



ARIZONA DEPARTMENT OF HEALTH SERVICES
(ADHS)/
ARIZONA NUTRITION NETWORK (AZNN)
“FRUITS & VEGETABLES”
POST CAMPAIGN RESEARCH REPORT

REPORT PREPARED FOR:
ARIZONA DEPARTMENT OF HEALTH SERVICES / AZNN

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I. BACKGROUND & Methodology

The Arizona Nutrition Network (AzNN), a public and private partnership led by the Arizona Department of Health's Office of Chronic Disease Prevention and Nutrition Services, 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, food stamp 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 includes consumption of fruits and vegetables, drinking 1% low fat and fat free milk, and eating healthy meals and portion sizes.

Moses Anshell implemented three marketing campaigns including a community outreach component for the target audience. Marketing campaigns are developed around the three messages of drinking 1% low fat or fat free milk, increased consumption of fruits and vegetables, and eating healthy meals and portion sizes. These campaigns were 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 the campaign is women ages 18 to 49 with children ages 2 to 11, with household income equal to 130% of federal poverty level. The secondary target is children ages 2 to 11.

The subject of this research report is the *Fruits and Vegetables* campaign, which focuses on eating more fruits and vegetables. The campaign, which ran August through October 2006, was statewide and included the following media and projects:

- Television
- Pay Phone Ads
- Web Site (www.eatwellbewell.org)
- Educational Reinforcements (e.g., nutrition-based games and toys)
- Fun Food News (newsletter in English and Spanish)
- Recipe Cards
- Wall Boards (DES offices)
- “Event in a Box” / community events

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 with 398 women were conducted in four Arizona cities: Phoenix, Tucson, Prescott, and Yuma. In addition, 40 children were “interviewed.” That is, if

women had their child/children with them, the child was included in the process. For example, children were asked a few questions about the advertising (e.g., had they seen it, where, did they like it), a question about foods they think are good for them, and their favorite fruits and vegetables. (*Note: this research was conducted after the school year had started so there were fewer children shopping with their mothers and therefore fewer children included in the study as compared to the Go Low study.*)

Intercepts were conducted at Food City locations in Phoenix, Tucson, and Yuma, and at a Bashas grocery store in Prescott (which does not have a Food City). All interviews were completed between September 13 and September 27, 2006.

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.

Location	Address	Sample Size Women	Sample Size Children	Interview Dates
Food City	3442 W. Van Buren, Phoenix	99	3	September 14 & 25
Food City	2950 S. 6 th Avenue, Tucson	100	27	September 21 - 22
Food City	1240 W. 8 th Street, Yuma	99	10	September 26 - 27
Bashas	1761 E. Highway 69, Prescott	100	0	September 17 - 18

Following a 10-minute, in-person interview, women participants were asked to complete a self-administered “questionnaire” regarding items they are most likely to purchase when grocery shopping. The questionnaire was simply a listing of specific fruits, vegetables, dairy products, meats, and breads/tortillas/starch. Respondents checked those items they are most likely to purchase. They were also asked if their “typical” grocery list/purchases had changed over the past six months. This question was asked to measure change in behavior.

Respondents were given “squishy toys” (e.g., foam fruits and vegetables), which were provided by ADHS, as a thank you for participating in the survey.

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 combination of a *quota sample* (e.g., 80% Hispanic) and a *convenience sample* (e.g., those who shop at Food City or Bashas grocery stores). Though these sampling techniques were appropriate to meet the study objectives (within the budget guidelines), they do introduce sampling bias and should be considered when interpreting the findings.

Respondent Profile

	Total n=398	Phoenix n=99	Tucson n=100	Prescott n=100	Yuma n=99
Age					
18 – 25	23%	25%	30%	18%	21%
26 – 35	37%	31%	37%	44%	34%
36 – 49	<u>40%</u>	<u>44%</u>	<u>33%</u>	<u>38%</u>	<u>44%</u>
Total	100%	100%	100%	100%	100%
Ethnicity (by observation)					
Hispanic	70%	87%	95%	12%	83%
Caucasian	27%	13%	2%	85%	9%
Native American	2%	0%	2%	0%	6%
Other	<u>1%</u>	<u>0%</u>	<u>1%</u>	<u>3%</u>	<u>1%</u>
Total	100%	100%	100%	100%	100%

II. Key Findings & Conclusions

- **Approximately six in ten women in the target audience use a grocery list**, with milk being the most frequently mentioned item on those lists.
 - *Caucasian women are significantly more likely than Hispanic women to use a list. This may have significant implications as grocery lists are said to reduce impulse buying, result in buying healthier items, and save money.*
- **Awareness of fruits and vegetables advertising, and specifically, awareness of the Bobby B./Fruits and Vegetables advertising, is high among these mothers** – 64% and 67% respectively, with levels in Phoenix and Tucson slightly higher than in Yuma or Prescott.
 - *25 of the 37 children who were shown the Bobby B./Fruits and Vegetables advertising, said they had seen it before.*
- ***Eat more/lots of fruits and vegetables*** was by far the dominant message participants recalled about advertising related to eating healthy foods and eating fruits and vegetables. When asked specifically what they remember about advertising or public service announcements regarding eating more fruits and vegetables, three in ten women mentioned “5 a Day,” second to the more general *eat more/lots of fruits and vegetables*.
- ***Eating more/lots of fruits and vegetables*** was also the main message women recalled from the *Bobby B./Fruits and Vegetables* advertising. The second most frequently cited message was the eat healthy/good message.
- **Participants gave their overwhelming approval to the *Bobby B./Fruits and Vegetables* advertising, with 96% of mothers and 68% of children saying they liked the advertising.** Just 1% - 2% said they did not like it, with the rest saying they didn’t have an opinion one way or the other.
- **Mothers like the fact that the advertising is fun for kids while providing a healthy eating message, while children like Bobby B.** Mothers also like the fact that the ads are colorful, and they, too, like Bobby B.
- **TV is the #1 medium, with nearly nine in ten of those who had seen or heard advertising, saying they had seen or heard the ads on TV.** Government offices, the second most frequently cited medium, was mentioned by three in ten of those interviewed. Other media were rarely mentioned.
 - *Channel 33 in Phoenix and in Tucson, Channel 8 in Prescott, and Cartoon Network and Channel 7 in Yuma were named most frequently by participants.*

- **Nearly all (99%) mothers find the advertising easy to understand, with half saying they are more likely to buy fruits and vegetables as a result of the campaign.** Though likely an inflated number, since good *intentions* (to buy more fruits and vegetables) don't always translate into good *practice*, it provides an indication of the impact of the advertising.
- **Potatoes, lettuce, onions, and tomatoes, as well as bananas and apples, are among the most frequently purchased food items by the target market.** Chicken, cheese, and sour cream are also in the grocery carts of most of these women.
- Over four in ten children help their mothers decide what to have for dinner, and the majority are aware that eating fruits and vegetables and drinking milk are good for them. Oranges, grapes, apples, and bananas, and interestingly, broccoli and tomatoes are among these children's favorite fruits and vegetables.

