigslist (17%), and YouTube (11%) attract a significant percentage of respondents as well.



Demographic Differences among All Internet Users:

The rank order is very similar among most subgroups and the top three are consistently Google, Yahoo and Facebook with a few exceptions. In the case of respondents who primarily speak Spanish at home - Google is 1st, but Yahoo ties for a 4th place ranking with Univision. Facebook holds the #2 spot and Hotmail ranks 3rd. The most notable difference among bilingual respondents is that Univision ranks 5th bumping others down the list slightly.

Other notable rank order differences occur between age groups. While 18 to 45 year olds generally follow the overall ranking results, “senior” women are somewhat different in their preferences. WebMD and CNN are among their top five most visited websites and the Weather Channel and MSN tie with Facebook for 7th place ranking.

Table 3: Rank Order of Websites Visited Most Often –Demographic Differences Among All Internet Users

Activities	Language Preference			Age	
	English n=342	Spanish n=64	Both n=109	18-45 n=424	46+ n=87
Google	1	1	1	1	1
Yahoo	2	4	2	2	2
Facebook	3	2	3	3	7
MySpace	4	8	4	4	11
Craigslist	5	6	6	5	3
YouTube	6	8	7	6	10
WebMD	7	--	11	8	4
MSN	10	8	8	7	7
CNN	8	--	11	10	5
eBay	11	7	9	9	6
Hotmail	20	3	9	13	20
Univision	--	4	5	11	16
Weather Channel	9	--	--	12	7

Note: Duplicate numbers represent a tie, which results in some rank numbers being skipped.

5. *Internet Advertising Awareness among Moms*

Nearly one-half (45%) of mothers (and all women interviewed) who use the Internet recall seeing advertising on this medium. Fifteen percent (15%) have actually clicked on Internet ads to get more information or to see an offer.

Moms who recall seeing advertising on the Internet most frequently name classmates.com, colleges/universities/schools and Netflix as the sponsors (23%, 20% and 18%, respectively). A relatively high proportion also recalls noticing Internet ads for Wal-Mart (15%) and loan or finance companies (14%).

Internet Advertising Awareness and Ad Click-Throughs

Among Moms who Use the Internet



6. Likelihood of Moms to Notice Online Advertising Compared to other Methods

Interestingly, more than four in ten moms of 2 to 11 year olds say they are “more likely” to notice online ads than advertisements on TV (46%), far exceeding the portion who say they are “less likely” (29%).

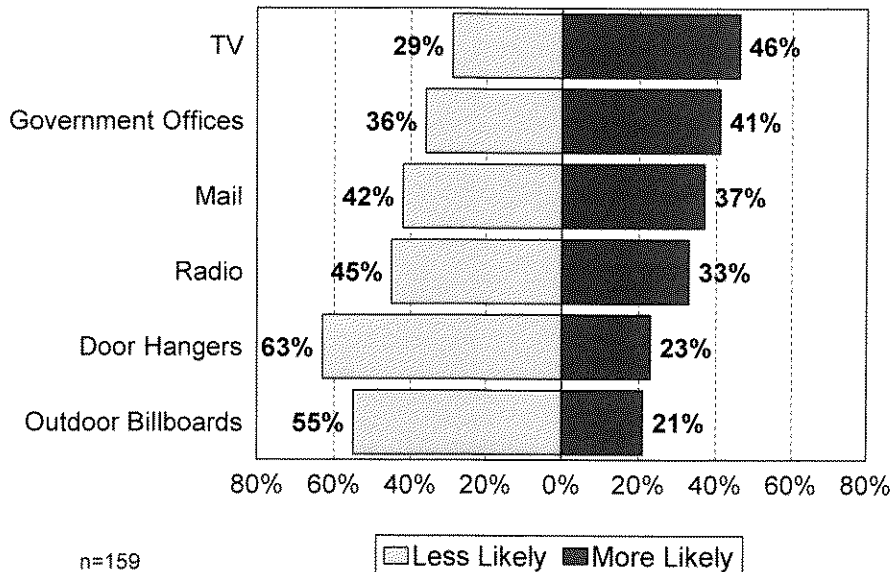
When comparing Internet ads to those seen in government offices or through direct mail advertising, mothers are split in their opinions with roughly the same portion saying they are more and less likely. (Government office – 41% “more likely” compared to 36% “less likely”; mail – 37% “more likely” and 42% “less likely.”)

For radio, door hangers, and billboards, a higher proportion say they would be “less likely” to notice Internet advertising compared to these mediums. The disparity is greatest for door hangers (23% “more likely” to notice online and 63% “less likely”) and for outdoor billboards (21% “more likely” to notice Internet advertising and 55% “less likely”).

More or Less Likely to Notice Online Ads than Ads on/in...

Among Moms Aware of Internet Advertising

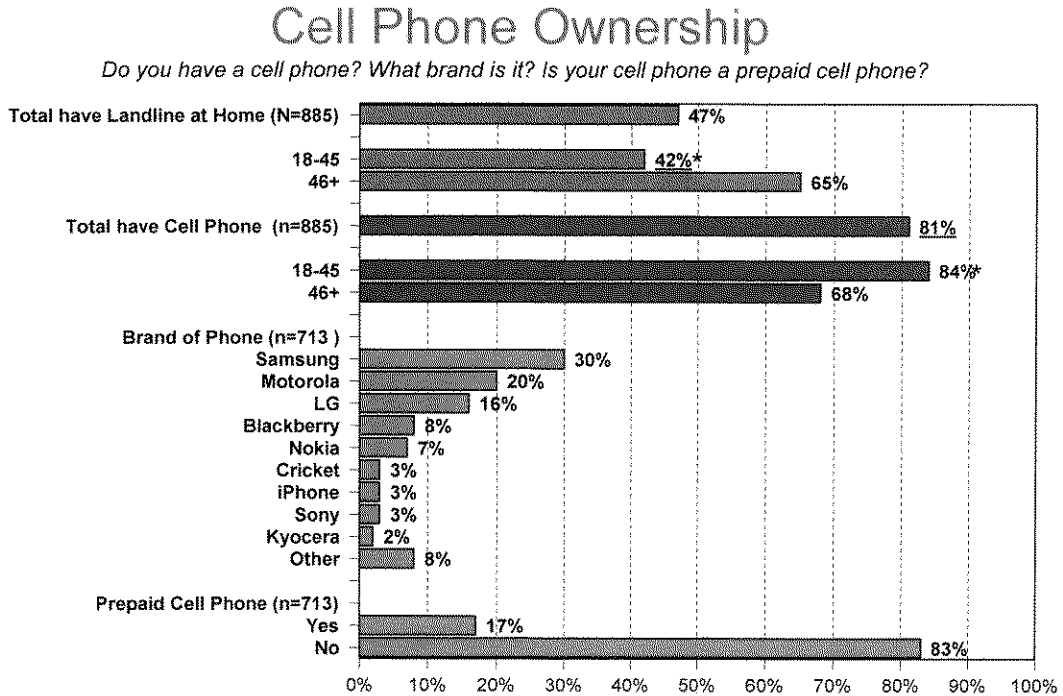
Thinking about the ads you see online, would you say you are more likely, less likely, or about the same, to notice these ads compared to ads you see or hear on/in: ...?



C. Cell Phones

1. Cell Phone Ownership and Type of Phone among All Women

Women in the target market are significantly more likely to have cell phones (81%) than landlines (47%). The most popular cell phone brands are Samsung (30%), Motorola (20%), and LG (18%). Nearly two in ten (17%) cell phone owners have a prepaid cell phone.



Demographic Differences among All Women:

Landlines: Women significantly more likely than their comparative group(s) to have landlines include:

- Phoenix, Tucson and Flagstaff moms (45%, 44%, 49% vs. 30% in Sierra Vista)
- Senior women (65% vs. 42% ages 18 to 45)
- Those who do not participate in food assistance programs (58% vs. 43%)

Cell phones: Women significantly more likely than their comparative group(s) to have cell phones include:

- Flagstaff (92%), Tucson and Sierra Vista moms (each at 87%) are significantly more likely than those in Phoenix to have cell phones (76%).
- Younger women (84% vs. 68% age 46 and older)
- Those interviewed at rural WIC office (92% vs. 85% at metro WIC offices)

Prepaid cell phones: Women significantly more likely than their comparative group(s) to have prepaid cell phones include:

- Those who participate in food assistance programs (19% vs. 9%)
- Those interviewed at rural WIC office (24% vs. 15% at metro WIC offices)

Table 4a: Types of Phones by Age and City

Types of Phones Owned	Age		Moms by City			
	18-45 n=685	46+ n=200	Phoenix n=214	Tucson n=187	Flagstaff n=61	Sierra Vista n=104
Landline	<u>42%</u>	65%	45%	44%	49%	<u>30%</u>
Cell phone	84%	<u>68%</u>	<u>76%</u>	87%	92%	87%
(Based to cell phone owners)	(n=577)	(n=136)	(n=162)	(n=163)	(n=56)	(n=90)
Prepaid cell phone	17%	15%	13%	17%	25%	19%

BOLD indicates statistically higher percentage than the underlined comparative group.

Table 4b: Types of Phones by WIC Location and Food Program Participation

Types of Phones Owned	WIC Location		Participate in Food Assistance Program	
	Metro n=374	Rural n=127	Yes n=669	No n=216
Landline	48%	39%	<u>43%</u>	58%
Cell phone	<u>85%</u>	92%	82%	76%
(Based to cell phone owners)	(n=317)	(n=117)	(n=549)	(n=136)
Prepaid cell phone	<u>15%</u>	24%	19%	<u>9%</u>

BOLD indicates statistically higher percentage than the underlined comparative group.

Table 4b: Cell-Only Households

Age				City			
18-25	26-35	36-45	46+	Phx	Tuc	Flag	Sierra Vista
59%	<u>49%</u>	50%	<u>31%</u>	<u>42%</u>	50%	52%	61%

Language				Ethnicity				WIC	
Eng	Spa	Both	Other	Hisp	White	Nat Amer	Other	Metro	Rural
50%	45%	46%	<u>20%</u>	<u>47%</u>	<u>45%</u>	61%	51%	<u>48%</u>	59%

BOLD indicates statistically higher percentage than the underlined comparative group.

