

# **Insights into American Mothers' Views on Baby Food Product Safety:** Access, Knowledge, and Trust around Levels of Heavy Metals

NOVEMBER 2024

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# **Insights into American Mothers' Views on Baby Food Product Safety: Access, Knowledge, and Trust Around Levels of Heavy Metals**

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Count on Mothers and Clean Label Project

## **Introduction**

Count on Mothers **provides legislators, industry leaders, and policymakers with comprehensive first-hand real-time data to help them make more informed decisions.** Each issue or policy that we examine is selected based on what surveyed mothers have indicated they want to address, reflecting the priorities of mothers from across the country and political spectrum. We survey mothers because they are the largest group charged with the well-being of children. Every mother is welcome to contribute to our efforts. We do this work because we believe that mothers' first-hand experiences are a critical source of information, essential to the policymaking process.

Count on Mothers tallies political affiliation, states of residence, race/ethnicity, level of education, and income in order to ensure a representative sample. After analyzing Mothers' opinions from the survey, we take this aggregate data and share it with policymakers and the public, so they are educated on Mothers' firsthand experiences and views on pressing issues and on the policies that affect children and families seeking to address those issues.

Increasing concern has been raised in recent years about contaminants in food - especially baby food. What are these contaminants and why is the public so concerned? Exposure to certain inorganic compounds, which we commonly refer to as "heavy metals," can cause a wide range of adverse effects, and children are especially vulnerable due to more rapid bone growth and differences in physiology from adults (Davis et al. 2014). Heavy metals such as lead, arsenic, cadmium, and mercury can accumulate in the body, causing developmental, neurological, and other long-term health problems (Blair 2022). These metals can enter the food supply through various pathways, including contamination of soil, water, and air, and can be absorbed by crops, grains, and other ingredients used in food production. In some cases, heavy metals are naturally occurring in

the environment, as is the case with arsenic, which is found in soil and groundwater and can be taken up by rice plants.

The issue of heavy metal contamination in food has led to increased scrutiny and legislative action, particularly in the United States. California Assembly Bill 899 (AB 899) has been a key piece of legislation aimed at addressing this problem. The bill, introduced to reduce heavy metal exposure in foods consumed by infants and toddlers, mandates stricter testing requirements and sets limits for allowable levels of these toxins in food products targeted at young children.

In response to these concerns, the U.S. Food and Drug Administration (FDA) launched the Closer to Zero initiative, a comprehensive campaign designed to reduce toxic elements in food, especially in products for babies and young children, who are especially vulnerable. This initiative focuses on minimizing exposure to harmful metals such as arsenic, lead, cadmium, and mercury, with the goal of lowering the risks associated with these metals through improved regulations, research, and industry practices.

Count on Mothers in collaboration with Clean Label Project aims to assess Mothers concerns regarding heavy metals and mandatory reporting through ongoing communication with mothers across the political spectrum. This study begged the questions: how do mothers assess infant and toddler foods?; what do mothers currently know about legislative initiatives regarding heavy metals?; and where do they find trusted information about these topics?

# Methodology

## Design

This study utilizes a mixed qualitative-quantitative research design. Cross-sectional surveys were distributed November 21, 2024, to December 6, 2024.

## Instrument

The instrument measured mothers' sentiment, knowledge, and trust around safe levels of metals in baby food and around food manufacturers' labeling to protect their children. An open-ended question was employed to garner more nuanced responses, specifically to find mothers' critical themes of concern for industry leaders. The instrument prompted mothers to provide feedback utilizing likert scales, ranking, and select all that apply responses. The survey also collected demographic indicators including mothers' political ideology, state of residence, race/ethnicity, number of children, level of education, and income to better understand the sample.

## Sampling Procedure

Count on Mothers employs both purposive and snowball sampling strategies. Concerted efforts were made to advertise and distribute the survey to and invite the participation of as many mothers as possible. For instance, we created Google advertisements, Instagram-based announcements, and posts in mothers' Instagram groups that consist of participants from across the political spectrum. Additionally, mothers who receive the questionnaire are encouraged to distribute the survey to other mothers who they believe would be interested in sharing their perspectives. The survey was launched on November 21st and was live on our website, social media, Substack platform, and with our Centiment collection partner through December 6th.

The margin of sampling error for the sample is  $\pm 3$  percent at a 95 percent confidence level. The estimated survey completion rate was 75 percent and took approximately 17 minutes for the average respondent to complete. The survey data collection period was from November 21, 2024, to December 6, 2024.

The survey data were weighted to conform with US Census data on the demographic composition of the United States population. Specifically, the results were weighted by education, race/ethnicity, income, and region. Weighting surveys based on population data is a common practice in survey analytics. It can be difficult to perfectly match the survey sample to the general population, so weighting survey data can yield more accurate results. For example, a survey may have a higher proportion of younger respondents than the overall population, so the results could be skewed. In

that case, younger respondents would get a lower weight to ensure the sample reflects the actual population.

## **Statistical Analysis**

Open-ended responses were analyzed for content and grouped thematically. Quantitative values are reported as counts and frequencies. For demographic characteristics, differences between groups were evaluated using chi-square tests. The statistical significance level was set at 0.05. JMP®, Version 17.0.0. SAS Institute Inc., Cary, NC, 1989–2023 was used for data analysis.

# Analysis of Survey Results

## A. Key Words and Phrases on Food Packaging

Information and key words on food packing helps consumers make - and also influence - decisions about their food choices (Understanding Food Labels, 2024 ). Not all buzz words are created equally when it comes to claims on food packing and we wanted to better understand what words were most important to mothers when it comes to grocery shopping for their young children.

We asked mothers to rank the level of importance of specific words and phrases they look for when selecting food for their babies or toddlers. Words were ranked from one to eight, with one being the most important and eight being the least important. The mean score for each word/phrase is presented below, along with the distribution of their respective scores.

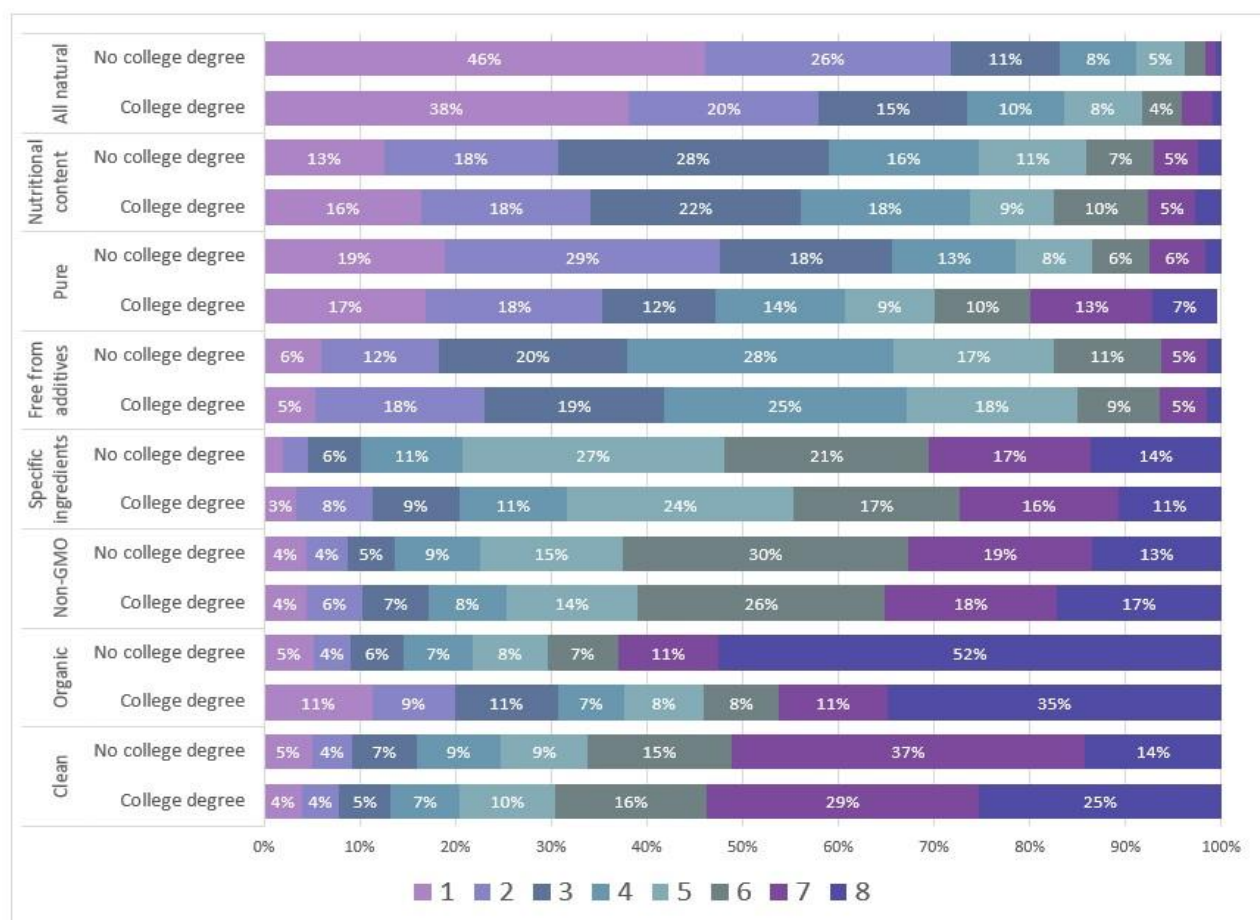
*Figure 1. Evaluation of Important Words and Phrases Mothers Look for When Selecting Food for Their Babies and Toddlers (Average Score and Ranking Percent, Where 1 = Most Important and 8 = Least Important)*



Overall, the two words ranked as the *most important* (1) most frequently were “all natural,” followed by “pure.” In fact, “all natural” was ranked number 1 (the *most important*) 41% of the time and “pure” was ranked number 1 approximately 18% of the time. The nutritional content is also important for mothers when selecting food to feed their young children, with a mean score of 3.5. Conversely, the words often ranked as *least important* were “organic” (mean score = 5.6) and “clean” (mean score = 6.0).