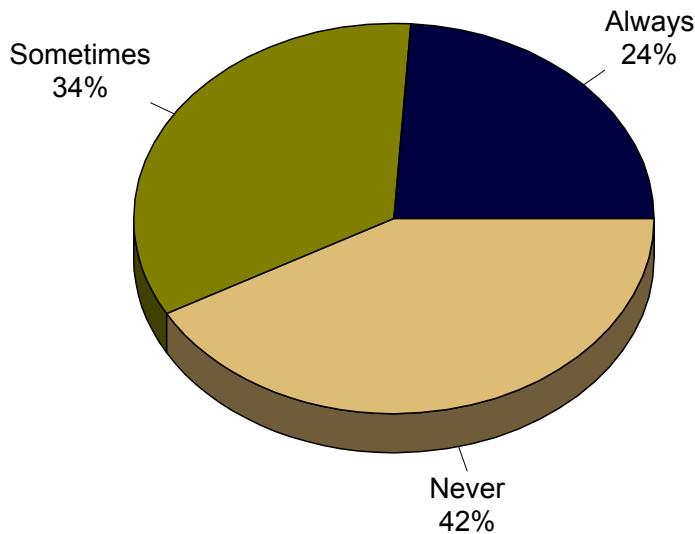
III. SUMMARY of Findings

A. GROCERY SHOPPING

To begin the interview, participants were asked whether or not they use a grocery list and if so, what three things are most likely to be on the list.

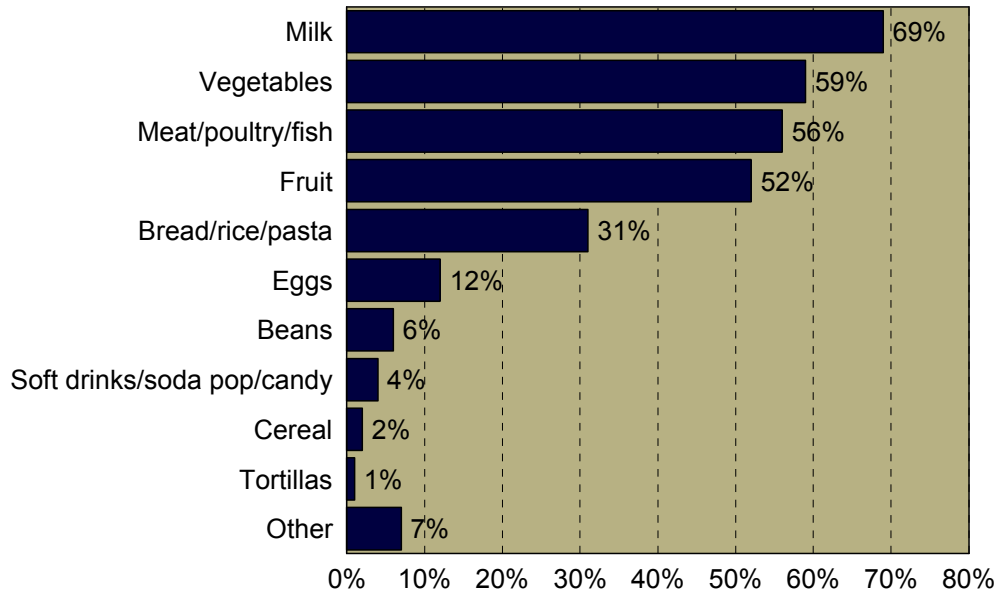
As seen in the following charts, nearly six in ten say they always (24%) or sometimes (34%) use a grocery list, with milk being the most frequently mentioned item on those lists. Caucasian women are significantly more likely to say they *always* use a list than are Hispanic women – 32% and 19% respectively. In addition, women between 45 and 49 are significantly more likely to say they *always* use a list than are those between 18 and 25 – 31% and 15% respectively.

Use Grocery List



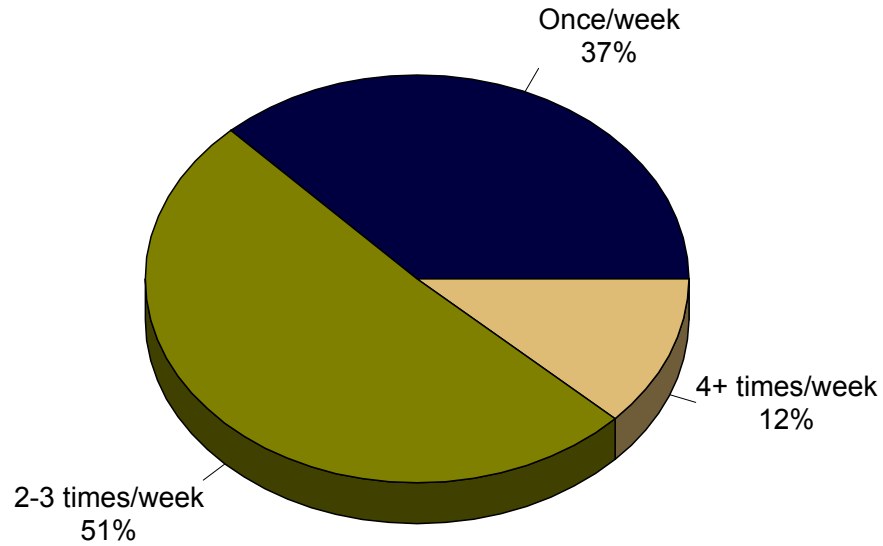
Items Most Often on List

Among those Using List



Approximately half (51%) of these respondents shop two to three times each week, with over one-third (37%) saying they go to the grocery store once a week. One in eight (12%) of those interviewed say they shop for groceries four or more times every week.