2. Cell Phone Activities among Moms

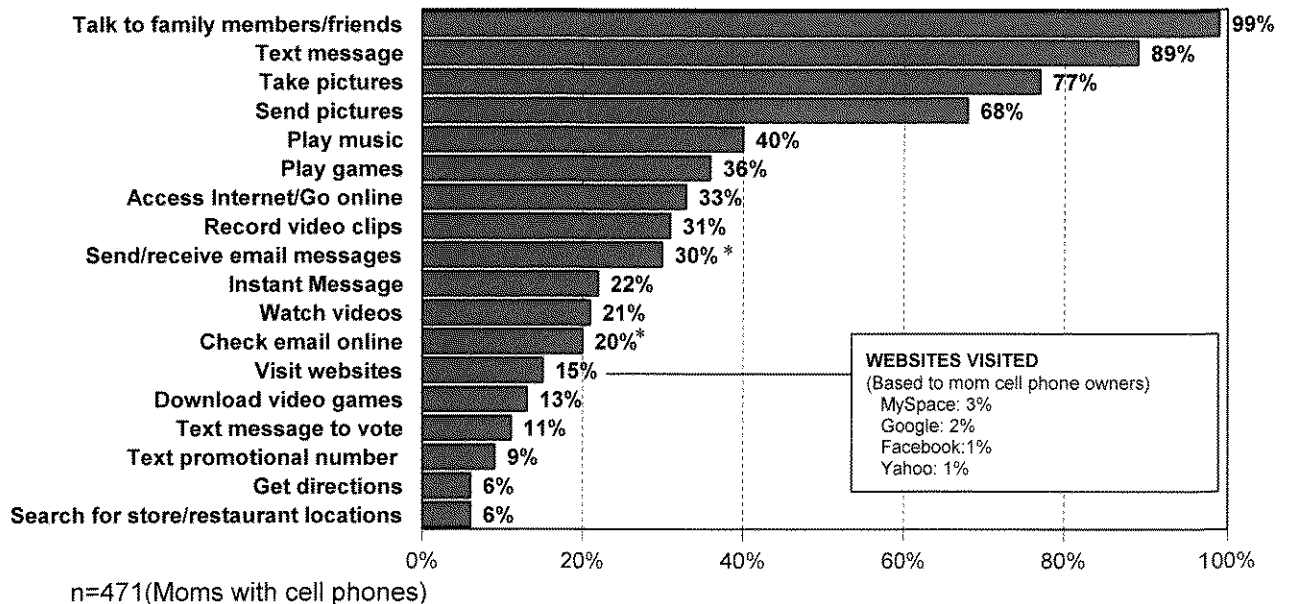
As expected, virtually all (99%) moms of 2 to 11 year olds with cell phones use them to talk to family and friends. A strong majority also text message and take and send pictures on their cell phones (89%, 77% and 68%). Playing music and playing games are also popular cell phone activities (40% and 36%).

One-third (33%) access the Internet via their cell phone and 15% visit websites this way with a total of 3% logging on to MySpace from their cell phone and 2% onto Google. Two in ten (20%) say they access an email account by going online on their cell phone.*

Three in ten record video clips and/or send and receive email messages* (31% and 30% respectively). Approximately two in ten use their cell phones to instant message (22%), and watch videos (21%).

Cell Phone Uses - Moms

Following is a list of things some people use their cell phones for. Please tell me if you use your cell phone for this.



*It appears that some moms who send and receive email messages on their cell phones do not consider it to be "accessing the Internet" when they do so. This may explain the difference between the 30% who say they send/receive email and the 20% who say they go online to access an email account.

Demographic Differences among Moms and All Women:

There are numerous significant differences in the cell phone activities engaged in among women and moms of different ages, locations, ethnicities and language spoken at home. These differences are demonstrated in tables on this page and the following page.

Not surprisingly, the younger the target audience member the more likely she is to participate in the various cell phone activities. In fact, senior moms are significantly less likely than those 18 to 45 (as a whole) to participate in all but one of the activities.

Sierra Vista mothers stand out for using cell phones to text, access the Internet, send and receive email messages, instant message, check email online, and visit websites. Phoenix moms are most likely to play games on their cell phones. Tucson moms are more likely than Phoenix moms to take pictures and more likely than Sierra Vista moms to play music. Flagstaff moms are more likely than Phoenix moms to send photos.

Table 5a: Cell Phone Activities among All Cell Users by Age and City

Cell Phone Activities	Total n=713	Age				Moms by City			
		18-25 n=232	26-35 n=235	36-45 n=110	46+ n=136	Phoenix n=162	Tucson n=163	Flagstaff n=56	Sierra Vista n=90
Talk to family/ friends	99%	99%	99%	99%	99%	98%	98%	100%	99%
Send/receive text messages	83%	94%	91%	<u>86%</u>	<u>49%</u>	<u>88%</u>	<u>86%</u>	88%	97%
Take pictures	76%	87%	<u>78%</u>	<u>72%</u>	<u>55%</u>	<u>70%</u>	82%	82%	78%
Send pictures	65%	78%	<u>69%</u>	<u>63%</u>	<u>38%</u>	<u>61%</u>	71%	75%	71%
Play music	38%	50%	42%	<u>30%</u>	<u>15%</u>	38%	45%	43%	<u>31%</u>
Access the Internet/ Go online	32%	45%	<u>34%</u>	<u>24%</u>	<u>13%</u>	<u>27%</u>	<u>32%</u>	30%	44%
Play games	32%	41%	36%	<u>29%</u>	<u>10%</u>	44%	<u>31%</u>	34%	<u>31%</u>
Record video clips	28%	41%	<u>31%</u>	<u>19%</u>	<u>7%</u>	29%	34%	23%	31%
Send/receive email messages	28%	35%	35%	<u>20%</u>	<u>9%</u>	<u>23%</u>	<u>28%</u>	32%	46%
Instant message	20%	27%	23%	<u>16%</u>	<u>7%</u>	<u>16%</u>	<u>22%</u>	<u>14%</u>	37%
Watch video	19%	26%	21%	<u>16%</u>	<u>4%</u>	20%	23%	20%	20%
Check email online	19%	25%	20%	<u>18%</u>	<u>7%</u>	<u>17%</u>	<u>17%</u>	23%	30%
Visit websites	16%	26%	<u>17%</u>	<u>6%</u>	<u>6%</u>	<u>11%</u>	<u>12%</u>	<u>14%</u>	29%
Download video games	12%	16%	13%	10%	<u>4%</u>	12%	14%	16%	9%
Text message to vote	10%	8%	11%	16%	<u>5%</u>	9%	11%	11%	14%
Text promotional number to get information, videos, coupons, free stuff	8%	10%	9%	6%	5%	11%	9%	11%	7%

BOLD indicates statistically higher percentage than the underlined comparative group.

Text messaging, playing music and games, recording video clips, and watching videos are more prevalent activities among women who speak only Spanish at home or both English and Spanish. English only speaking women are more likely than those who only speak Spanish at home to visit websites.

The Hispanic target market is significantly more likely than the Caucasian target market to use their cell phones to text message, play music, play games, record video clips, watch videos and text promotional numbers. Native Americans are significantly more likely than Caucasians to download video games or to text promotional numbers.

Caucasians are significantly less likely than all other ethnicities to play music on their cell phones. Caucasians are also the least likely to access the Internet or to send or receive email messages from their cell phones.

**Table 5b: Cell Phone Activities among Cell Users
By Language at Home and Ethnicity of Women**

Cell Phone Activities	Total n=713	Language at Home			Ethnicity			
		English n=450	Spanish n=111	Both n=145	Hispanic n=339	Caucasian n=234	Native American n=56	Other n=84
Talk to family/ friends	99%	99%	99%	99%	99%	100%	100%	98%
Send/receive text messages	83%	<u>81%</u>	87%	88%	90%	<u>76%</u>	86%	<u>76%</u>
Take pictures	76%	74%	78%	78%	79%	74%	73%	<u>68%</u>
Send pictures	65%	64%	67%	67%	69%	61%	66%	61%
Play music	38%	<u>32%</u>	44%	48%	47%	<u>23%</u>	43%	38%
Access Internet	32%	32%	28%	34%	33%	<u>27%</u>	34%	39%
Play games	32%	<u>30%</u>	29%	39%	34%	<u>26%</u>	39%	35%
Record video clips	28%	<u>24%</u>	33%	37%	34%	<u>21%</u>	<u>21%</u>	27%
Send/receive email messages	28%	27%	23%	30%	<u>27%</u>	<u>22%</u>	32%	39%
Instant message	20%	20%	18%	22%	19%	18%	25%	26%
Watch video	19%	<u>16%</u>	27%	21%	22%	<u>9%</u>	16%	30%
Check email online	19%	18%	16%	23%	18%	18%	21%	21%
Visit websites	16%	17%	<u>10%</u>	17%	15%	<u>14%</u>	16%	25%
Download video games	12%	10%	<u>12%</u>	17%	12%	<u>8%</u>	23%	14%
Text message to vote	10%	10%	7%	8%	9%	9%	14%	11%
Text promotional number for info., videos, coupons, free stuff	8%	7%	8%	12%	9%	<u>4%</u>	14%	10%

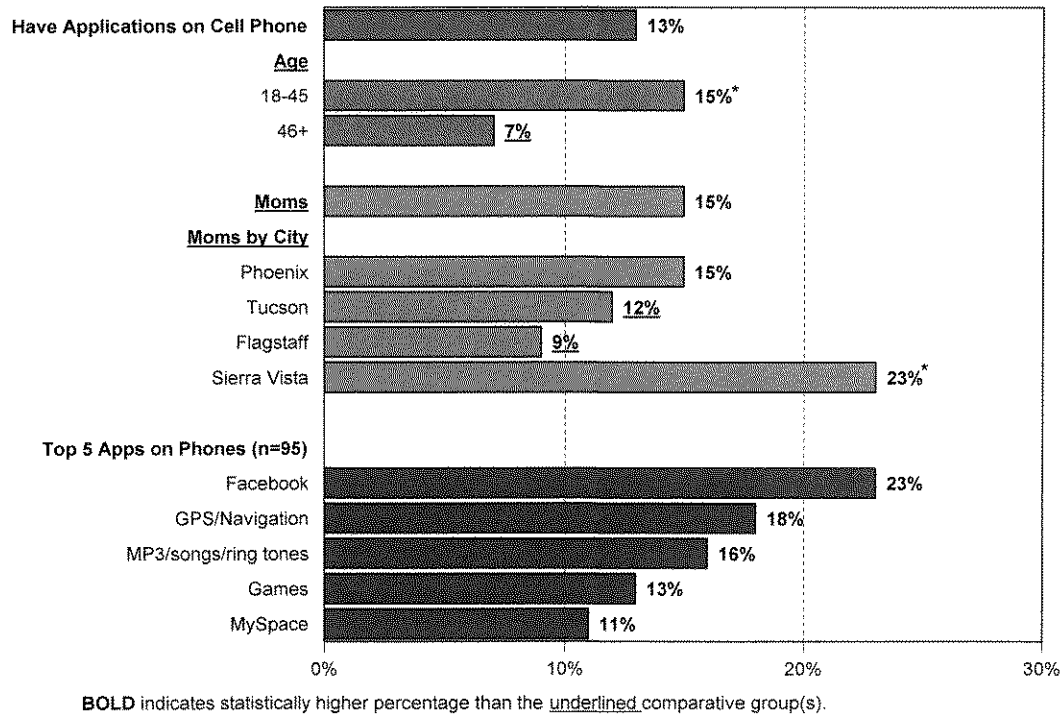
BOLD indicates statistically higher percentage than the underlined comparative group.