When each word or phrase was analyzed by demographics, we saw that income and education level were consistently statistically significant (alpha level set at 0.05) for most words/phrases. For example, mothers without a college degree ranked the words “all natural” (p-value 0.0018) and “pure” (p-value <0.0001) as *most important* more often than mothers with a college degree. Conversely, mothers with a college degree ranked “organic” (p-value <0.0001) and “specific ingredients” (p-value 0.0011) as more important than mothers without a college degree.

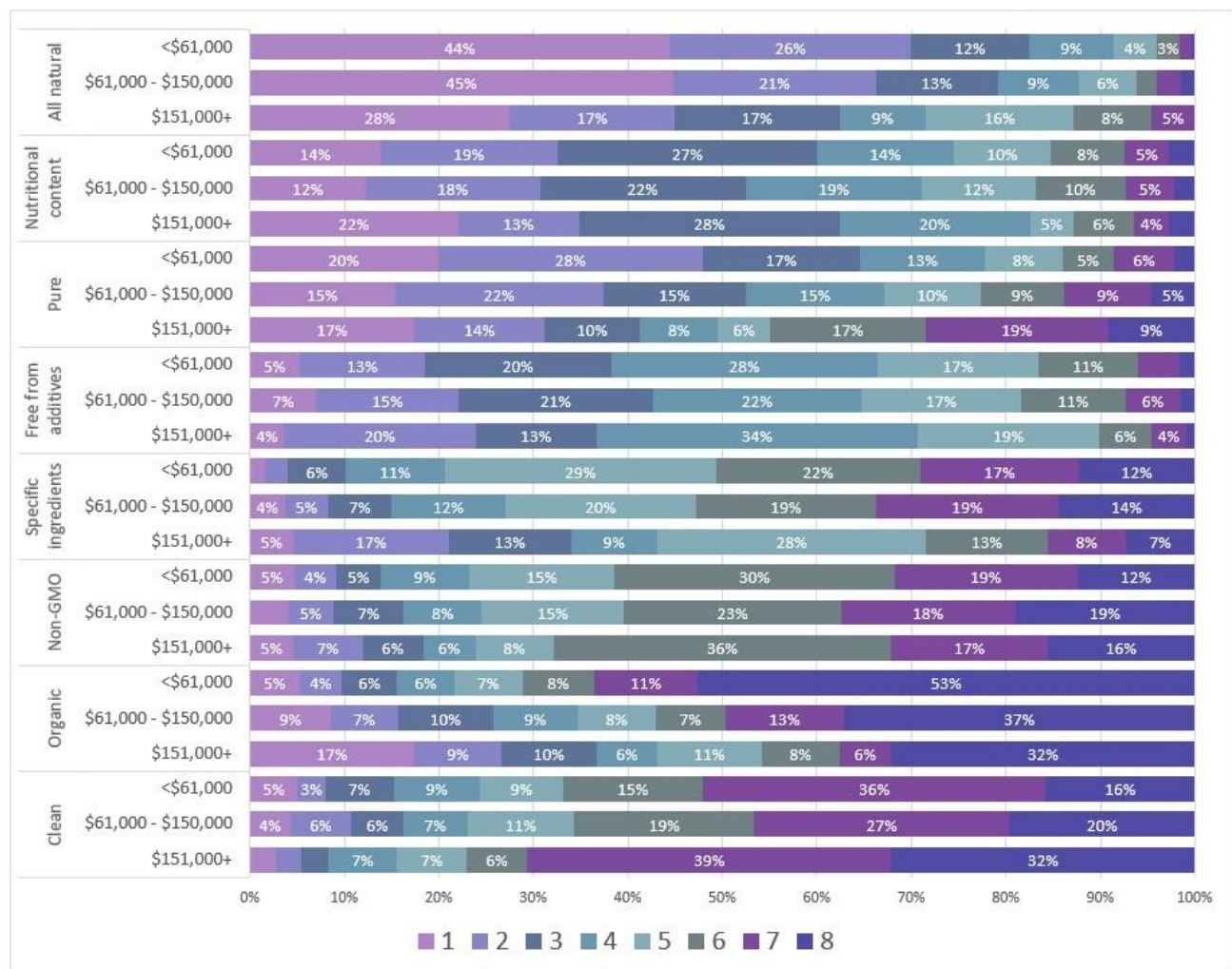
Figure 2. Evaluation of Important Words and Phrases Mothers Look for When Selecting Food for Their Babies and Toddlers by College Degree vs No College Degree (Average Score and Ranking Percent, Where 1 = Most Important and 8 = Least Important)



As seen in Figure 3 below, mothers from lower- and middle-income households were also more likely to rank the words “all natural” (p-value <0.0001) and “pure” (p-value <0.0001) as more important than higher-income households. Specific ingredients (p-value <0.0001), and the word “organic” (p-value <0.0001) were ranked as more important to mothers from higher-income households than their counterparts.

There were no statistically significant variables for the words and phrases “nutritional content,” “free from additives,” and “Non-GMO.” In other words, the difference in rankings for these words are not large enough to believe that demographics are correlated to these differences.

*Figure 3. Evaluation of Important Words and Phrases Mothers Look for When Selecting Food for Their Babies and Toddlers by Income Level (Average Score and Ranking Percent, Where 1 = Most Important and 8 = Least Important)*

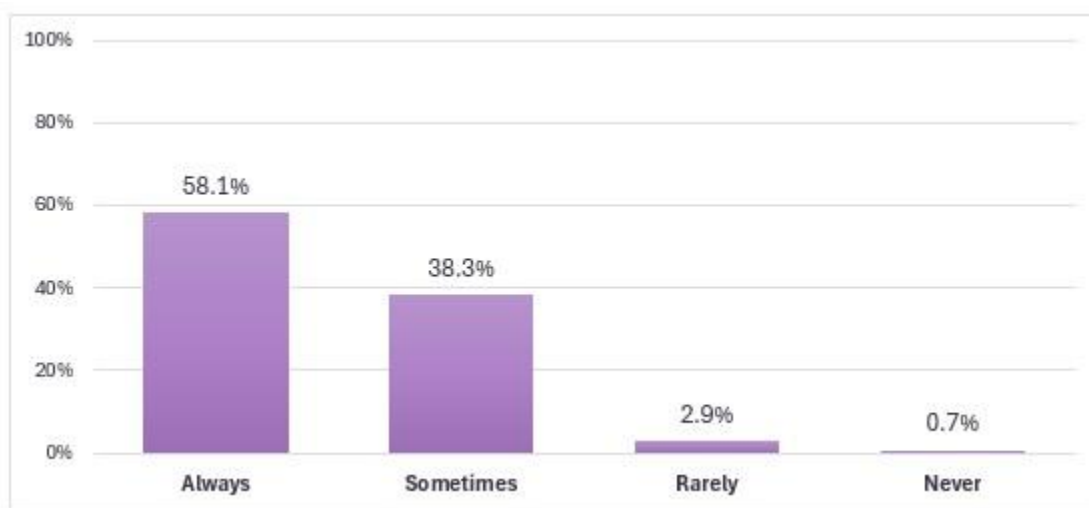


Respondents were subsequently asked a series of questions to better understand how often and why they look for words they deemed as most important. Mothers were asked:

*Looking back at the top three words or phrases you chose in the question above; how often do you look for these words when grocery shopping?*