Frequency of Grocery Shopping



n=396

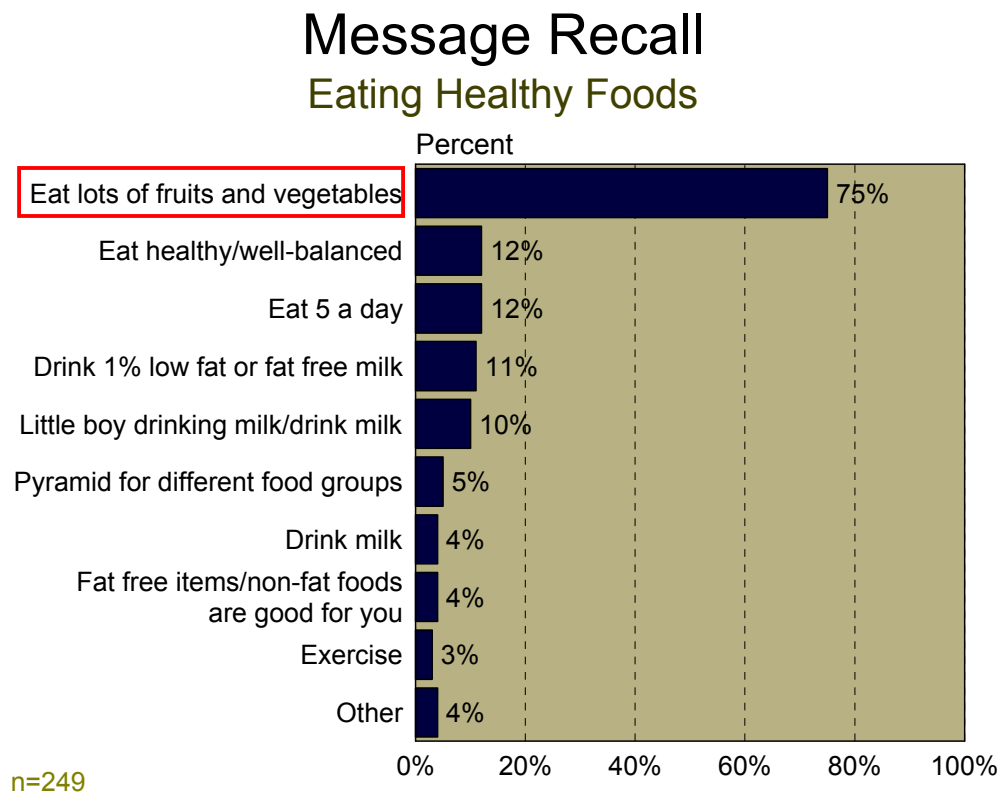
B. Ad AWARENESS – EATING Healthy Foods

Prior to discussing advertising specifically related to eating more fruits and vegetables, participants were asked if they had seen or heard any advertising or public service announcements about *eating healthy foods*. Over six in ten (63%) said they had, with 35% saying that had not, and 2% saying they did not know.

C. MESSAGE RECALL – EATING Healthy Foods

Overwhelmingly, women were most likely to say the advertising they had seen about eating healthy foods related to eating lots of fruits and vegetables, with three-quarters (75%) saying that's what they remember most.

Other mentions included messages relating to eating healthy / well balanced meals (12%), eating five fruits and vegetables a day (12%) and drinking 1% low fat or fat free milk (11%).



Demographic Differences

The only statistically significant difference by city was in the number of respondents who mentioned drinking low fat or 1% milk. The portion referring specifically to low fat or 1% milk was slightly lower in Tucson than in the other cities. However, if we combine the two categories of responses – *drinking low fat/1% milk* with *little boy drinking milk* – the cities are more similar.

**Table 1: Message Recall - Healthy Foods
By City**

	Phoenix n=68	Tucson n=64	Prescott n=51	Yuma n=66
Eat lots of fruits and vegetables	71%	75%	84%	73%
Eat 5 a day	19%	6%	14%	8%
Eat healthy/well-balanced	16%	8%	12%	14%
Drink low fat/1% milk	16%	2%	18%	9%
Little boy drinking milk	7%	17%	10%	6%
Fat free items/non-fat items are good for you	6%	2%	2%	5%
Pyramid for different food groups	3%	9%	8%	2%
Exercise	3%	3%	--	6%
Other	--	2%	--	9%

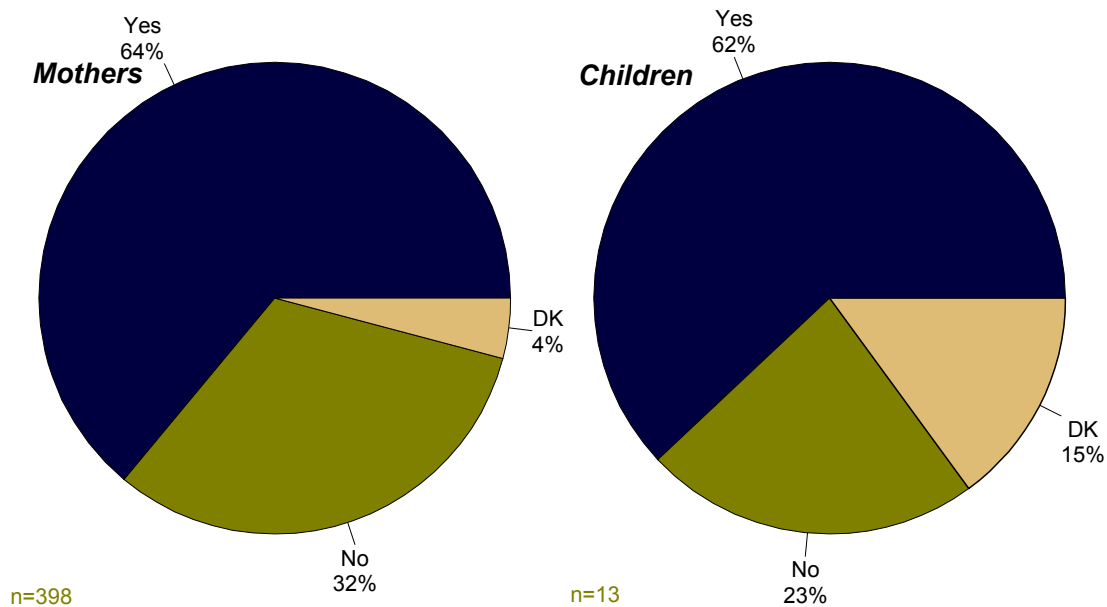
BOLD indicates statistically significant differences from others in category/row

D. Ad AWARENESS – FRUITS AND VEGETABLES

Following the question regarding advertising or public service announcements about eating healthy foods, respondents who did not say something related to eating more fruits and vegetables were specifically asked if they had seen or heard any advertising or public service announcements about *eating more fruits and vegetables*. Three in ten (31%) women said they had. In total, over six in ten women (64%) interviewed had seen advertising related to eating fruits and vegetables, without being prompted with the Bobby B./Fruits and Vegetables graphic.

Among the children who responded to this question, 62% (8 of 13) said they had seen such advertising.

Aware of Fruits & Vegetables Advertising



Demographic Differences

Women in Prescott were significantly less likely to say they had seen advertising about eating more fruits and vegetables than were women in Phoenix, Tucson, and Yuma.