3. Cell Phone Applications – Moms and All Women

More than one in ten (13%) cell phone owners in the target market (and 15% of mothers) have applications on their cell phones. The five most popular apps are Facebook (23%), GPS/Navigation (18%), MP3s/songs or ringtones (16%), Games (13%), and MySpace (11%).

Younger women are significantly more likely than older ones to have apps on their phone – 15% compared to 7%. Sierra Vista moms are significantly more likely than those in the other three cities to have cell phone applications.

Cell Phone Applications



4. Cell Phone Advertising among Moms

Mothers of young children with cell phones were asked if they recalled seeing or hearing advertising, such as texts, voice messages, or banner ads, on their cell phones. Nearly two in ten (19%) moms recall seeing or hearing such advertising and 4% report they have clicked on an advertisement to get more information.

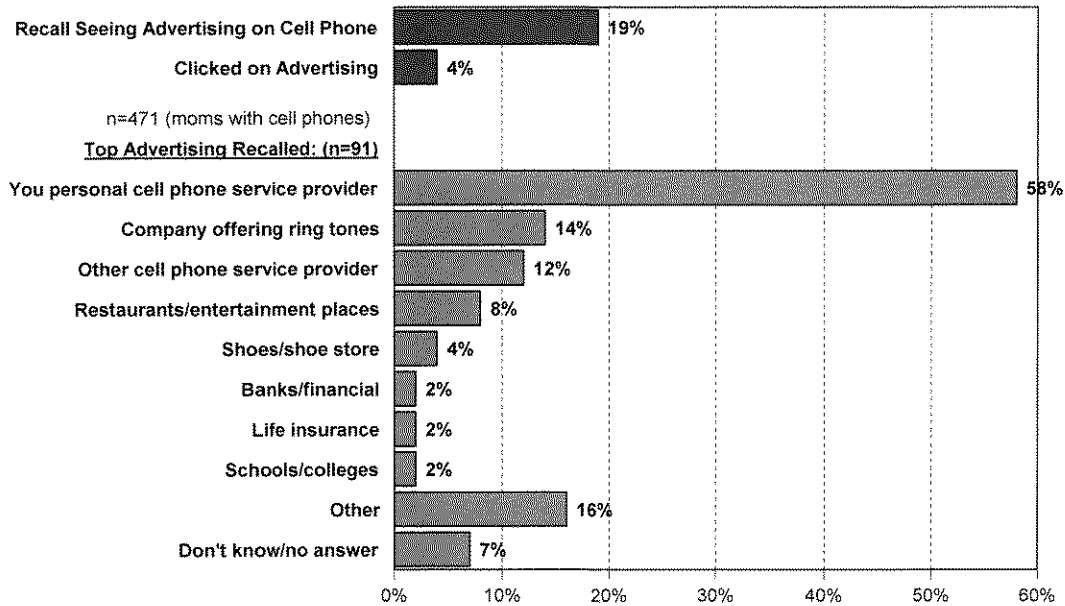
Nearly six in ten (58%) of those who have noticed this type of advertising on their cell phone, say the advertiser was their cell phone service provider. Advertising for a company offering ring tones (14%) and some other cell phone provider (12%) come in a distant second and third.

Cell Phone Advertising Awareness and Ad Click-Throughs among Moms

Do you recall seeing or hearing any advertising on your cell phone? That is, have you ever received a text message, a voice message or banner ad from a particular company on your cell phone?

For what companies do you recall seeing or hearing advertising?

Have you ever clicked on one of these ads to get more information?



5. Likelihood of Moms to Notice Cell Advertising Compared to Other Methods

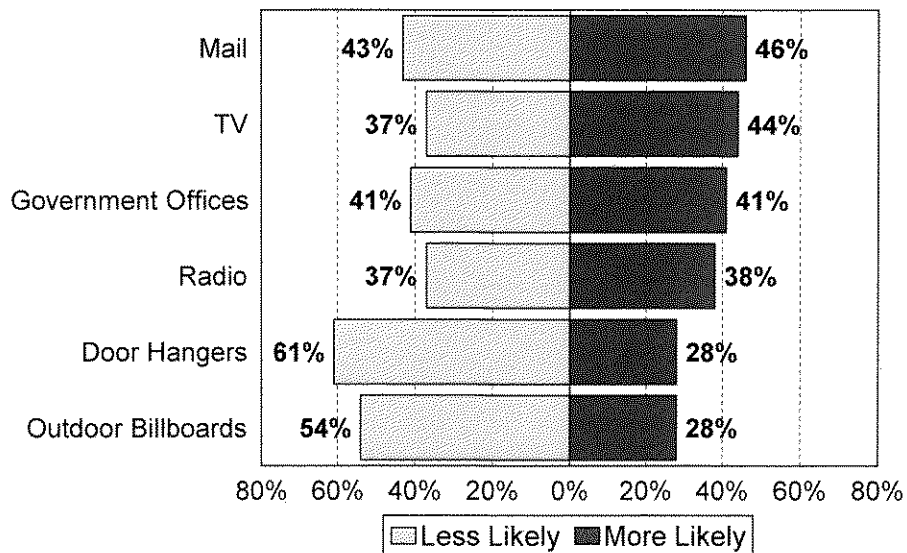
The only advertising method where the percentage of moms saying they are “more likely to notice” cell phone ads outweighs the percentage saying they are “less likely to notice” cell phone ads is television (44% more/37% less). When comparing cell phone ads to advertising in direct mail, government offices and radio, women are split in their opinions with similar portions saying more and less likely.

For door hangers and billboards, a higher proportion say they would be “less likely” to notice cell phone advertising compared to these mediums than say they would be “more likely” to notice cell phone ads. The disparity is greatest for door hangers (28% more likely to notice cell ads and 61% less likely) followed closely by outdoor billboards (28% more likely to notice cell advertising and 54% less likely).

More or Less Likely to Notice Cell Phone Ads than Ads on/in...

Among Moms Aware of Cell Phone Advertising

Thinking about the ads you see or hear on your cell phone, would you say you are more likely, less likely, or about the same, to notice these ads compared to ads you see or hear on/in: ...?



n=90 - moms who recall cell phone advertising

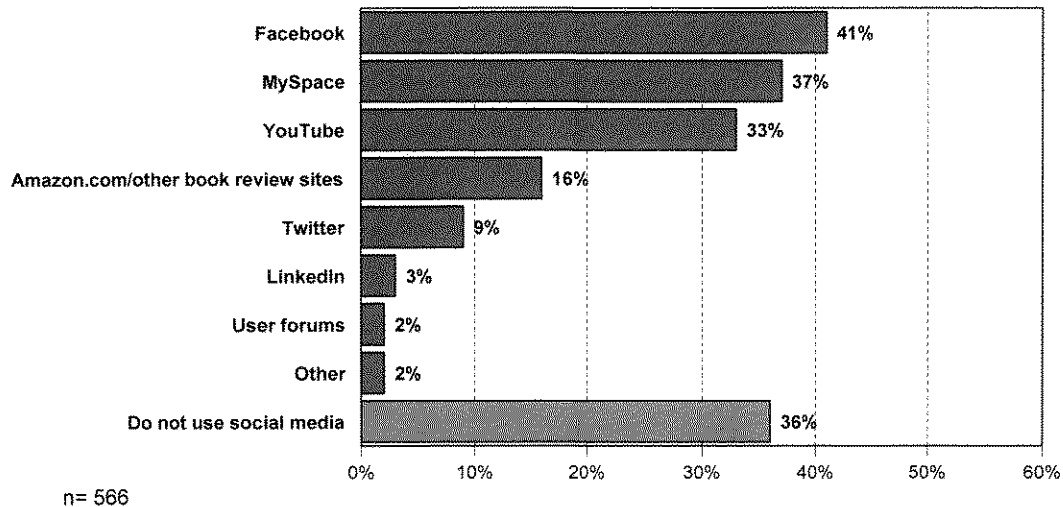
D. Social Media Use

Overall, nearly two-thirds of mothers of 2 to 11 year olds (64%) and six in ten (59%) of all women in the target audience use some kind of social media. Among moms, the most popular social networking sites are Facebook (41%), MySpace (37%) and YouTube (33%). Sixteen percent (16%) use Amazon or some other book review website and about one in ten (9%) participate in Twitter. A few mention using the professional networking site LinkedIn (3%), user forums (2%), or some other social media (2%).

Women interviewed at Rural WIC offices are significantly more likely than those interviewed at Metro WIC offices to be Facebook members (52% vs. 40%). There are several other demographic differences, which are shown and discussed on the following two pages.

Social Media Use - Moms

The following is a list of social media sites. Please tell me which of these you use.



Demographic Differences among Moms and All Women:

Not surprisingly, younger women are significantly more likely than those 46 and older to use social media. This is true across the board for the five most popular social media sites.

Overall, Phoenix area moms are less likely to use social media than those in the other three cities (45% do not use vs. 24% in Sierra Vista and 34% in Tucson). Sierra Vista mothers are significantly more likely than those in Phoenix, Tucson and Flagstaff to be Facebook members.

LinkedIn is the only social media site that is significantly more popular in Phoenix than elsewhere.