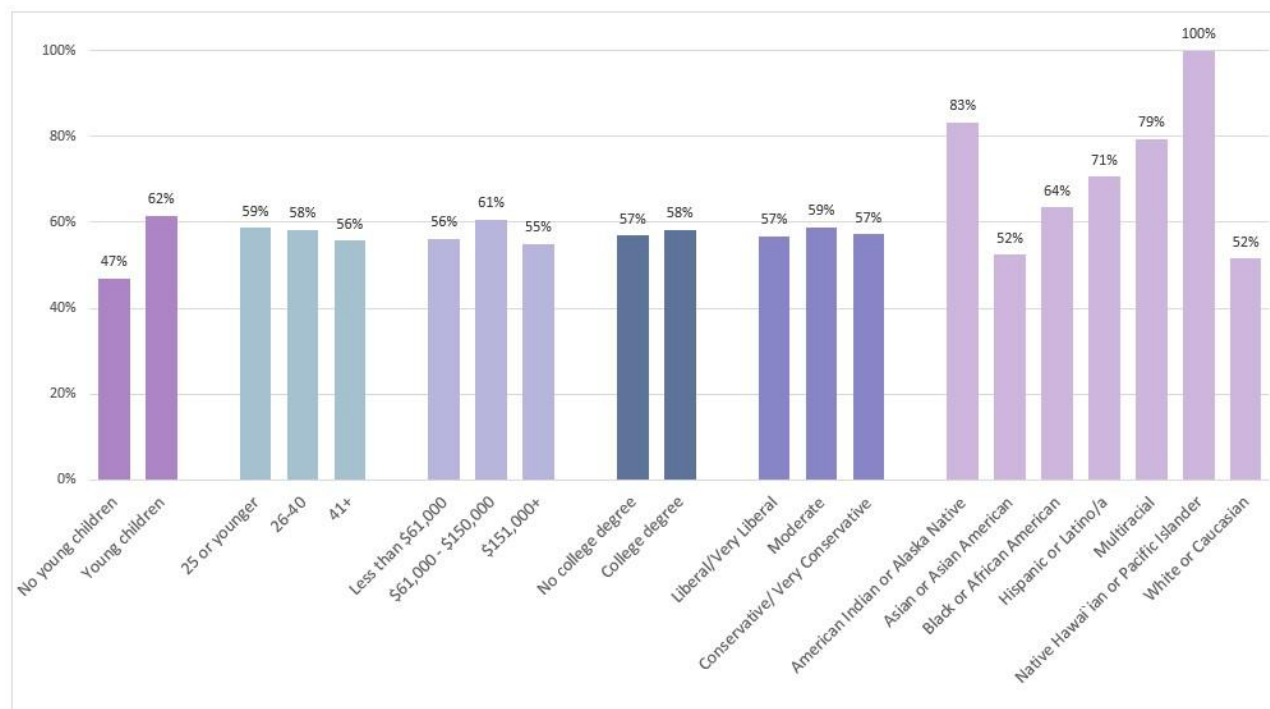
As shown in Figure 4 below, approximately 58% of mothers say they “always” look for these words when grocery shopping and 38% “sometimes” look for these words. Less than 4% of respondents say they rarely or never look for the words they indicated as most important.

*Figure 4. Frequency Respondents Look for Words/Phrases on Food Packaging They Identify as Most Important When Grocery Shopping*



When this question was explored by demographics, we saw that mothers with young children (defined here as 3 years old or younger) more often reported to “always” look for the words they identified important when grocery shopping compared to mothers without young children (62% vs. 47%, respectively). This variable was statistically significant with a p-value of 0.0008, meaning we can reasonably believe that the difference between mothers with young children and without young children is not due to chance alone. Additionally, middle-income households and younger mothers more often said they “always” look for important words or phrases when grocery shopping, however, these variables were not statistically significant. Race/ethnicity was also identified as statistically significant (p-value 0.0063), however, caution should be used when interpreting these results as some of the racial categories had relatively few respondents.

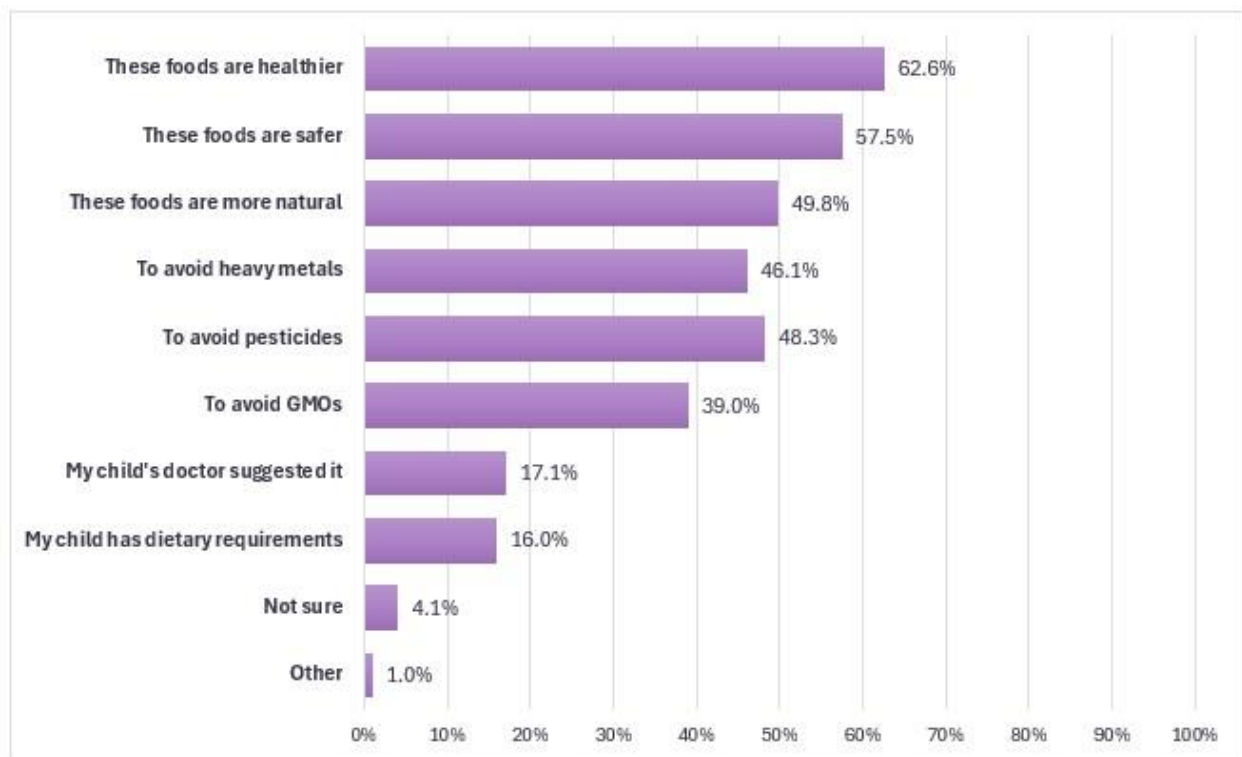
Figure 5. Distribution of Respondents Who Always Look for Words/Phrases on Food Packaging They Identify as Most Important When Grocery Shopping by Demographics



Note: "Young children" was defined as 3 years old or less

Conditional logic was utilized so that mothers who responded with "always," "sometimes," and "rarely" were asked a follow-up question about why they buy foods with the words/phrases they indicated as most important. Mothers who responded with "sometimes," "rarely," and "never" were asked why they *do not* buy food with these words/phrases. Respondents could select all options that applied.

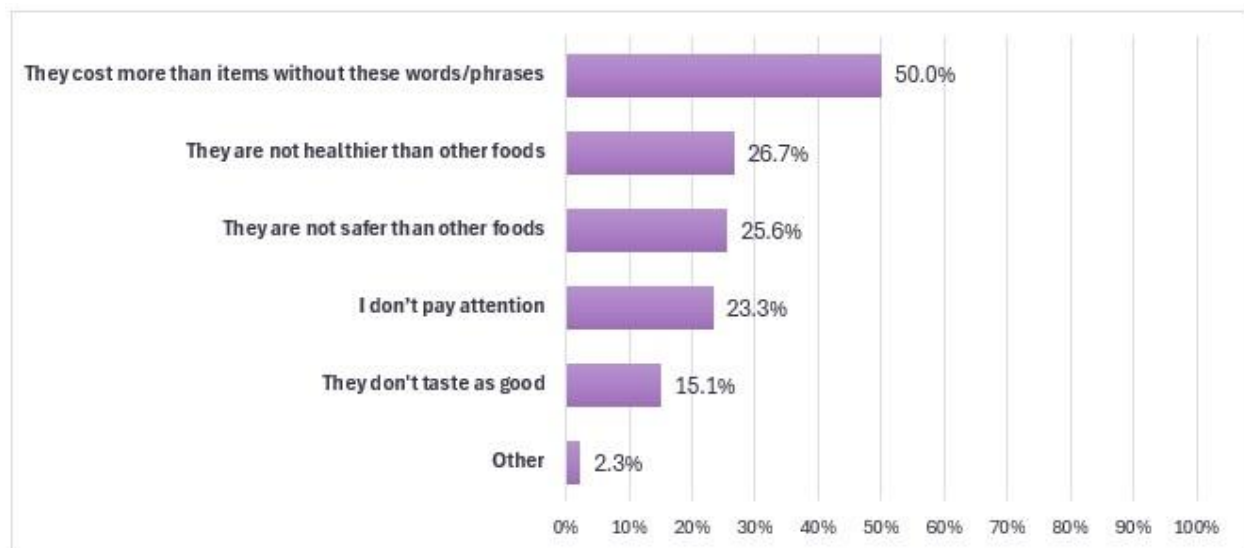
Figure 6. Reasons Mothers Buy Food with The Words/Phrases They Identify as Most Important on Food Packaging



Most mothers surveyed believe that foods with the words/phrases they identified as *most important* are healthier (63%) and safer (58%) than foods without these words/phrases.