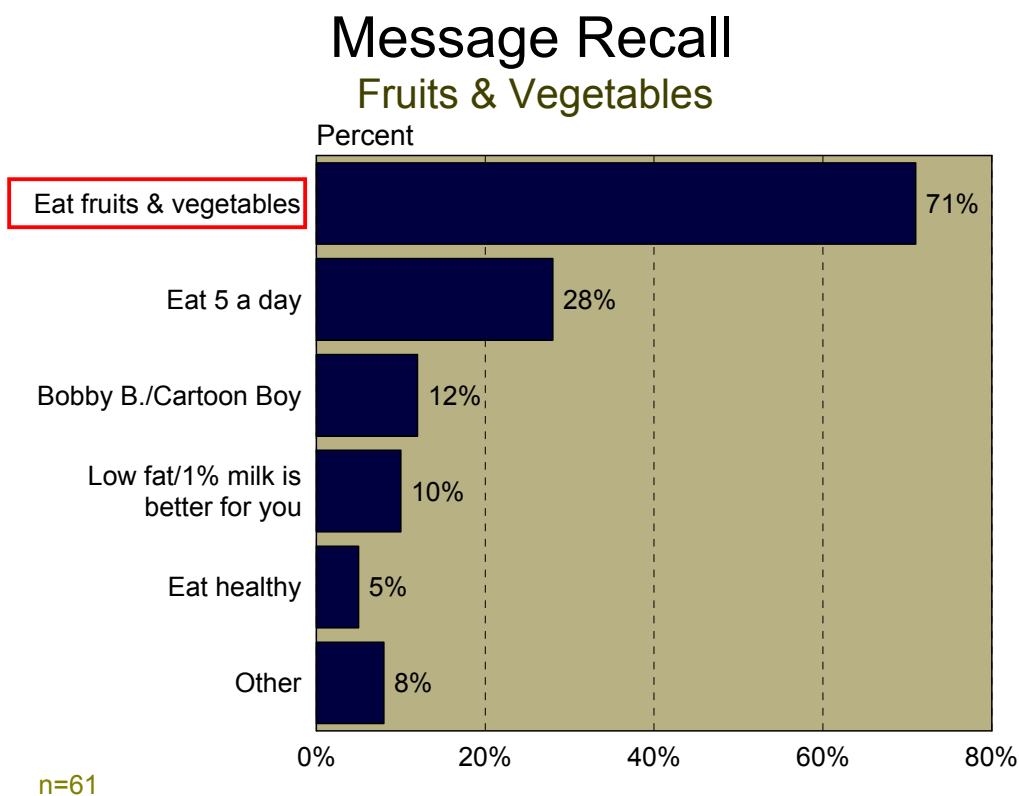
The sample sizes for children are too small to look at by city.

**Table 2: Aware of Fruits & Vegetables Advertising
By City**

Mothers	Phoenix n=99	Tucson n=100	Prescott n=100	Yuma n=99
Yes	73%	72%	49%	63%
No	27%	23%	51%	27%
DK	--	5%	--	10%
Total	100%	100%	100%	100%

E. MESSAGE RECALL – FRUITS AND VEGETABLES

Clearly, the dominant message received from the fruits and vegetables advertising is to eat them, with seven in ten (71%) citing this as what they remember about the advertising. Three in ten (28%) said *eat 5 a day*, with one in eight women (12%) mentioning Bobby B. One in ten participants (10%) said something about 1%/low fat milk being better for you, even though they were asked about the fruits and vegetables advertising.



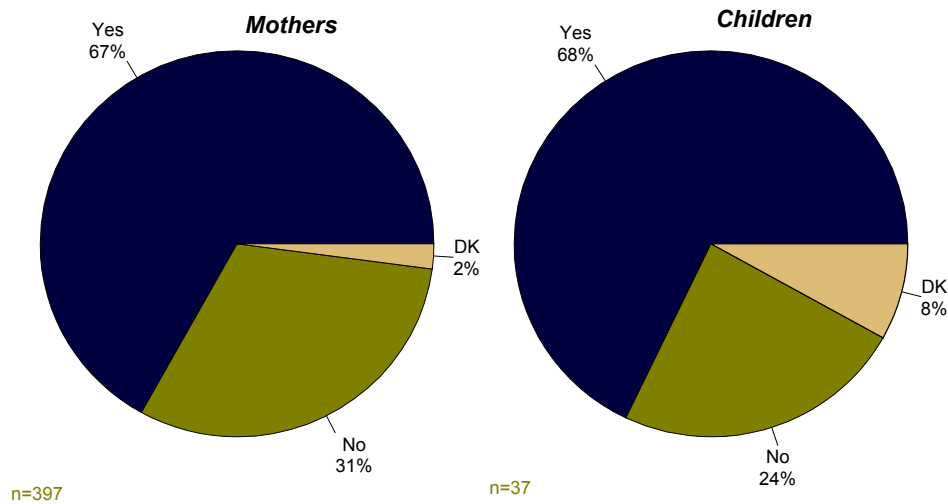
Demographic Differences

Because the overall sample size for this question was relatively small (61), comparisons among cities cannot be made. *(Note: It is important to remember that participants were only asked this follow-up question if they did not say something related to fruits and vegetables in the eating healthy foods question.)*

F. Ad AWARENESS – Bobby B. / FRUITS AND VEGETABLES

All participants were shown an example of the *Bobby B./Fruits and Vegetables* advertising campaign (i.e., mounted boards with the outdoor graphic), and asked if they recall seeing advertising that looked similar. Two-thirds (67%) of mothers said they had seen something similar to the boards shown, with a similar portion (68%) of children saying they had seen the advertising.

Aware of Fruits & Vegetables Advertising



Demographic Differences

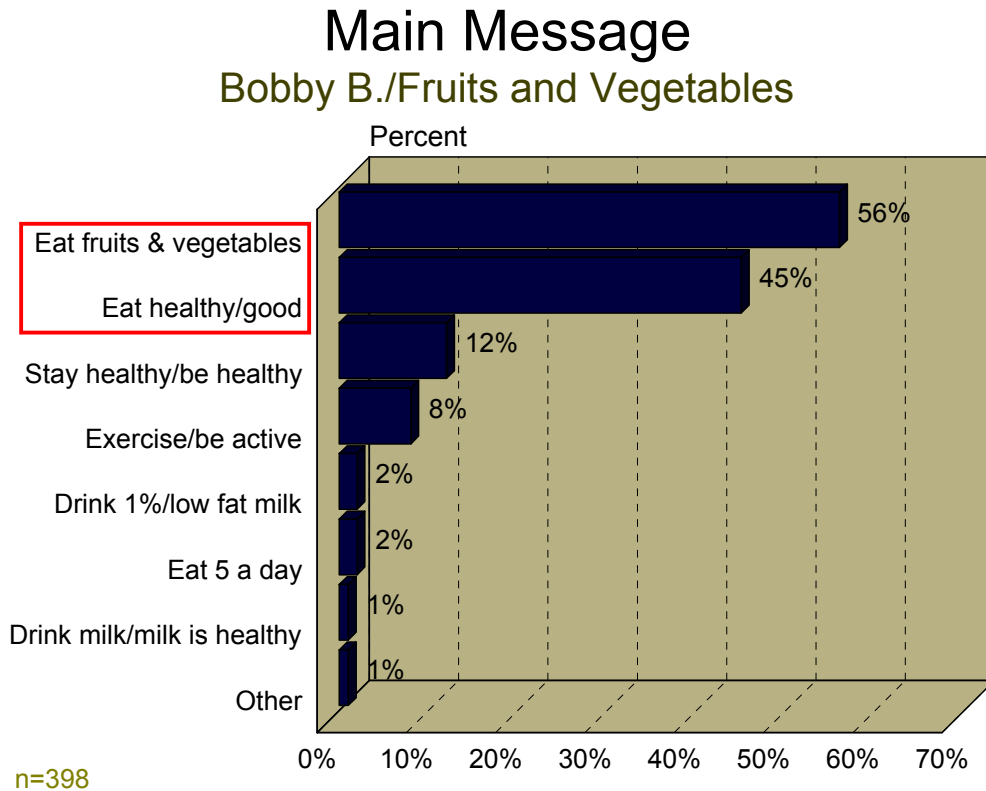
Women in Phoenix and Tucson were significantly more likely than those in Prescott and Yuma to say they had seen the *Bobby B./Fruits and Vegetables* advertising.