Table 6a: Social Media Use by Age and City

Social Media Sites	Total n=885	Age		Moms by City			
		18-45 n=685	46+ n=200	Phoenix n=214	Tucson n=187	Flagstaff n=61	Sierra Vista n=104
Facebook	37%	44%	<u>12%</u>	<u>31%</u>	<u>41%</u>	<u>41%</u>	63%
MySpace	35%	43%	<u>8%</u>	<u>33%</u>	42%	30%	40%
YouTube	32%	39%	<u>8%</u>	30%	39%	34%	29%
Amazon.com/other book review sites	16%	18%	<u>10%</u>	15%	17%	18%	15%
Twitter	9%	11%	<u>3%</u>	11%	9%	8%	9%
LinkedIn	3%	3%	2%	6%	<u>2%</u>	--	<u>1%</u>
User forums	3%	3%	2%	2%	2%	--	4%
Other	3%	3%	3%	5%	2%	--	--
None/Do not use Social Media	41%	<u>30%</u>	77%	45%	<u>34%</u>	33%	<u>24%</u>

BOLD indicates statistically higher percentage than the underlined comparative group.

Those who participate in food assistance programs are significantly more likely than those who do not participate to use Facebook and MySpace. This disparity leads to the overall finding that those who do not receive food assistance are less likely to participate in social media websites (50% none/do not use vs. 38% of those who do receive food assistance).

Overall, women who speak Spanish at home are less likely to participate in social media. This can primarily be attributed to their lack of involvement in Facebook, as those who speak English or both English and Spanish at home are significantly more likely to be Facebook members than are those who only speak Spanish at home (38% vs. 26%). Also, women who only speak English at home are significantly more likely than those who speak Spanish or both Spanish and English at home to use Amazon.com or other book review sites.

Additionally, Caucasians (42%) are significantly more likely than Hispanics (32%) and Native Americans (25%) to use Facebook as are other minorities (44%). In contrast, MySpace is more popular among Hispanics and Native Americans than Caucasians (40% and 47% vs. 27%). Caucasians are significantly more likely than Hispanics to use Amazon.com or similar sites (21% vs. 11%).

Table 6b: Social Media Use by Food Assistance Programs and Language at Home Among All Women

Activities	Total n=885	Food Assistance		Language Spoken at Home		
		Yes n=669	No n=216	English n=547	Spanish n=145	Both n=183
Facebook	37%	39%	<u>30%</u>	38%	<u>26%</u>	38%
MySpace	35%	40%	<u>21%</u>	34%	38%	39%
YouTube	32%	32%	29%	30%	32%	33%
Amazon.com/other book review sites	16%	16%	16%	19%	<u>7%</u>	<u>12%</u>
Twitter	9%	9%	11%	8%	12%	12%
LinkedIn	3%	3%	3%	3%	2%	3%
User forums	3%	2%	4%	3%	1%	3%
Other	3%	3%	3%	3%	3%	2%
None/Do not use Social Media	41%	<u>38%</u>	50%	<u>39%</u>	50%	<u>41%</u>

BOLD indicates statistically higher percentage than the underlined comparative group.

E. Eat Well Be Well Website

1. Visited www.eatwellbewell.org

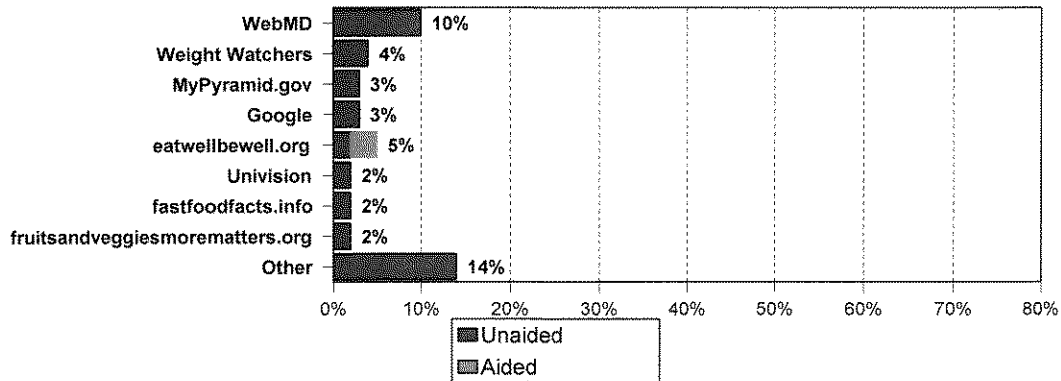
Overall, 5% of moms/women in the target market have visited www.eatwellbewell.org (2% unaided + 3% aided). Hispanics are significantly more likely than all other ethnicities to have visited the site (7% vs. 4% Caucasians, 2% Native American and 2% other minorities). Women age 45 and younger are significantly more likely than those 46 and older to have visited the website.

Other nutrition related sites visited (unaided) include WebMD (10%), Weight Watchers (4%), and MyPyramid.gov (3%). Of interest, 2% volunteered visiting www.fruitsandveggiesmorematters.org.

More than eight in ten target market women (82%) who have visited www.eatwellbewell.org rate the site highly – 53% gave it an excellent/“5” rating and 18% rated it a “4” (for a total of 37 of the 45 women who visited the site).

Eat Well Be Well Website

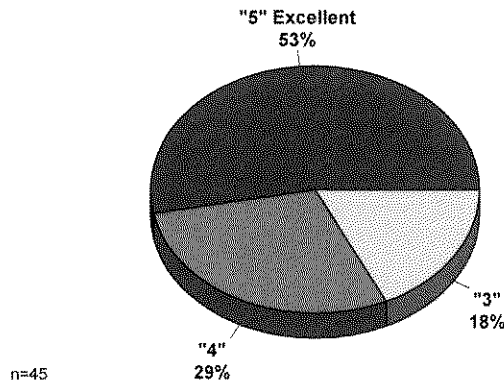
Which nutrition-related websites have you visited? Have you ever been to the Eat Well Be Well website?



n=885

Overall Rating of eatwellbewell.org

Among those who have Visited the Site
Scale: 1 to 5, where 1 means "Poor" and 5 means "Excellent"



n=45

2. *Like Best about www.eatwellbewell.org*

Women most appreciate the website because it helps them learn about healthy food (36%) and be informed (24%). Thirteen percent (13%) like the recipes best and 11% find it easy to access.

**Table 7: Things like Best about Eat Well Be Well Site
Among Women who have visited the Site**

Favorite Things	Total by Percentage n=45	Total by Frequency n=45
Learning about healthy food	36%	16
Informative	24%	11
Recipes	13%	6
Easy to access	11%	5
Clear/straight forward	7%	3
The explanations	4%	2
The stories I can share with my kids	2%	1
Helps with daughters	2%	1
Don't know/no answer	7%	3

3. *Dislike about www.eatwellbewell.org*

Most women (80%) who have visited the website cannot think of anything they dislike about it (18% don't know + 62% nothing/like everything). A few feel it could give more information about eating healthy (9%). Two percent (2% or one person each) complained that: something was not in Spanish, that it is boring, it does not consider people with food allergies, and that it needs more pictures.

**Table 8: Dislike about Eat Well Be Well Site
Among those who have visited the Site**

Things Dislike	Total by Percentage n=45	Total by Frequency n=45
Give more information about eating healthy	9%	4
Not in Spanish	2%	1
Boring	2%	1
Does not consider people with food allergies	2%	1
Needs pictures	2%	1
Don't know/no answer	18%	8
Nothing/I like everything	62%	28

V. Kids

A total of 255 children ages 5 to 17 participated in the study.

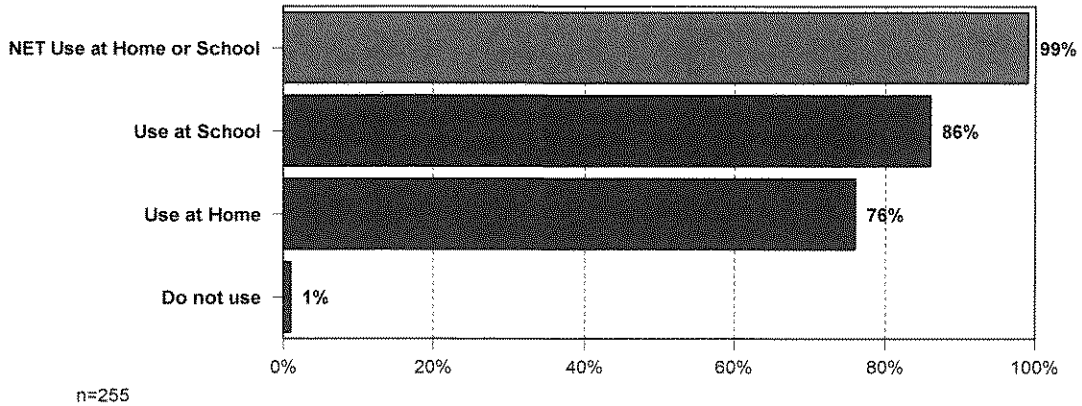
A. Computer Use at Home and School

1. Computer Access

Nearly all 5 to 17 year olds kids interviewed (99%) have access to a computer either at school (86%) or at home (76%). Among those who use a computer (all but two children), 59% have a printer at home.

Computer Use at Home and School

Do you use a computer at home or at school?



2. Computer Activities

Kids are most likely to use computers to play games (75%), look up stuff on the Internet (61%), and to do homework (58%). A substantial percentage (45%) report they listen to music on the computer.

Not surprisingly there are some significant differences in the activities based on the age of the child. While those ages 5 to 10 are significantly more likely to report playing games, those 11 and older are significantly more likely to look up stuff online, do homework and listen to music.

**Table 9: Computer Activities
Among those with Computer Access**

Activities	Total n=253	Age	
		5-10 years n=155	11+ years n=98
Play games	75%	83%	<u>62%</u>
Look up stuff on the Internet	61%	<u>54%</u>	72%
Homework	58%	<u>47%</u>	76%
Listen to music	45%	<u>36%</u>	59%
Email family/friends/chat with friends	4%	5%	4%
Practice typing/typing	3%	4%	1%
Projects/science projects	2%	3%	--
Research	2%	1%	2%
YouTube	1%	1%	1%
Watch videos/movies	1%	1%	1%
Take tests	1%	1%	--
Reading	1%	1%	--
Shopping	1%	1%	1%
Other	6%	7%	6%
Don't know/no answer	1%	1%	1%

BOLD indicates statistically higher percentage than the underlined comparative group.