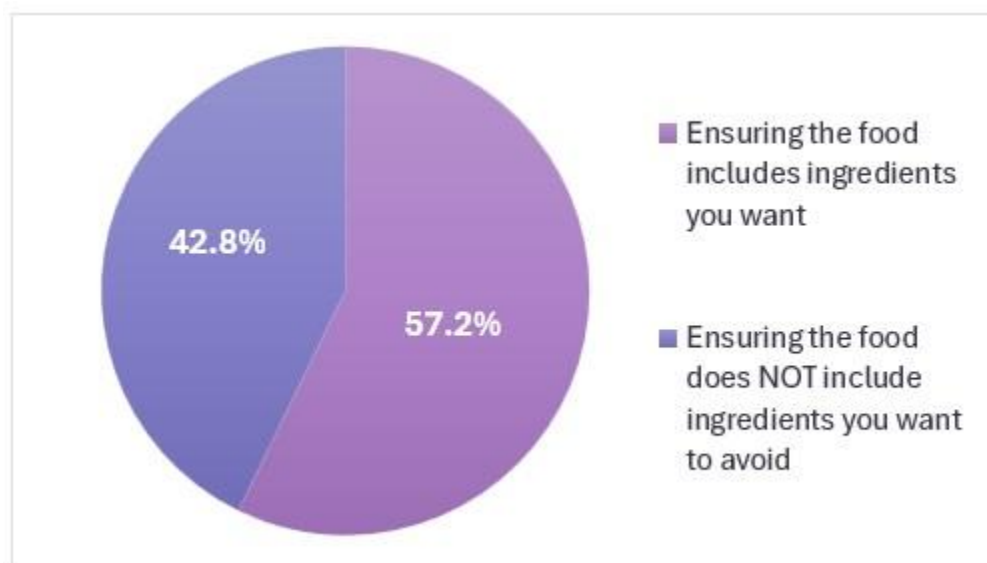
When mothers *do not* buy foods with the words they identified as most important on the packaging, half of respondents (50%) say it is because they perceive food with these words/phrases on the packaging are more expensive than food without these words. Additionally, one out of four mothers believe food without these words *is not* healthier (27%) or safer (26%) than foods with the words they deem as most important.

Figure 7. Reasons Mothers Do Not Buy Food with The Words/Phrases They Identity as Most Important on Food Packaging



Respondents were asked to identify which of the following options were more important to them when buying food for their babies/toddlers: ensuring food includes ingredients they want or ensuring food does not include ingredients they want to avoid.

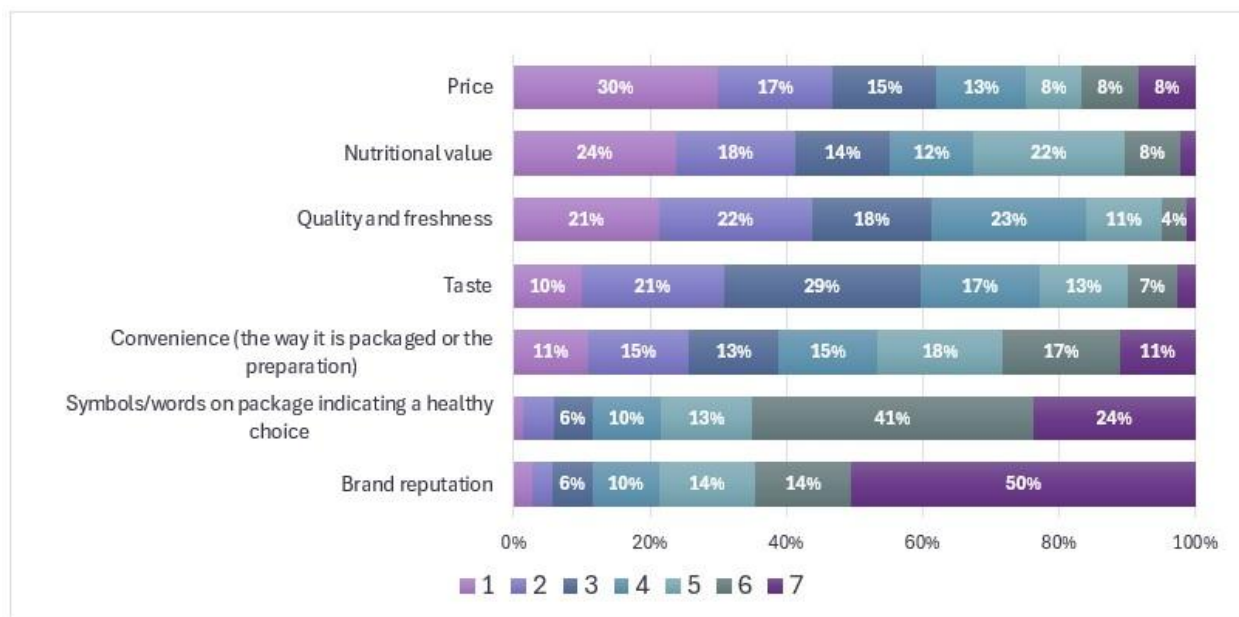
Figure 8. Importance of Ingredients Included or Excluded in Baby/Toddler Food



There was a notable and statistically significant difference between younger and older respondents. Younger mothers tended to feel that it was more important to ensure their baby food contained ingredients they wanted to include, while older mothers were relatively evenly split between the two choices (p-value 0.0476). Mothers without a college degree also believed it was more important to ensure their baby food contained ingredients they wanted to include compared to mothers with a college degree (p-value 0.0009).

We also wanted to know what impacts mothers' decisions when buying baby and toddler food items and how important each factor comparatively ranks. Overall, mothers felt that price was the most important factor when deciding what food to buy for their babies and toddlers, followed by the nutritional value of the food. By far, respondents felt that brand reputation was the least important factor.

*Figure 9. Evaluation of Important Factors Mothers Look for When Deciding to Purchase Food for Their Babies and Toddlers (Average Score and Ranking Percent, Where 1 = Most Important and 7 = Least Important)*



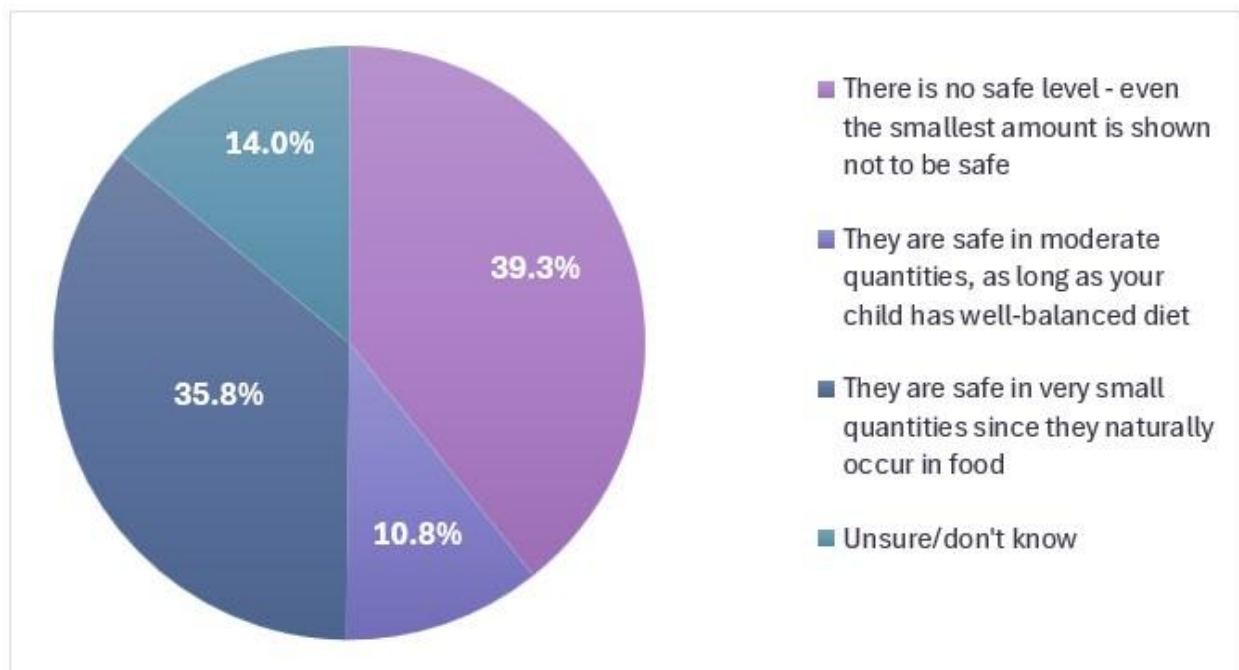
## B. Knowledge of Heavy Metals and Perception of Concern