**Table 3: Aware of *Bobby B./Fruits and Vegetables* Advertising
By City**

Mothers	Phoenix n=99	Tucson n=100	Prescott n=99	Yuma n=99
Yes	82%	74%	42%	68%
No	18%	26%	58%	22%
DK	--	--	--	10%
Total	100%	100%	100%	100%

G. MAIN MESSAGE – Bobby B. / FRUITS AND VEGETABLES

When asked what they consider to be the main message of the advertising, 56% of participants said to *eat fruits and vegetables*. Nearly half - 45% - said *eat healthy/good food*, with another 12% saying *stay healthy/be healthy*. (Note: multiple “main” messages were allowed.)



Demographic Differences

Women in Yuma were significantly more likely than those in Phoenix, Tucson, and Prescott to say the main message of the advertising is to *eat fruits and vegetables*, and slightly less likely to mention the more general message of *staying/being healthy*. Women in Phoenix were more likely to see the bigger picture messages of *staying healthy* and *exercising* than were those in the other cities.

**Table 4: Main Message – Bobby B./Fruits and Vegetables
By City**

	Phoenix n=99	Tucson n=100	Prescott n=100	Yuma n=99
Eat healthy/good	53%	35%	52%	40%
Eat fruits and vegetables	50%	61%	42%	73%
Stay healthy/be healthy	19%	17%	8%	3%
Exercise/be active	19%	5%	4%	3%
Eat 5 a day	2%	2%	--	3%
Drink 1%/low fat milk	1%	1%	2%	3%
Drink milk/milk is healthy	1%	--	--	3%
Other	1%	--	--	--

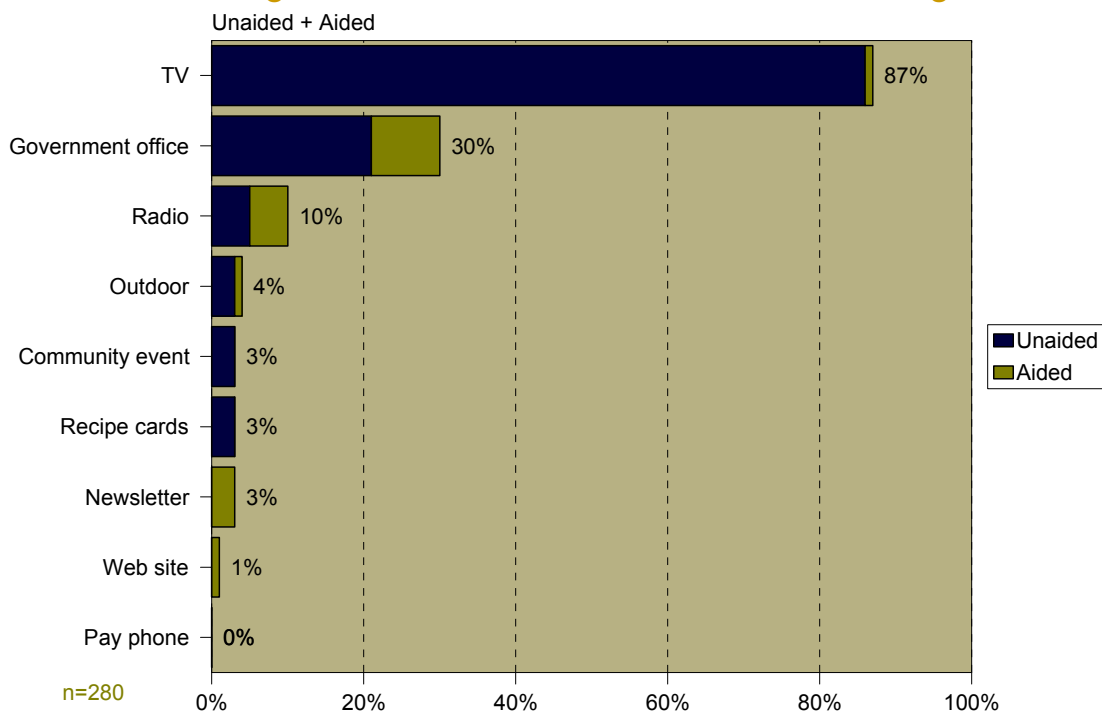
H. Media Recall

Overwhelmingly, respondents were most likely to say they had seen the advertising on TV, with nearly nine in ten (87%) naming this medium when asked where they had seen or heard the advertising. Government office was cited next most frequently, with three in ten (30%) survey participants mentioning this. *(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.)*

Although there was little increase in the number of women who recalled having seen the advertising on TV after being prompted (aided advertising), that was not the case with those who had seen public service announcements in government offices. While 21% mentioned this medium unaided, an additional 11% recalled having seen something in those offices after being prompted.

Source of Advertising

Among those who had Seen/Heard Advertising



Demographic Differences

As seen in the table below, there were no statistically significant differences by city.

**Table 5: Source of Advertising
By City**

	Phoenix n=81	Tucson n=74	Prescott n=50	Yuma n=75
TV	93%	82%	82%	89%
Government office	30%	32%	22%	35%

A total of 244 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.