B. Internet Use

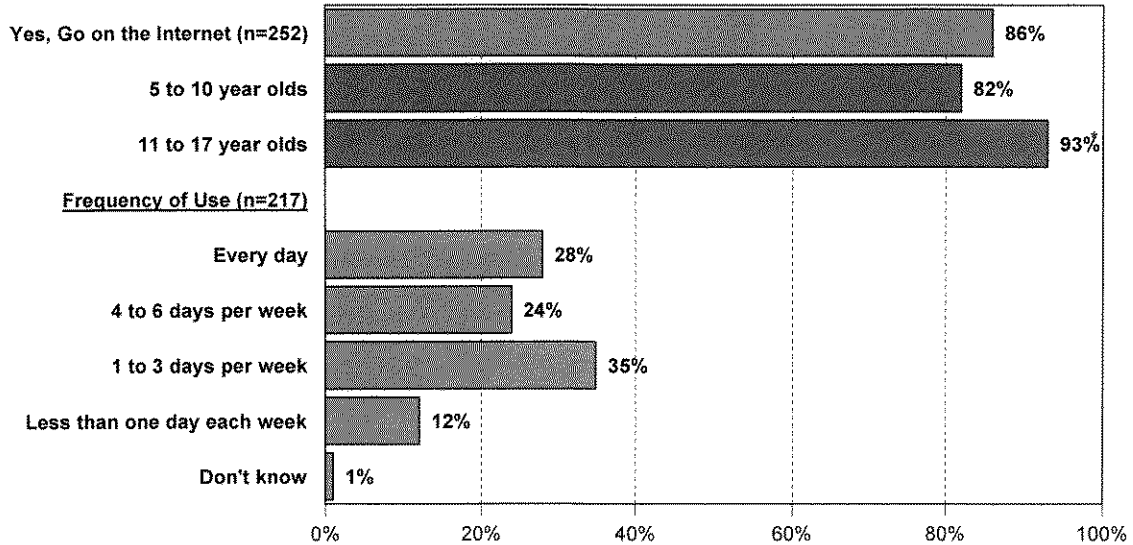
1. Internet Access and Frequency of Use

A strong majority of kids 5 and older (86%) go on the Internet. Those ages 11 to 17 are significantly more likely to do so than those aged 5 to 10. Children interviewed at non-partner sites are significantly more likely to report going on the Internet than those interviewed at partner sites (91% vs. 80%).

The vast majority of kids who use the Internet do so at least weekly (87%), with just over half using it most days of the week (28% every day and 24% using it 4-6 days per week). Older children (11+) are significantly more likely than younger kids to report using it daily (43% vs. 17%).

Internet Access and Frequency of Use

Do you go on the Internet? If Yes: How often do you use the Internet?



*Indicates a significantly higher percentage than the comparative group.

Demographic Differences:

Kids who speak both Spanish and English at home are more likely than those who speak only English at home to report going online less than once a week (22% vs. 6% compared to 33% of those who only speak Spanish).

**Table 10: Frequency of Using the Internet by Language at Home
Among those with Internet Access**

Frequency	Total n=217	Language Spoken at Home		
		English n=132	Spanish n=9	Both n=73
Every day	28%	32%	22%	22%
4 to 6 days per week	24%	29%	--	18%
1 to 3 days per week	35%	33%	33%	37%
Less than one day each week	12%	<u>6%</u>	33%	22%

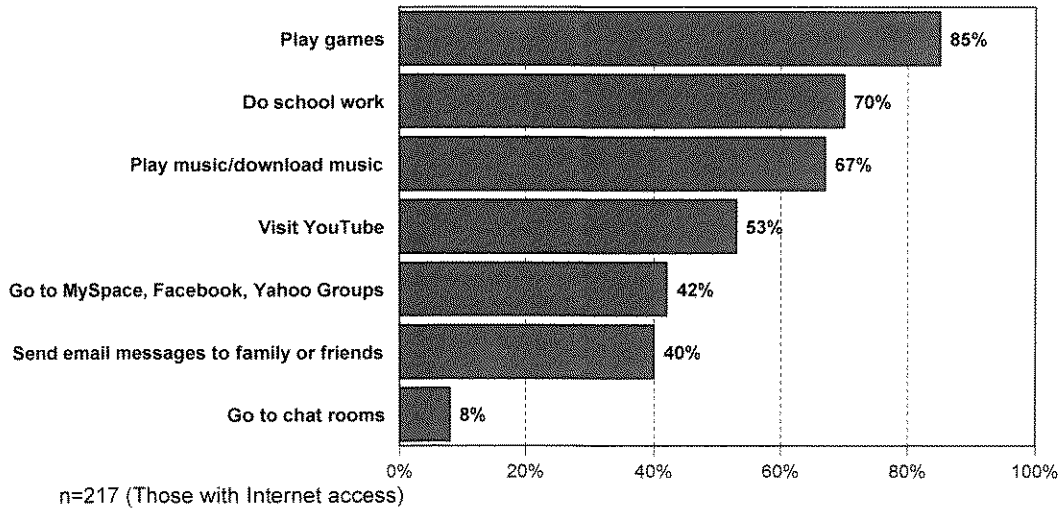
BOLD indicates statistically higher percentage than the underlined comparative group.

2. *Internet Destinations*

A majority of kids interviewed say that when they are on the Internet they play games (85%), do school work (70%), and play or download music (67%). Just over half say they visit YouTube (53%). Four in ten use social networking sites such as MySpace, Facebook and Yahoo Groups (42%) and/or send email messages to family or friends (40%). Relatively few (8%) go to chat rooms when online.

Internet Destinations

When you go on the Internet, do you...?



Demographic Differences:

As demonstrated below, playing games online is more popular among younger children, whereas those ages 11 and older are significantly more likely to do school work, visit YouTube, participate in social networking sites, and send emails to family and friends.

Minority children are significantly more likely to report using the Internet to do homework than are Caucasians. Hispanics are more likely than Caucasians to visit YouTube and non-Hispanic minority kids are significantly more likely than Caucasian kids to use social networking websites.

**Table 11a: Internet Destinations by Age and Ethnicity
Among those with Internet Access**

Activities	Total n=217	Age		Ethnicity		
		5-10 yrs. n=126	11+ yrs. n=91	Hispanic n=111	Caucasian n=60	Other n=44
Play games	85%	97%	<u>68%</u>	87%	88%	75%
Do school work	70%	<u>64%</u>	78%	74%	<u>57%</u>	77%
Play music/download music	67%	62%	74%	66%	65%	71%
Visit YouTube	53%	<u>44%</u>	64%	59%	<u>39%</u>	57%
Go to MySpace, Facebook, Yahoo Groups	42%	<u>21%</u>	70%	41%	<u>33%</u>	57%
Send email messages to family/friends	40%	<u>25%</u>	62%	36%	42%	50%
Go to chat rooms	8%	8%	8%	6%	5%	16%

BOLD indicates statistically higher percentage than the underlined comparative group.

Similarly, children who speak both Spanish and English at home are more likely than those who speak only English to visit YouTube (63% vs. 47%). On the other hand, emailing friends and family is more popular among kids who only speak English at home (46% vs. 33% who speak only Spanish and 32% who speak both English and Spanish at home).

Children interviewed at non-partner sites are significantly more likely than those at partner locations to say they do school work online (77% vs. 59%), go to MySpace, Yahoo Groups, Facebook, etc. (50% vs. 28%) and send email messages (46% vs. 31%).

**Table 11b: Internet Destinations by Partner Status and Language at Home
Among those with Internet Access**

Activities	Total n=217	Partner Status		Language Spoken at Home		
		Partner n=82	Non- Partner n=135	English n=132	Spanish n=9	Both n=73
Play games	85%	89%	82%	83%	89%	86%
Do school work	70%	<u>59%</u>	77%	67%	44%	77%
Play music/download music	67%	71%	64%	67%	67%	65%
Visit YouTube	53%	52%	53%	<u>47%</u>	56%	63%
Go to MySpace, Facebook, Yahoo Groups	42%	<u>28%</u>	50%	46%	33%	36%
Send email messages to family/friends	40%	<u>31%</u>	46%	46%	33%	<u>32%</u>
Go to chat rooms	8%	10%	7%	9%	22%	4%

BOLD indicates statistically higher percentage than the underlined comparative group.

3. Websites Most Often Visited

The three most popular websites are YouTube (36%), Disney Channel (26%) and MySpace (23%). Google, PBS Kids, WebKinz and Yahoo Groups complete the top seven and are the only other sites regularly visited by more than 8% of kids. Of note: 2% of kids say www.eatwellbewell.org is among the sites they visit most often.

Table 12: Websites Visited Most Often (Among those with Internet Access)

Activities	Total n=217	Age		Partner Status	
		5-10 years n=126	11+ years n=91	Partner n=82	Non-Partner n=135
YouTube	36%	<u>27%</u>	47%	35%	36%
Disney Channel	26%	37%	<u>12%</u>	<u>18%</u>	31%
MySpace	23%	<u>5%</u>	47%	<u>13%</u>	28%
Google.com	18%	<u>8%</u>	33%	21%	17%
PBS Kids	17%	23%	<u>8%</u>	12%	19%
WebKinz	15%	14%	15%	10%	18%
Yahoo Groups	12%	<u>7%</u>	18%	<u>7%</u>	18%
Nickelodeon/Nick Jr.	8%	12%	<u>2%</u>	11%	6%
Facebook	6%	<u>2%</u>	12%	6%	6%
Club Penguin	6%	7%	3%	5%	6%
Fun Brain/Poptropica	5%	6%	4%	10%	<u>2%</u>
Andkon.com	4%	4%	3%	1%	5%
Y8.com	4%	5%	2%	5%	3%
Pog.com	3%	4%	2%	5%	2%
Koolmathgames.com	3%	3%	2%	4%	2%
Barbie.com	2%	3%	1%	2%	2%
Puff games/puff kids	2%	2%	2%	4%	2%
Cartoon Network	2%	2%	2%	4%	2%
Miniclip.com	2%	3%	1%	2%	2%
Icarly.com	2%	4%	--	5%	1%
Eat Well Be Well	2%	3%	--	1%	2%
Moshi Monsters	2%	3%	--	1%	2%
Ticket to read	2%	2%	1%	2%	2%
Addicting games	2%	2%	1%	4%	1%
Other (less than 2% consensus)	40%	37%	44%	39%	41%

BOLD indicates statistically higher percentage than the underlined comparative group.

Demographic Differences:

As expected and demonstrated on the table on the prior page, the popularity of some websites is largely dependent on the age of the child. Older children are significantly more likely than those ages 5 to 10 to report frequently visiting YouTube, MySpace, Google, Yahoo Groups and Facebook. Not surprisingly, younger children are more likely to regularly visit Disney Channel, PBS Kids, and Nickelodeon/Nick Jr.