Currently, the guidance for heavy metal exposure in young children ranges widely depending on the specific metal. For example, no safe blood lead level (BLL) in children has been identified (Centers for Disease Control and Prevention), but the FDA currently uses a toxicological reference value (TRV) of 0.21 to 0.36 micrograms of cadmium per kilogram of body weight per day to be protective to human health (Schaefer et al. 2023). To gauge mothers' perceived knowledge and understanding of "safe" levels heavy metals, we asked respondents:

*Some metals like arsenic, cadmium, lead, and mercury can naturally occur in certain foods. What levels do you consider safe in baby and children's food products?*

Almost 40% of respondents believe there is no safe level of these metals and even the smallest quantities are shown not to be safe. Approximately 36% of mothers said these metals are safe in very small quantities since they occur naturally in food and

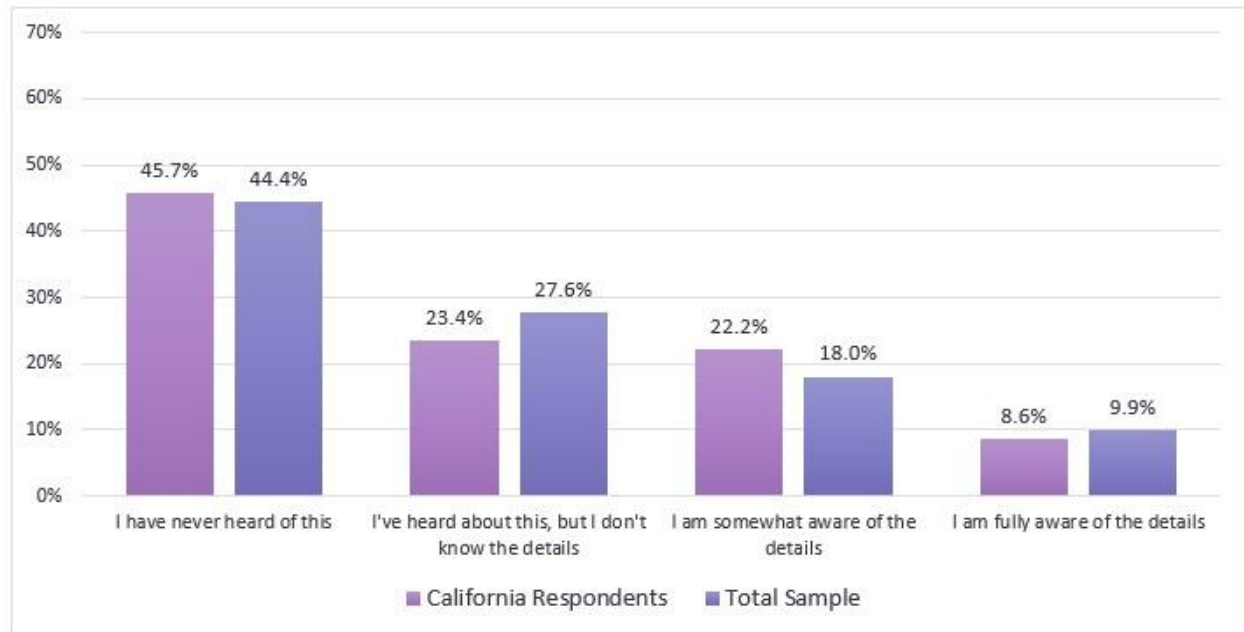
Figure 10. Perception of Safe Levels of Heavy Metals in Baby and Children's Food Products



As previously discussed, California Assembly 899 was signed in 2023 that requires companies who make or sell baby food in California to test their products for arsenic, cadmium, lead, and mercury. Starting in January 2025, baby food manufacturers will be required to make these test results publicly available. We asked mothers to what extent they have heard of this new legislation.

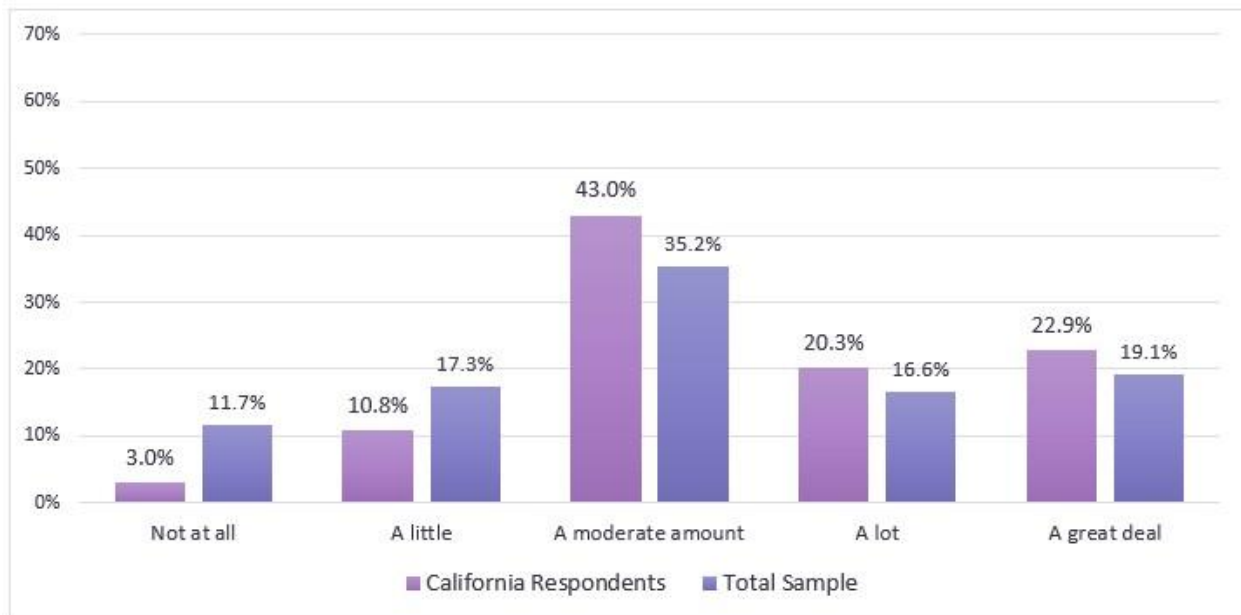
Approximately 44% of mothers surveyed have never heard of AB899 and 28% of mothers have heard about it, but do not know the details. We were interested to know if respondents from California have a different level of awareness of AB899, since the bill passed in the California State Legislature. We found that mothers from California were slightly *less aware* of this bill compared to the total sample of respondents.

Figure 11. Awareness of California Assembly Bill 899



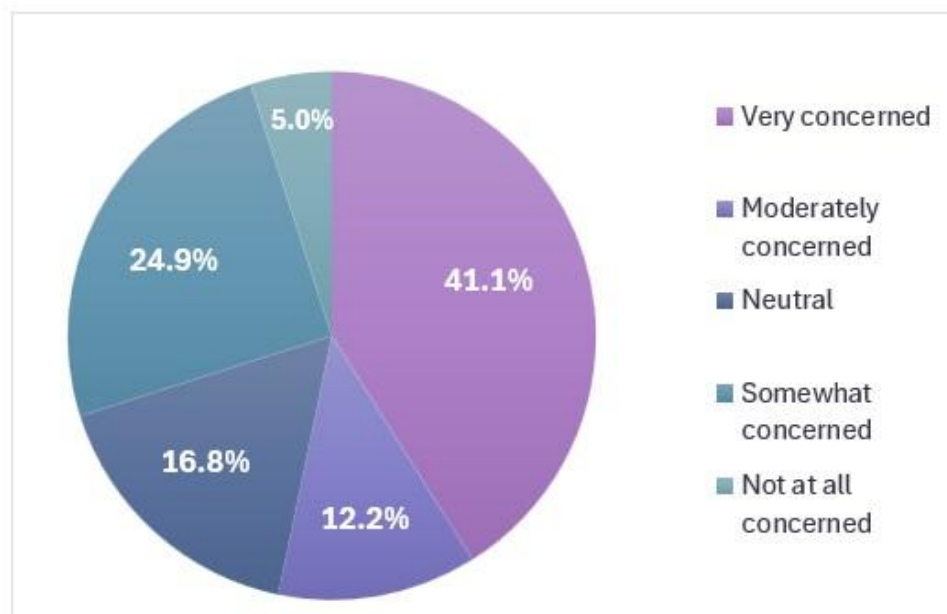
While most mothers have little or no awareness of bill AB899, almost nine in ten mothers (88%) perceive it will have at least some impact on their or their children's daily lives. On average, respondents from California felt the impact of AB899 to their daily lives would be more compared to the total survey sample.