**Table 6: TV Stations
By City**

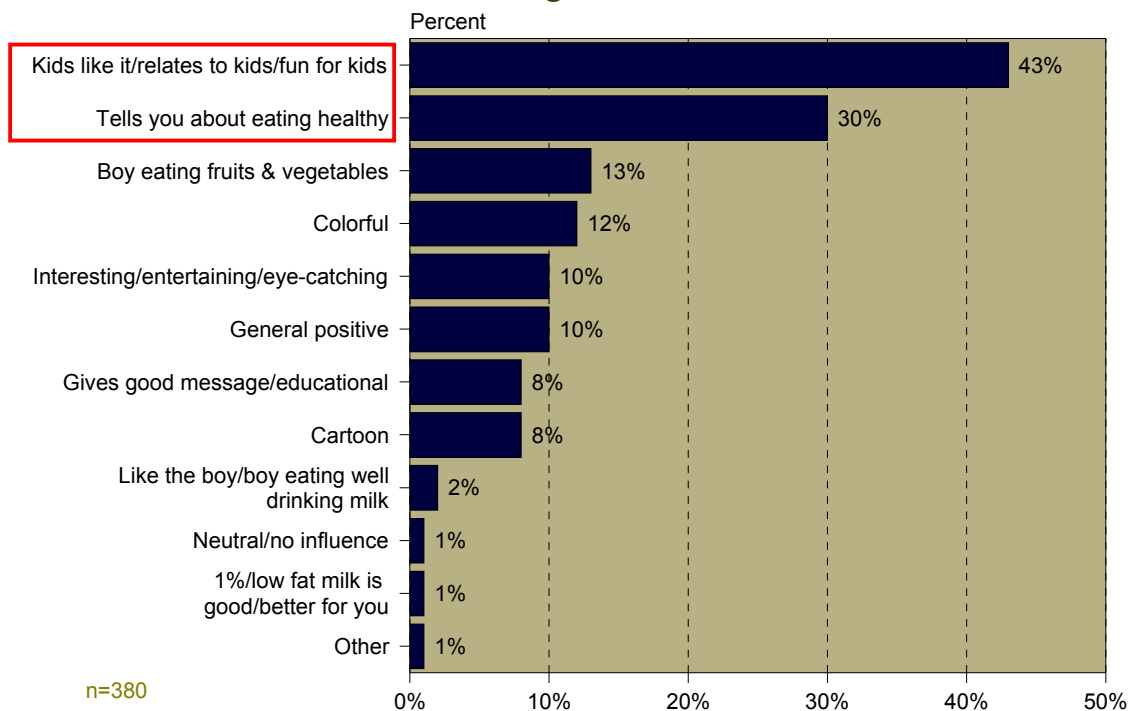
Phoenix n=76	Tucson n=61	Prescott n=41	Yuma n=67
Channel 33 - 68%	Channel 33 - 43%	Channel 8 - 32%	Cartoon Network - 34%
Channel 61 - 30%	Channel 39 - 20%	Channel 3 - 27%	Channel 7 - 34%
Channel 45 - 20%	Channel 58 - 13%		Channel 13 - 10%
Channel 10 - 9%			

I. Overall Opinion of Advertising

Participants gave their overwhelming approval to the *Fruits and Vegetables* advertising, with 96% of mothers and 68% of children saying they liked the advertising. Just 1% of mothers and 3% of children interviewed said they didn't like it, with the rest saying they didn't have an opinion one way or the other.

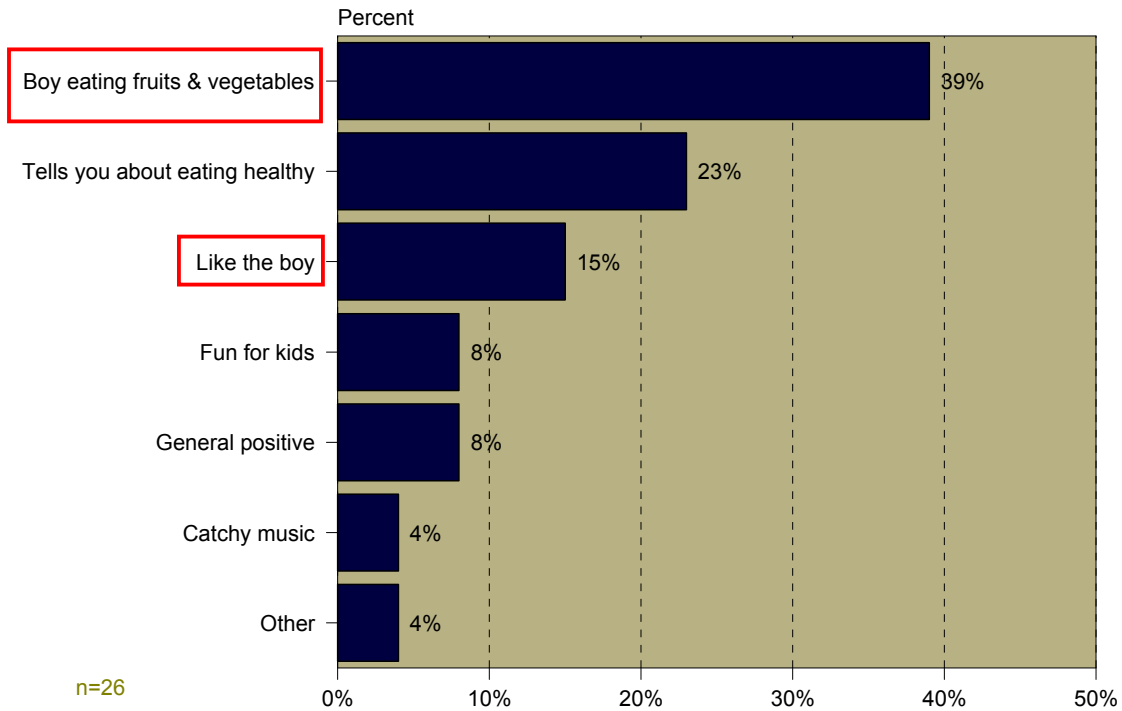
Mothers cited two main reasons for liking the *Fruits and Vegetables* advertising: *kids can relate to it/it's fun for kids* (43%) and *it tells you about eating healthy* (30%). *Bobby B. eating fruits and vegetables* and the fact that the advertising is *colorful*, were mentioned by one in eight women as reasons for liking the ads.

Why Like Advertising Among Mothers



Four in ten of the children interviewed (39%) said they like the advertising because of the *boy eating fruits and vegetables*, with another 15% saying they *like the boy*. Nearly one-quarter (23%) said they like it because it tells you about eating healthy. (Note small sample size.)

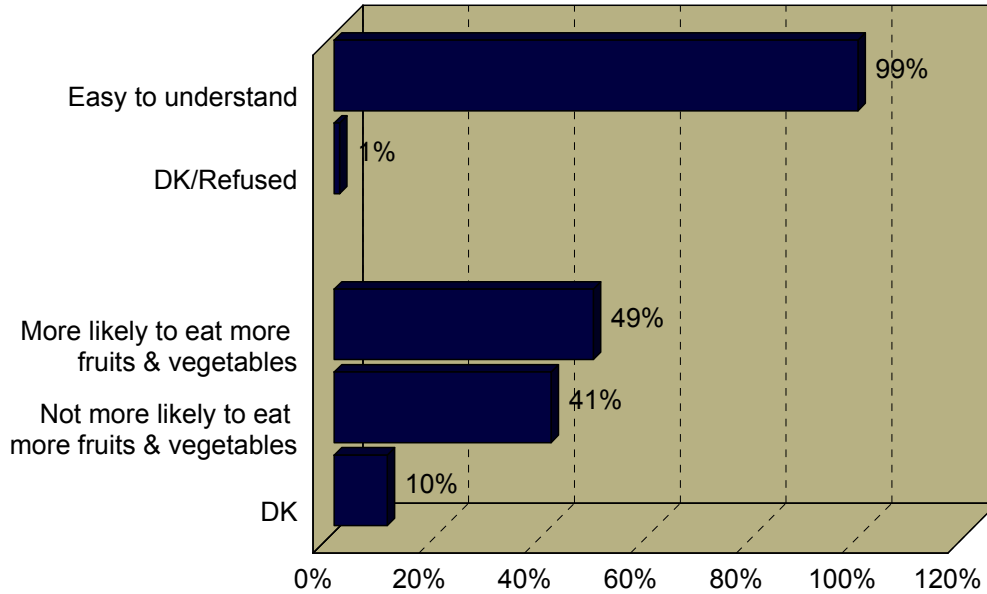
Why Like Advertising Among Children



J. Overall Effectiveness

Nearly all (99%) of the mothers interviewed find the advertising easy to understand, with half (49%) saying they are more likely to eat more fruits and vegetables.