Kids interviewed at non-partner sites are significantly more likely to visit the Disney Channel website, MySpace, and Yahoo Groups. In contrast, those interviewed at a partner location are significantly more likely to visit Fun Brain/Poptropica.

As previously noted, Hispanic kids are significantly more likely than Caucasian kids to visit YouTube (43% vs. 25%). Club Penguin is also more popular among Hispanic children (8% vs. 2% Caucasian). In addition, Caucasians and non-Hispanic minority children are significantly more likely than kids of Hispanic descent to visit the WebKinz page (22% and 23% vs. 8%).

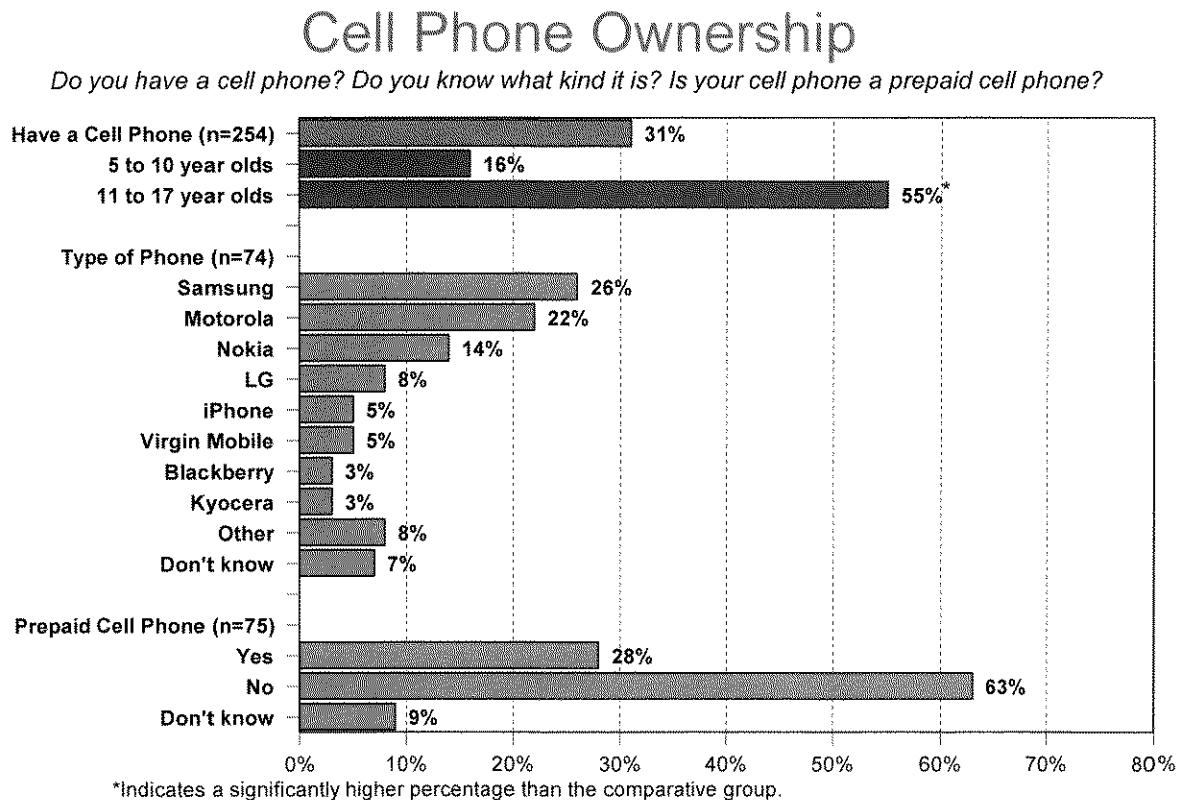
C. Cell Phones

1. Cell Phone Ownership and Type of Phone

Nearly one-third of kids (31%) interviewed have cell phones. As expected, cell phone ownership is significantly higher among older children. No children who only speak Spanish at home have cell phones (100% no phone vs. 67% English only and 71% both Spanish and English).

Among those with phones, the most popular brands are Samsung (26%) and Motorola (22%). Nokia is a distant third (14%). Nearly three in ten (28%) cell phone owners report they have a prepaid cell phone. Children interviewed at non-partner locations are significantly more likely to report owning a prepaid cell phone (37% vs. 14% of those at a partner site).

As expected, younger children are significantly less likely to know what kind of phone they have (23% of 5-10 year-olds don't know vs. 0% for kids 11 and older) or if it is a prepaid cell phone (22% don't know vs. 4% of those at a partner site).



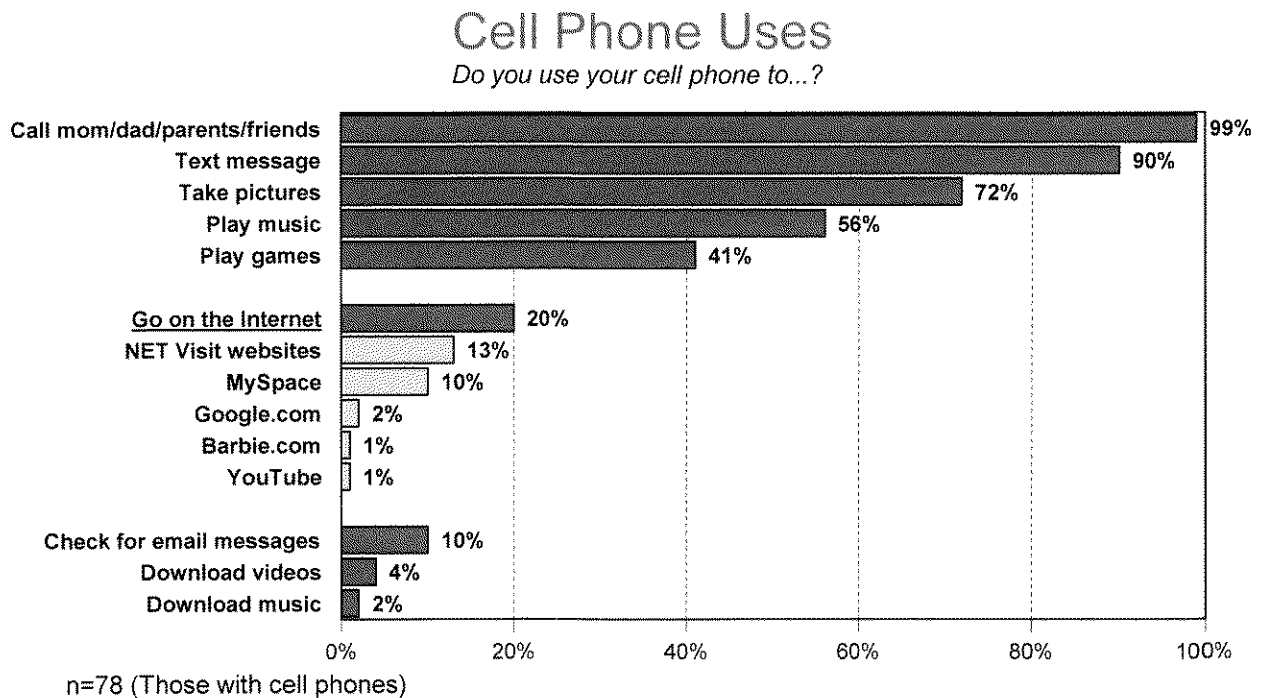
2. Cell Phone Activities

Virtually all kids (99%) with cell phones report using their cell phones to make calls to parents or friends. Nine in ten kids (90%) use text messaging. Nearly three in four (72%) take pictures with their phones and just over half (56%) play music on their cell phones. Approximately four out of ten (41%) play games on their cell phones.

Two in ten kids (20%) use their phone to access the Internet with 13% visiting websites. Overall, eight kids visit MySpace, two use Google, one visits Barbie.com and one visits YouTube.

In addition, eight kids with cell phones use it to check their email. Three download videos from the Internet and two download music.

Of the 15 kids who go to the Internet on their cell phone, only one has applications on his/her cell phone.



Demographic Differences:

Nearly all kids (98%) 11 and older text message, which is a significantly higher proportion than for kids ages 5 to 10 (70%). Kids 11 and older are significantly more likely to access the Internet via their cell phone (26% vs. 4% 5 to 10 years old) and visit websites in this manner (17% vs. 4%, respectively).

Younger children (5 to 10 years old) are significantly more likely to play games (65% vs. 31% of those 11+).

Because only one younger child uses his/her cell phone to go on to the Internet, virtually all website visiting can be attributed to children 11 and older. (The one younger child who accesses the web visits MySpace and Barbie.com.). Similarly, all of the kids engaged in checking email and downloading videos or music are 11 and older.

**Table 13: Cell Phone Use by Age and Ethnicity
Among Cell Phone Owners**

Activities	Total n=78	Age		Ethnicity		
		5-10 yrs. n=25	11+ yrs. n=53	Hispanic n=39	Caucasian n=18	Other n=20
Call parents/friends	99%	96%	100%	100%	94%	100%
Text message	90%	<u>70%</u>	98%	87%	89%	95%
Take pictures	72%	74%	72%	76%	61%	75%
Play music	56%	52%	58%	<u>43%</u>	56%	79%
Play games	41%	65%	<u>31%</u>	<u>27%</u>	50%	58%
Go on the Internet	20%	<u>4%</u>	26%	22%	17%	20%
Go to websites	13%	<u>4%</u>	17%	15%	17%	5%
Check email	10%	<u>0%</u>	15%	13%	6%	10%
Download videos	4%	<u>0%</u>	6%	3%	<u>0%</u>	10%
Download music	2%	0%	4%	3%	0%	5%
Websites Visited	(n=10)*	(n=1)*	(n=14)*	(n=8)*	(n=3)*	(n=4)*
MySpace	8	1	7	5	2	1
Google.com	2	0	2	0	2	0
Barbie.com	1	1	0	0	1	0
YouTube	1	0	1	1	0	0