Figure 12. Perceived Impact of California Assembly Bill 899 to Mothers' or Their Children's Daily Lives



When asked about their concern level for the potential presence of heavy metals in baby food, over half of respondents said they were “moderately” or “very concerned.” Relatively few mothers (5%) said they were “not at all concerned.”

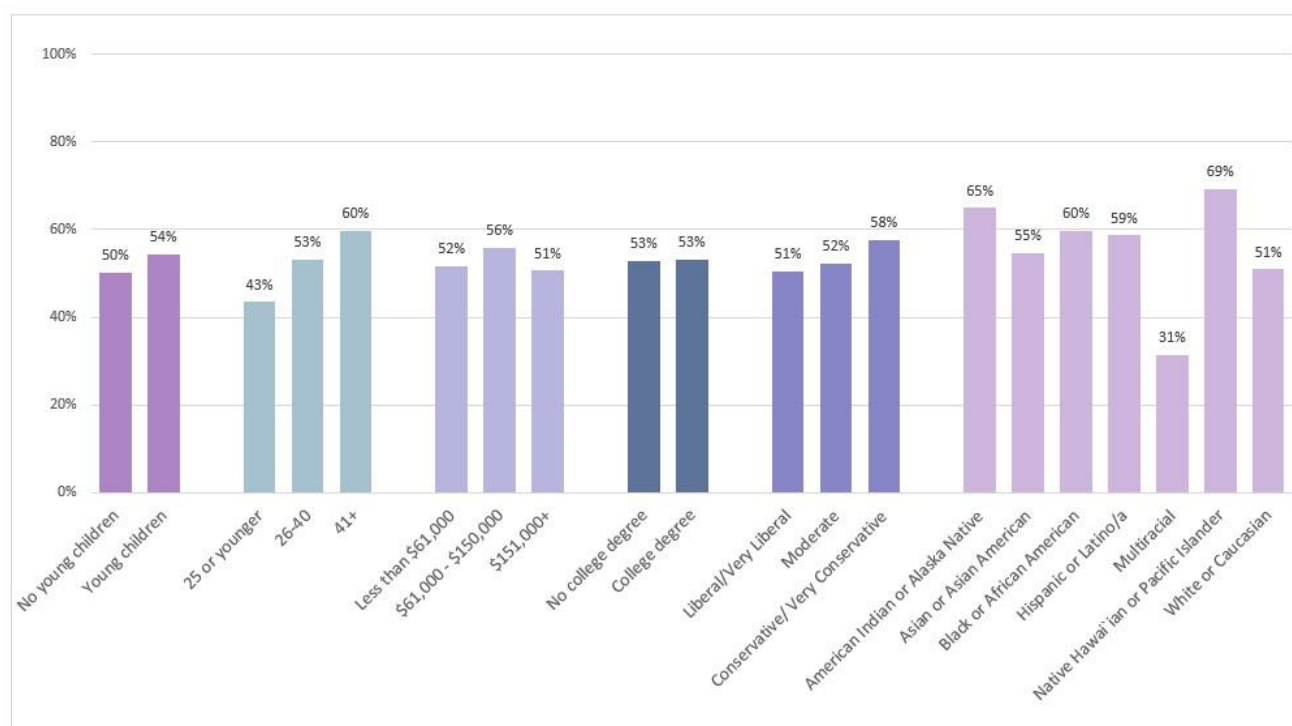
Figure 13. Distribution of Concern Level for the Presence of Heavy Metals in Baby Food Products



Mothers with young children said they were “moderately” or “very concerned” about the presence of heavy metals in baby food only *slightly* more often compared to moms without young children. However, this difference was not statistically significant (p-value 0.3968). This tells us that mothers of children of all ages are worried about the presence of heavy metals in their children’s food.

Respondents who self-identified as political conservative/very conservative, middle-income, and older mothers also more often reported “moderately” or “very concerned” about the presence of heavy metals in baby food, although these variables were also not statistically significant. The only demographic that was shown to be statistically significant was race/ethnicity (p-value 0.0313), but again, caution should be used when interpreting these results as some of the racial categories had relatively few respondents.

*Figure 14. Distribution of Mothers who are Very/Moderately Concerned for the Presence of Heavy Metals in Baby Food Products by Demographics*



Note: “Young children” was defined as 3 years old or less

We asked mothers how likely they would choose a baby food brand if its products were tested and certified to meet standards for harmful levels of heavy metals over other brands.

Overall, Figure 15 shows that two out of three mothers (66%) would likely choose a baby food brand if its products were tested and certified to meet standards for harmful levels of heavy metals over other brands. Only 13% of mothers would be “unlikely” or “very unlikely” to choose these brands over other brands.

Figure 15. Likeliness of Choosing a Baby Food Brand Whose Products Were Tested and Certified to Meet Standards for Harmful Levels of Heavy Metals Over Other Brands

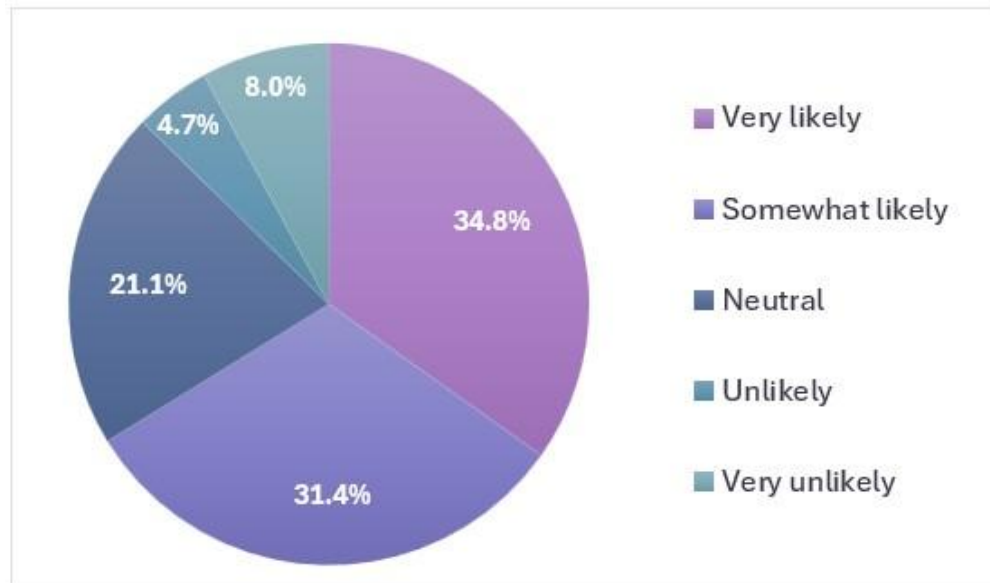
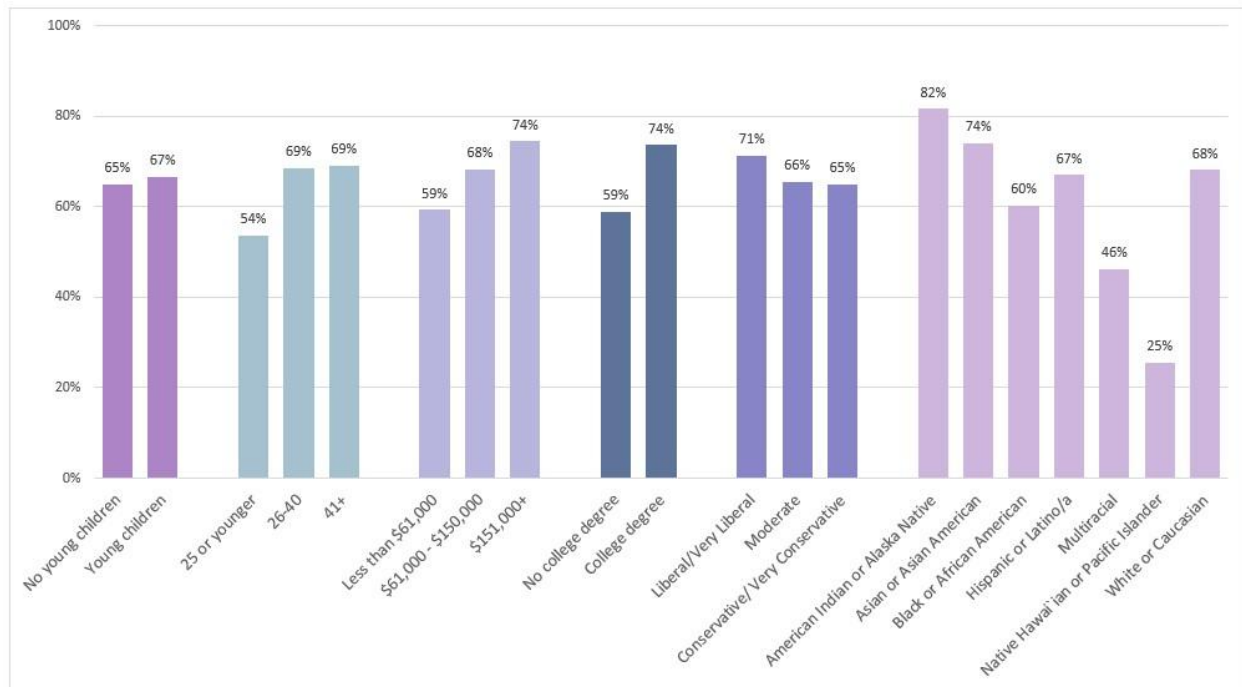