Overall Effectiveness



n=398

Demographic Differences

Mothers in Prescott are slightly more likely to eat more fruits and vegetables than are mothers in the other cities.

**Table 7: Likely to Eat More Fruits & Vegetables
By City**

Children	Phoenix n=99	Tucson n=100	Prescott n=100	Yuma n=99
Yes	42%	47%	60%	47%
No	49%	36%	33%	45%
DK	<u>9%</u>	<u>17%</u>	<u>7%</u>	<u>8%</u>
Total	100%	100%	100%	100%

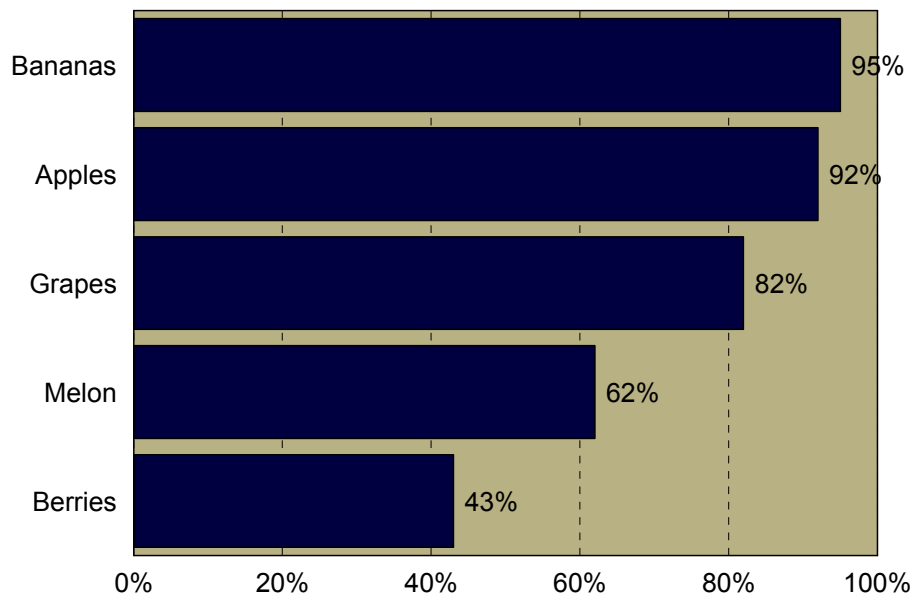
K. Self-Administered Questionnaire

As mentioned in the Background & Methodology section of this report, following the in-person interview, women participants were asked to complete a self-administered “questionnaire” regarding items they are most likely to purchase when grocery shopping. This was simply a listing of specific fruits, vegetables, dairy products, meats, and breads/tortillas/starch.

Participants were most likely to say they purchase chicken (98%), cheese (97%), and bananas and potatoes (95%).

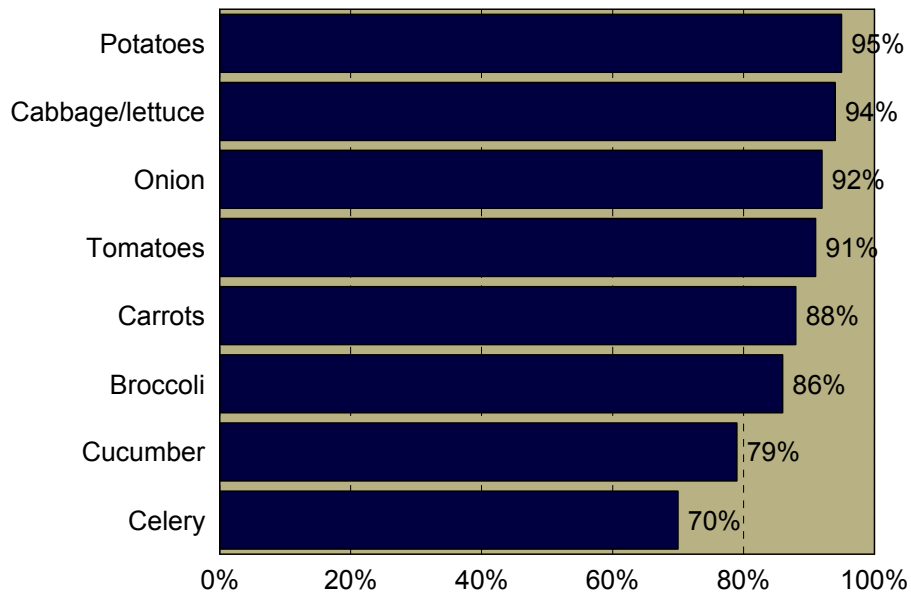
By category, these women are most likely to buy bananas (95%) and apples (92%) among the fruits listed, and potatoes (95%) and lettuce (94%) among those vegetables listed.