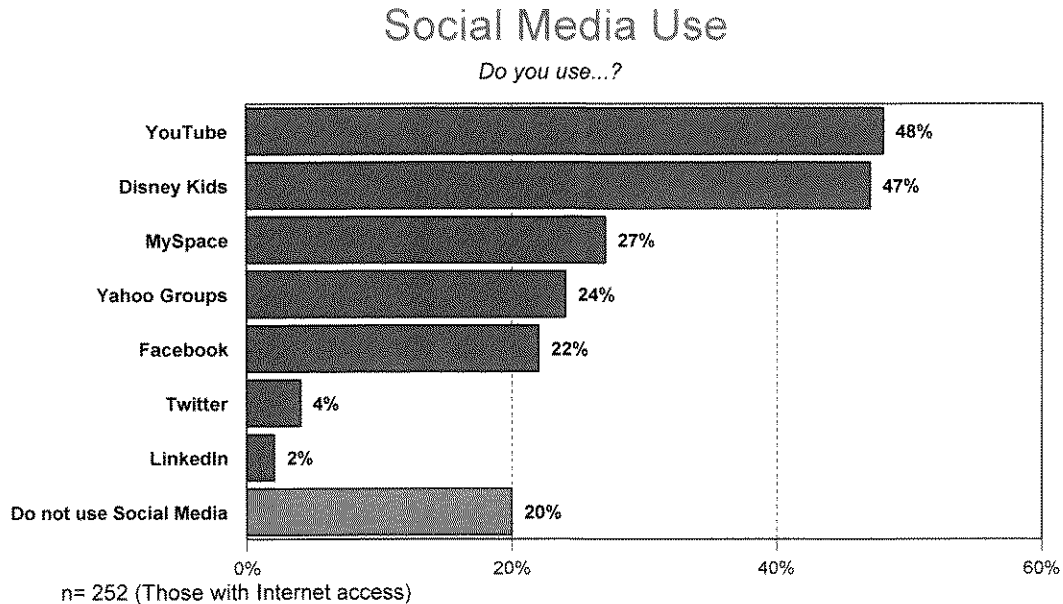
BOLD indicates statistically higher percentage than the underlined comparative group

*Frequencies shown due to extremely small sample sizes.

D. Social Media Use

Most kids that use the Internet access social media websites. Two in ten (20%) say they do not participate in social media. One in four children (25%) ages 5 to 10 do not visit social media sites compared to 12% of older children.

YouTube and Disney Kids are the most popular social media sites with nearly one half of kids using them (48% and 47%). MySpace, Yahoo Groups and Facebook round out the top five (27%, 24% and 22%, respectively).



Demographic Differences:

As might be expected, older children are significantly more likely than those aged 5 to 10 to use YouTube, MySpace, Yahoo Groups and Facebook. Younger kids are more likely to use Disney Kids.

Hispanic children are significantly more likely than Caucasian kids to visit YouTube (56% vs. 35%) and Facebook is significantly more popular among non-Hispanic minority children (42% vs. 16% Hispanic and 19% Caucasian).

Whereas kids who speak both Spanish and English at home are more likely to visit YouTube and Disney Kids, those who speak only English are significantly more likely to use MySpace, Yahoo Groups and Facebook.

**Table 14: Social Media Use
Among those with Internet Access**

Social Media Sites	Total n=252	Age		Language at Home		
		5-10 yrs. n=154	11+ yrs. n=98	English n=155	Spanish n=11	Both n=82
YouTube	48%	<u>41%</u>	58%	<u>43%</u>	36%	60%
Disney Kids	47%	56%	<u>34%</u>	<u>42%</u>	<u>27%</u>	62%
MySpace	27%	<u>9%</u>	54%	29%	<u>9%</u>	26%
Yahoo Groups	24%	<u>16%</u>	37%	29%	27%	<u>16%</u>
Facebook	22%	<u>13%</u>	35%	26%	27%	<u>15%</u>
Twitter	4%	2%	7%	3%	--	8%
LinkedIn	2%	4%	--	1%	--	5%
Google	2%	1%	4%	2%	--	3%
Nickelodeon	2%	3%	--	--	--	5%
Puff Games	1%	2%	--	--	--	3%
Other	6%	7%	4%	4%	33%	5%
None/Do not use Social Media	20%	25%	<u>12%</u>	22%	18%	15%

BOLD indicates statistically higher percentage than the underlined comparative group.

E. Eat Well Be Well Website

1. Use and Opinion of www.eatwellbewell.org

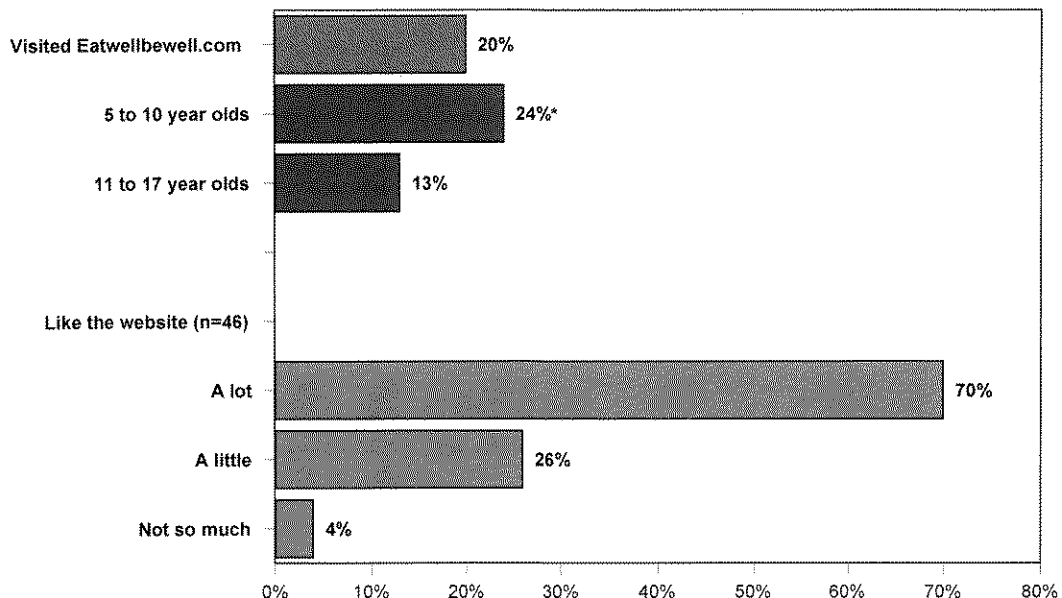
Two in ten (20%) kids that use the Internet have visited the Eat Well Be Well website. Those most likely to have visited it include:

- Younger children (24% vs. 13% of those 11 or older)
- Hispanic children (28% vs. 12% of Caucasians and other minorities)
- Kids who speak Spanish or both Spanish and English at home (46% and 36% vs. 13% who speak English only)

A majority of kids (70%) who visited the site say they like it “a lot,” and an additional 26% report liking it “a little.” Only two indicate they dislike the site (4% - “not so much”).

Kids who are bilingual at home are most likely to say they like it a lot (88% vs. 40% who only speak Spanish and 50% who only speak English). Those who only speak Spanish or only speak English are more likely to say they like it a little (60% and 50% vs. 4% who speak both). Children interviewed at non-partner locations are significantly more likely to say they like it “a little” (37% vs. 11% of partner sites).

Eat Well Be Well Website



n=253 (those who go on the Internet)

*Indicates a significantly higher percentage than the comparative group.

2. *Favorite Thing about www.eatwellbewell.org*

Visitors to the Eat Well Be Well site most often say their favorite thing about it is the games and activities (61%). Learning about healthy food (29%) and the video showing how to eat in a healthy manner (22%) complete kids' top three favorite things about the website. The "other" favorite things receiving one mention each include responses such as: salad recipes, the ship blasting off, information on the food pyramid, some fruit has too much sugar, and oil is not good for you, among other things.

**Table 15: Favorite Thing about Eat Well Be Well Site
Among those who have visited the Site**

Favorite Things	Total by percentage n=49	Total by Frequency n=49
You can play games/do the fun activities	61%	30
Learning about healthy food	29%	14
The video showing you how to eat healthy	22%	11
You get smarter/you learn new things	6%	3
It has fruits and vegetables/you can eat vegetables	6%	3
I like the puzzles	4%	2
Other (1 response per mention)	29%	14
Don't know/no answer	4%	2

3. *Dislike about www.eatwellbewell.org*

Most of the children who have visited the website could not think of anything they disliked about it (30 nothing/liked everything + 4 don't know). Two kids said they do not like the games. Nothing else was mentioned by more than one child.

**Table 16: Dislike about Eat Well Be Well Site
Among those who have visited the Site**

Things Dislike	Total by Frequency n=43*
The games	2
It takes awhile to down load	1
Computer doesn't work right always	1
Easy words, I need bigger/harder words to learn to read	1
When you put food in the airship it does not fly	1
Needs more games	1
We always have to play at 2:30 pm and 4:30 pm on Thursdays	1
In the Bobby B. Healthy race game, it tries to tell you what to eat	1
Don't know/no answer	4
Nothing/I like everything	30

*Frequencies, not percentages, are shown due to the small sample size.

Appendix I

Partner Satisfaction Survey



Champions for Change

Arizona Nutrition Network

Partner Satisfaction Survey

FY 2010

Introduction

The vision of the Arizona Nutrition Network (AZNN) is “To shape food consumption in a positive way, promote health, and reduce disease among all people living in Arizona.” The Network’s work is accomplished primarily through the efforts of its Partners. For the purpose of continuously improving the Network, a survey was developed to measure the Partners’ satisfaction with the Network. The survey assesses Partners’ satisfaction with program planning and implementation, leadership, community outreach in the Network, communication, progress and outcome, and overall impression of the Network.

Methods

A link to the web-based survey was emailed in June 2010 to approximately 300 email addresses. The number of partners the email was sent to is unknown, however, all partners are on the mailing list. A total of 31 returned a survey. Most (90%) of the respondents identified themselves as Local Incentive Award Matching Partners. The remaining 10% did not identify the type of partnership they had with the Arizona Nutrition Network. Additionally, 6.5% of respondents reported that they participate on the Program Committee.

Partners were asked to report their satisfaction with each of seven areas of the Network (Program Planning and Implementation, Leadership, Community Outreach in the Network, Communication, Progress and Outcomes, Materials, and Overall Impression with the Network). A satisfaction scale from 1 to 5 was used for this assessment: 1= Completely Dissatisfied, 2=Dissatisfied, 3= Neutral, 4= Satisfied, 5=Very Satisfied.

Results

Aspects of the Network with the *lowest* average satisfaction scores included the availability of incentive items, availability of materials, and the online distribution system, all receiving average satisfaction scores less than 3.4. Design of the website, Fun Food News, recipe cards, and posters; the television ads for the fruits and vegetables social marketing campaign and the low fat milk campaign; and the strength and competence of staff received the *highest* average satisfaction scores of 4.1 or higher.