Figure 16 below shows the demographic distribution of mothers who responded “very likely” and “somewhat” likely to choose brands that test and certify their baby food for levels of heavy metals. Younger mothers seemed to be *less likely* (54%) than other age groups (69%) to choose a baby food brand if its products were tested and certified to meet standards for harmful levels of heavy metals over other brands (p-value 0.0026). Conversely, higher-income households and mothers with a college degree were *more likely* to choose a baby food brand if its products were tested and certified to meet standards for harmful levels of heavy metals than their counterparts. Mother’s age (p-value 0.0026), income (p-value 0.0035), and education level (p-value <0.0001) were all shown to be statistically significant demographic variables.

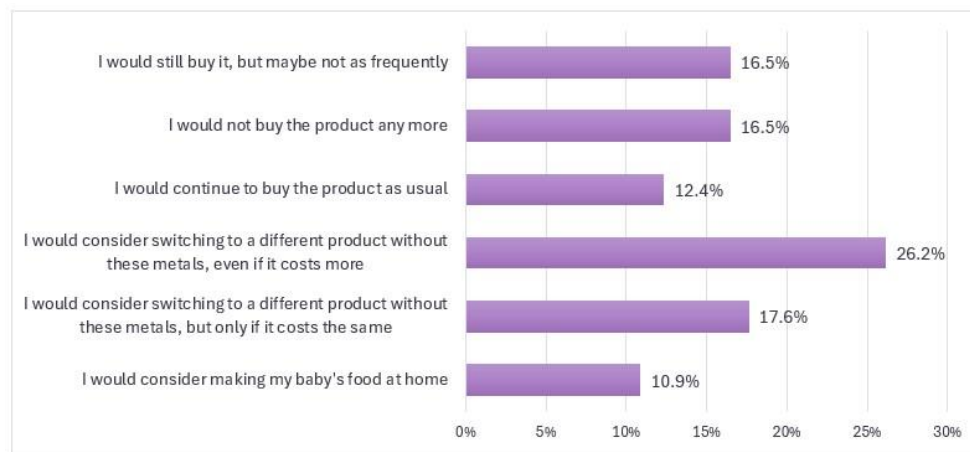
Figure 16. Likeliness of Choosing a Baby Food Brand Whose Products Were Tested and Certified to Meet Standards for Harmful Levels of Heavy Metals Over Other Brands by Demographics (Very Likely and Somewhat Likely)



Note: "Young children" was defined as 3 years old or less

We also wanted to know the extent respondents would continue to buy a food item they typically purchase if they were made aware that it contained very low levels of arsenic, cadmium, lead, or mercury. Approximately 17% of mothers said they would no longer buy the product at all, and almost 44% of mothers said they would consider switching to a different food product without these metals. Specifically, almost three in ten mothers (26%) said they would consider switching even if the product without low levels of these metals cost more. Only 12% of respondents said they would continue to buy the product at the same frequency.

Figure 17. Extent Mothers Would Continue to Buy a Food Item with Very Low Levels of Arsenic, Cadmium, Lead, or Mercury



Finally, we asked mothers to use a slider bar to rate their concern level about the following metals in relation to their child's health: arsenic, cadmium, lead, and mercury. The slider bar scale began at one (the least concern) and ended at ten (the most concern). Mothers expressed the most concern with lead, which had an average score of 7.9. In fact, over 50% of the time, mothers gave lead a score of nine or a ten, with a score of 10 being the most concerning. Both arsenic and mercury had an average concern score slightly lower than lead, with 7.2 and 7.5 respectively. Respondents expressed the least amount of concern over cadmium. However, the average score for cadmium was 6.2, indicating that mothers do have some concern with this metal in relation to their children's health.

Figure 18. Evaluation of Mothers' Concern Level for Arsenic, Cadmium, Lead, and Mercury in Relation to Their Children's Health (1 = Least Concern, 10 = Most Concern)

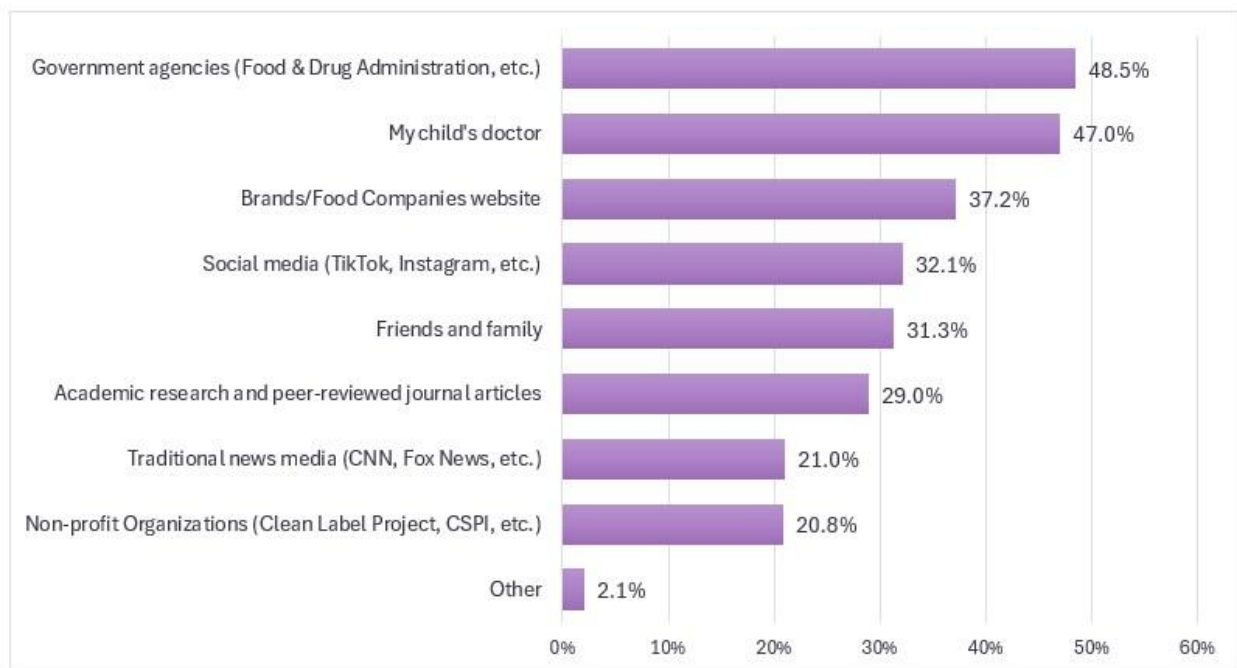


## C. Sources of Information on Nutrition, Health, and Food Regulations

Information (and misinformation) on health and nutrition is abundant. One study found that nutrition and health related information online and on social media sites had relatively low accuracy and were of poor quality (Denniss E, Lindberg R, & McNaughton SA 2023). To better understand where mothers find information, we asked respondents to select all the places they most frequently look for information on nutrition, health, and food regulations.

Approximately half of respondents said they most frequently get their information on nutrition, health, and food regulations from government agencies like the Food & Drug Administration (FDA) (49%) and their child's doctor (47%). Interestingly, only one in five mothers (21%) get their information from traditional news media sources.

*Figure 19. Distribution of Places Mothers Most Frequently Look for Information on Nutrition, Health, and Food Regulations*



We were interested to know if there was a difference in where mothers look for sources of information on nutrition, health, and food regulations based on their level of concern for heavy metals in baby food. We found that regardless of concern level, government agencies and their child's doctor were still the two most frequent sources mothers look for information, although the differences are not statistically significant.