Most Frequently Purchased Fruits



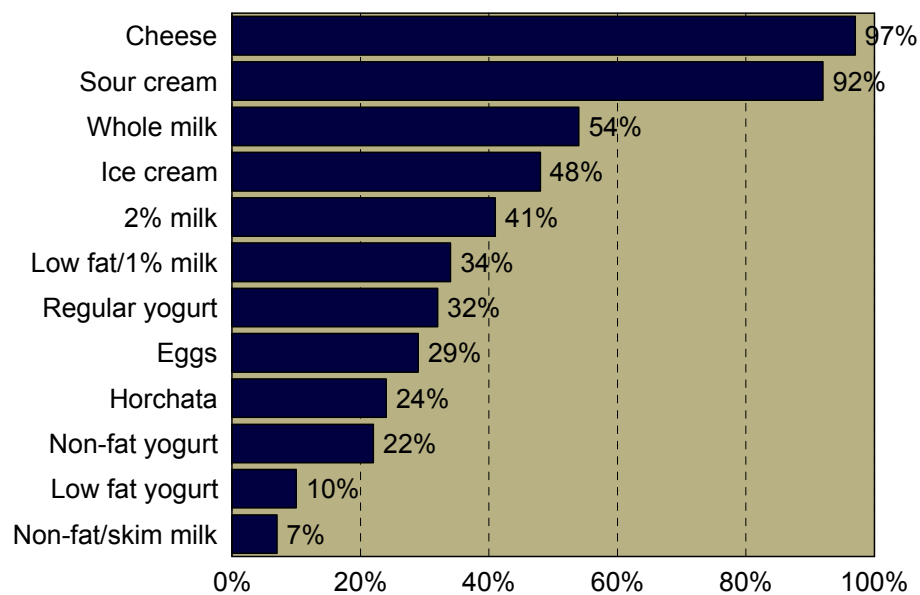
n=397

Most Frequently Purchased Vegetables



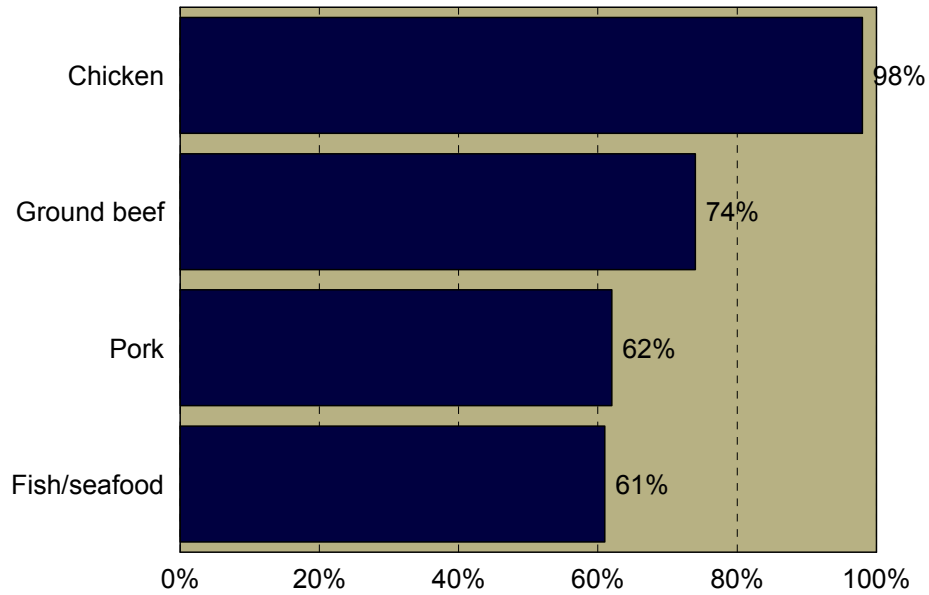
n=397

Most Frequently Purchased Dairy



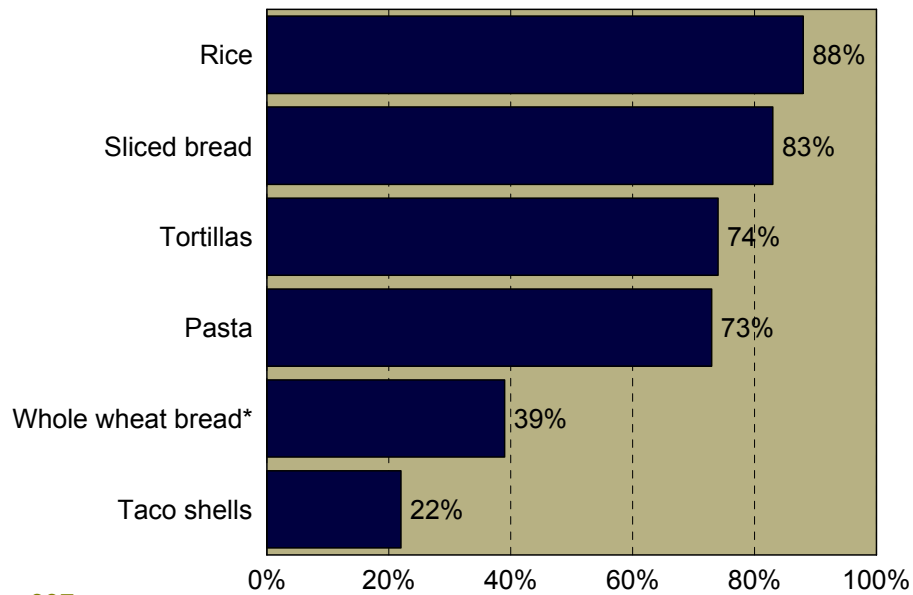
n=397

Most Frequently Purchased Meats



n=397

Most Frequently Purchased Bread/Starch



n=397

*Asked of respondents in Prescott and Yuma only

Six percent of those interviewed said their typical grocery list had changed over the past six months. Of those 24 people, six said they are buying more vegetables, four said they are buying more fruit, and two said they were generally buying healthier foods. Several other single responses were given.

L. CHILDREN'S QUESTIONS

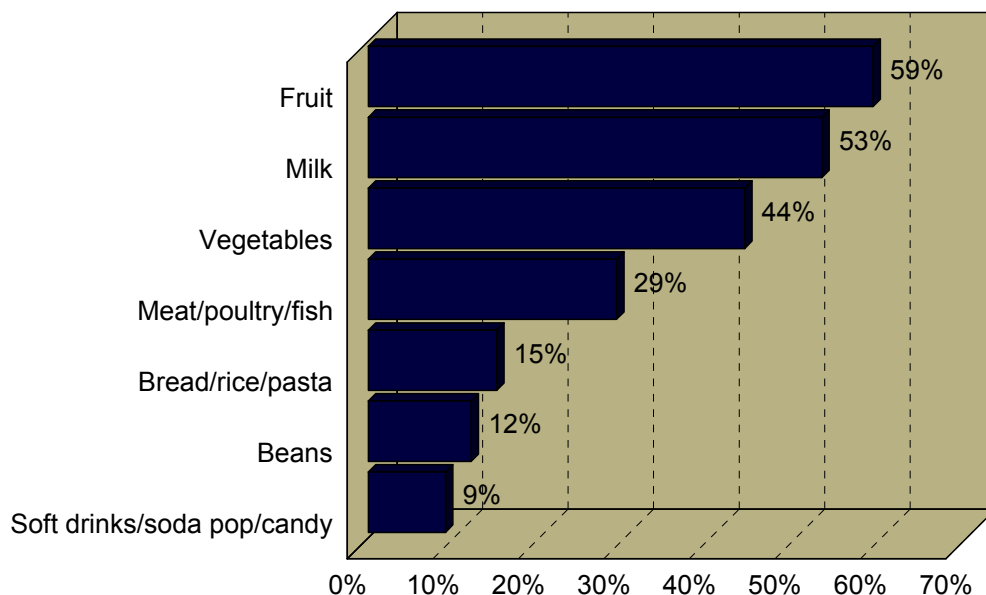
As mentioned in the introduction, if children were grocery shopping with their mothers, they were included in the interview. Results of their awareness and opinions of the *Fruits and Vegetables* advertising are included throughout the report where applicable. In addition, children were asked a few of their own questions to keep them involved. It is important to note that just 40 children were included in this research as most were back in school.

Fewer than half (44%) of these children said they help decide what to have for dinner.

When asked what foods are good for them, the top three responses were fruits (59%), milk (53%), and vegetables (44%).

Healthy Foods

Among Children



n=34

Finally, children were asked about their favorite fruits and vegetables. Oranges were named most often in the fruit category, followed by grapes, apples, and bananas. Interestingly, children said broccoli and tomatoes are their favorite vegetables.