A comparison of average scores between the satisfaction survey completed FY09 and the satisfaction survey completed in FY10 is addressed in Table 1 below. The number of respondents for the FY09 survey was 55 and the number of respondents for the FY10 survey was 31.

Table 1: Average Satisfaction Scores and Percent Change from FY09 to FY10

Satisfaction with:	Satisfaction Average	% Change FY09 to FY10
<i>Program Planning and Implementation</i>		
Clarity of the vision for where the Nutrition Network should be going.	3.7	2.7
Planning process used to prepare the Network's objectives.	3.7	8.0
Utilization of your input.	3.8	13.0
Follow-through on Network's activities.	3.7	5.4
Efforts to improve collaborative action.	3.8	7.9
Strength and competence of staff.	4.1	4.9
Processes used to assess the community's needs.	3.7	8.1
Technical assistance provided, including training, site visits and resources.	3.9	7.7
<i>Leadership</i>		
Strength and competence of Network's leadership.	3.7	2.7
Sensitivity to cultural issues.	3.8	2.6
Opportunities for Network members to take leadership roles.	3.8	10.5
Trust that Network members afford each other.	3.8	5.3
<i>Community Outreach in the Network</i>		
Participation of types of community agencies.	3.9	2.6
Diversity of Nutrition Network members.	3.8	2.6
Efforts in identifying local funding for community programs.	3.5	2.9
<i>Communication</i>		
Use of the media (television ads, billboards, materials, etc.) to promote awareness of the Network's messages.	3.9	7.7
Communication among members of the Network.	3.8	8.3
Communication between the Network and the broader community.	3.6	5.6
Extent to which Network members are listened to and heard.	3.6	5.6
<i>Progress and Outcomes</i>		
Success in generating resources for the Network.	3.5	0
Capacity of members to give support to each other.	3.5	2.9
Network's contribution to improving nutrition and physical activity practices in the community.	3.8	5.3
<i>Materials</i>		
Availability of materials.	3.2	-5.9
Availability of incentive items.	3.0	0
On-line distribution system.	3.3	-8.3
Appropriateness of materials to the target population in your community.	3.4	0
Fun Food News	4.4	9.0

Arizona Nutrition Network Partner Satisfaction Survey, FY 2010

Satisfaction with:	Satisfaction Average	% Change FY09 to FY10
Posters	4.3	6.9
Recipe Cards in Color	4.2	6.9
Incentive Items	3.5	2.4
“Fruits and Vegetables” Sept 09	4.1	0
“Grow a Healthy Child” Jan 10	4.0	NA
“Go Low” April 10	4.1	4.9
Website: www.eatwellbewell.org	4.4	6.8
Costumes, Inflatables, Games	3.8	-2.6
<i>Overall Impression of the Arizona Nutrition Network</i>		
The Arizona Nutrition Network overall.	3.9	5.1

While all categories received average scores in the neutral range (with 1=Very Dissatisfied, 3=Neutral, and 5= Very Satisfied), the categories with the highest level of satisfaction were Materials and the Overall Impression of the Network, with an average score of 3.9. The Progress and Outcome category received the lowest average score of 3.6. Table 2 shows the average score and the percent change between FY09 and FY10 by category.

Table 2: Average Score and Percent Change from FY09 to FY10 by Category

Satisfaction with:	Average	% Change FY09 to FY10
<i>Program Planning and Implementation</i>	3.8	5.3
<i>Leadership</i>	3.8	2.6
<i>Community Outreach in the Network</i>	3.7	5.4
<i>Communication</i>	3.8	10.5
<i>Progress and Outcome</i>	3.6	2.8
<i>Materials</i>	3.9	7.7
<i>Overall Impression of the Arizona Nutrition Network</i>	3.9	5.1

Respondents were given the opportunity to provide comments for each section of the survey. Table 3 shows the write-in responses for each category. The responses were edited only for spelling.

Table 3. Write-in Comments by Category

Comments Planning and Implementation:
Continual improvement is always appreciated and recognized, Thank You!
I am not sure that I remember exactly how I responded last year.
Would love to have more activity ideas on the website
I don't know what process was used to assess community needs - I know that when it comes to things like purchasing educational reinforcement items (ERIs) we have never

<p>been asked what we use or don't use; how we use things; or whether we plan to use something in the future. This year you decided without any input from us to drop things that we rely on for ERIs and made purchases that we cannot use - some of the items you chose our schools consider weapons! We could certainly have told you that if you had only asked.</p>
<p>Every year I complete this survey and I never see any change in programming, or any indication that my feedback is used in any way.</p>
<p>I like to see more opportunities for training, ideas for program implementation, and shared success stories on what other programs (even in other states) are doing in the area of nutrition education.</p>

<p>Comments Leadership:</p>
<p>Sometimes members do not feel comfortable taking leadership roles. Is there sensitivity to this perhaps?</p>
<p>no new materials in Navajo yet. We have been asking for many years.</p>
<p>I don't think there's much opportunity for others not at the state level to be involved in providing feedback or to take leadership roles. You all seem to have decided how you are spending our money without giving us any input. The 50 cents on the dollar that you take from us doesn't seem to be buying much that supports my program. About the only thing that I find of great value for my money is our program director -she is actually quite helpful at times.</p>
<p>Please release a report indicating how our feedback from these annual surveys has impacted the activities of the Network.</p>

<p>Comments Outreach in the Network:</p>
<p>Many of the partners appear to work with children and schools, it would be nice to hear from partners who work with more diverse groups. I would also like to hear about more efforts to work with teens, and high school participants.</p>
<p>I'm not sure about these questions - I and my staff are the one who go out and recruit various types of community agencies to work with us and work on diversifying network members; I'm not sure how this is a rating for you all. Same goes for efforts in identifying local share funding; the only support I get for this is the documentation provided that tells me how a site can qualify - though I will say our program director has been quite helpful in this regard.</p>

<p>Comments Communication:</p>
<p>Discussion board should be utilized more by partners (don't know if there is an issue with individual's being concerned about how to post, what/when to post or whether they have the freedom to post). Campaign commercials/advertising is not seen in our area (unless individuals are watching Phx stations, but that seems to be the exception)</p>
<p>Thank you for the fabulous materials. They are much utilized and appreciated!</p>
<p>the green room is great. great new resources for different age groups.</p>
<p>Don't see the ads as much as I used to (maybe that's a conscious decision to reach target audience through other methods. Could use more variety of materials and incentive items. Incentive items difficult to get sometimes.</p>
<p>I have seen some of the media messages and like what I have seen; I'm not sure they help</p>

<p>much in my county, though. I don't see that there's much communication among members, but then I haven't been active in the online chat room thing; maybe that's helped improve things, but I haven't had the time to get on in several months. I have no idea what communication is done between the network and the broader community, except what we do here in my area via my program.</p>
<p>What is the difference between being "listened to" and "heard?" I would like to see action taken in response to concerns, questions, comments, and suggestions, not just "being heard."</p>
<p>As a first year employee at a partner, I am not aware of any communication with other members of the network, or communication with the broader community.</p>

<p>Comments Progress and Outcome:</p>
<p>Again, if the discussion board was utilized more, this would a very satisfied/improved rating.</p>
<p>items were still out most of the year, still feel the need for more collaboration with other groups in the areas of local match</p>
<p>Again I have a hard time thinking about these in terms of the network or state - I know we have worked very hard in our program to generate resources, identify new partners and forge new relationships, and to support one another. I don't necessarily feel that the "network" is involved at all in what we are doing here other than as oversight and accountability. I feel we (my staff) have made a significant contribution to improving nutrition and physical activity practices, but I don't feel like the 'network' has really been much a part of that effort.</p>
<p>We do not feel supported or valued in our work as a Network partner. The vast majority of feedback we receive is punitive in content and delivery indicating only what we are doing wrong with very little recognition for what we do well.</p>

<p>Comments Materials:</p>
<p>Recipe cards seem less engaging than in the past- maybe it's the color scheme? Also, the recipes have been difficult to demo.</p>
<p>Again thank you for the wonderful materials and website!!</p>
<p>Availability, ordering and delivery were never very good and have worsened this year. Incentive materials are redundant year after year. How about something new that my former 2nd graders (now 5th graders) haven't already seen for 2 years? Example - they have all received yo-yos for 2 years. What do yo-yos with "Champions for Change" logos have to do with nutrition anyway?</p>
<p>The new format of the FFN is a huge improvement. The booklet style is great compared to the single page. Having the language on flip sides is better, it was time consuming to refold the old FFN to display the Spanish side. The Grow a Healthy Child FY10 materials were the best! I answered N/A on the f/v 09 materials because I can't remember which ones they are and cannot easily locate them on the website. Some items on the website are hard to find, and recently many of the recipes on the website have been missing the ingredient portion. Overall the website has improved but has become worse in the last 6 weeks.</p>
<p>I think my earlier comments will help you understand why I think things have gotten worse.</p>

Incentive items are the number one issue that affects our partners. Please provide more opportunities for partners to contribute to what is purchased as incentive items and the quantities.
Some of our community partners have mentioned utilization of all incentive items and have expressed interest in other items such as seedies, frisbees, coloring books, dvds, new posters, updated pens/pencils, other neat free items, as well as updated hand outs.
The games need to be checked periodically for missing parts. The tossing pieces for the pyramid are falling apart.

Comments Overall Impressions of the Arizona Nutrition Network:
Keep up the great work!!
Love the staff at AZNN. Very friendly, personable, knowledgeable and helpful.
It seems as though the issues, particularly around access to things like costumes, ERIs, etc. have become much worse. Ordering anything is a nightmare in this system - as there is no such thing as a back order we are left to order over and over again to no avail. If you are not the first person in with an order when something arrives you get nothing even if you've ordered 15 times in the past without receiving a flipping thing!
An improved overall spirit of collaboration rather than castigation would greatly improve our working relationship. LIA partners have equivalent and sometimes more expertise in nutrition education than some state staff and would appreciate being treated as partners in collaboration rather than wayward children.

Conclusions

The results of the Partner Satisfaction Survey for FY 2010 have clearly identified areas of the Network that the partners feel need improvement, as well as the strengths of the Network.

Strengths of the network identified by the partners include:

- Design of the website, Fun Food News, posters and recipe cards
- The television ads for the fruits and vegetables social marketing campaign and the low fat milk campaign

Areas of improvement identified by the Partners include:

- Availability of incentive items and materials
- Online distribution system