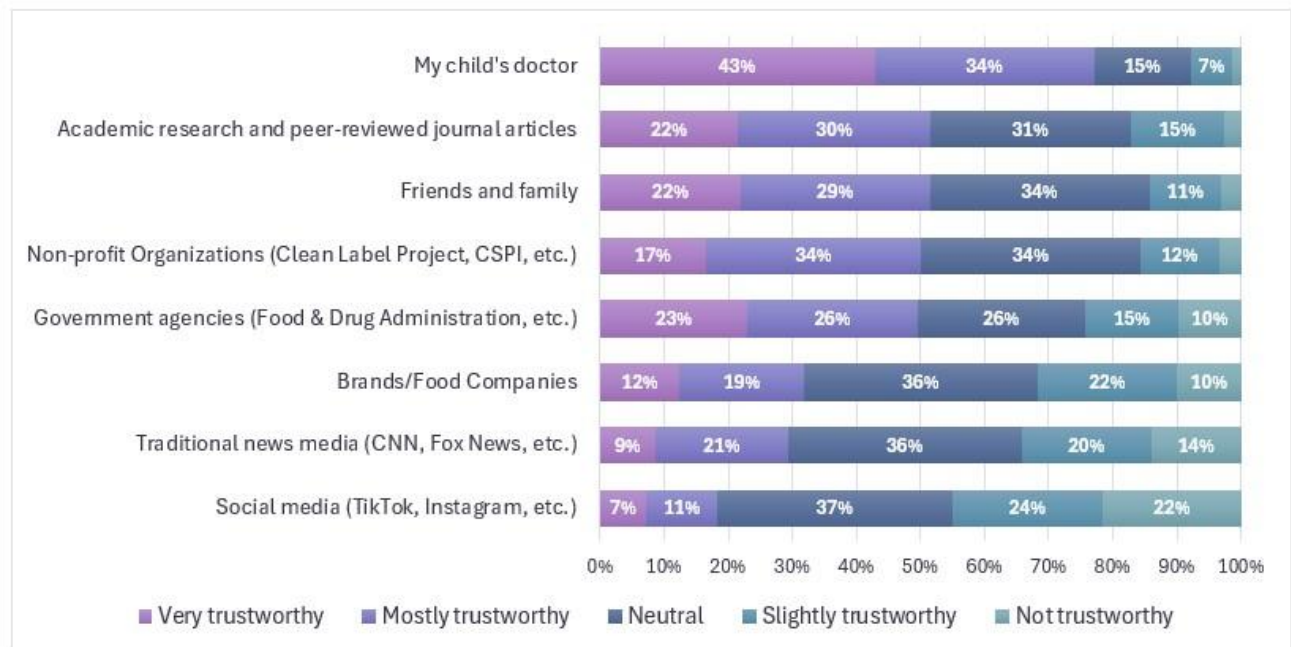
The only source of information that had a statistically significant difference by concern level was academic research and peer-reviewed journals. Approximately 32% of mothers with no/low concern about heavy metal levels reported looking for health and nutrition information from academic research and peer-reviewed journals, while only 20% of mothers who were neutrally concerned, and 31% of mothers who were moderately/highly concerned looked to this source for information.

*Figure 20. Distribution of Information Sources on Nutrition, Health, and Food Regulations by Heavy Metal Concern Level (Frequency, Percent, and P-Value)*

|                                                                   |          | No/Low Concern | Neutral | Moderate/High Concern | TOTAL | p-value |
|-------------------------------------------------------------------|----------|----------------|---------|-----------------------|-------|---------|
| Government agencies (Food & Drug Administration, etc.)            | <i>n</i> | 139            | 68      | 264                   | 471   | 0.1627  |
|                                                                   | Column % | 47.8%          | 41.5%   | 50.9%                 | 48.4% |         |
|                                                                   | Total %  | 14.3%          | 7.0%    | 27.1%                 | 48.4% |         |
| Academic research and peer-reviewed journal articles              | <i>n</i> | 92             | 32      | 158                   | 282   | 0.0407  |
|                                                                   | Column % | 31.6%          | 19.5%   | 30.4%                 | 29.0% |         |
|                                                                   | Total %  | 9.4%           | 3.3%    | 16.2%                 | 29.0% |         |
| Social media (Facebook, TikTok, Instagram, etc.)                  | <i>n</i> | 86             | 55      | 171                   | 312   | 0.6909  |
|                                                                   | Column % | 29.6%          | 33.5%   | 32.9%                 | 32.0% |         |
|                                                                   | Total %  | 8.8%           | 5.6%    | 17.6%                 | 32.0% |         |
| Brands/Food Companies website                                     | <i>n</i> | 93             | 52      | 219                   | 364   | 0.117   |
|                                                                   | Column % | 32.0%          | 31.7%   | 42.2%                 | 37.4% |         |
|                                                                   | Total %  | 9.5%           | 5.3%    | 22.5%                 | 37.4% |         |
| Traditional news media (CNN, Wall Street Journal, Fox News, etc.) | <i>n</i> | 45             | 35      | 125                   | 205   | 0.1093  |
|                                                                   | Column % | 15.5%          | 21.3%   | 24.1%                 | 21.0% |         |
|                                                                   | Total %  | 4.6%           | 3.6%    | 12.8%                 | 21.0% |         |
| Non-profit Organizations (Clean Label Project, CSPI, etc.)        | <i>n</i> | 61             | 22      | 121                   | 204   | 0.0487  |
|                                                                   | Column % | 21.0%          | 13.4%   | 23.3%                 | 20.9% |         |
|                                                                   | Total %  | 6.3%           | 2.3%    | 12.4%                 | 20.9% |         |
| My child's doctor                                                 | <i>n</i> | 141            | 69      | 249                   | 459   | 0.4624  |
|                                                                   | Column % | 48.5%          | 42.1%   | 48.0%                 | 47.1% |         |
|                                                                   | Total %  | 14.5%          | 7.1%    | 25.6%                 | 47.1% |         |
| Friends and family                                                | <i>n</i> | 90             | 46      | 170                   | 306   | 0.9677  |
|                                                                   | Column % | 30.9%          | 28.0%   | 32.8%                 | 31.4% |         |
|                                                                   | Total %  | 9.2%           | 4.7%    | 17.5%                 | 31.4% |         |
| TOTAL                                                             |          | 291            | 164     | 519                   | 974   |         |

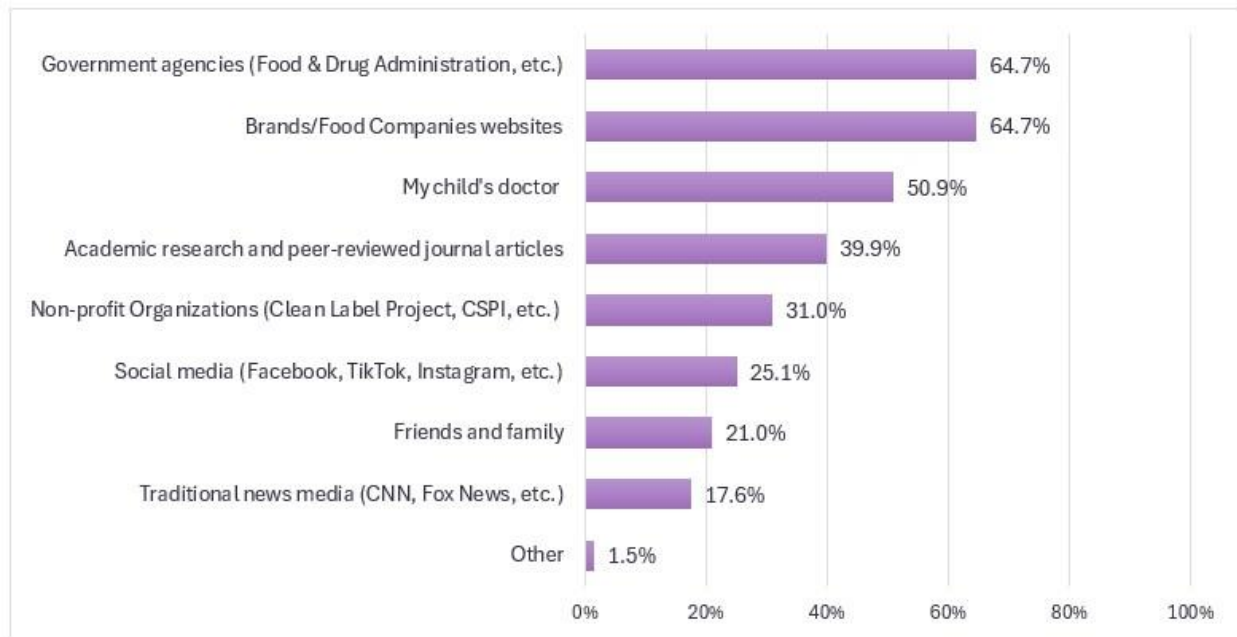
Mothers were also asked to rank the sources of information for trustworthiness. Overall, mothers felt that the most trustworthy sources of information are their child's doctor and academic research and peer-reviewed journals. In fact, 77% of mothers said that their child's doctor was very or mostly trustworthy and 52% of mothers said that academic research and peer-reviewed journals were very or mostly trustworthy. Only 30% of respondents thought traditional news media sources were very or mostly trustworthy and 18% thought social media sites were very or mostly trustworthy.

Figure 21. Evaluation of Trustworthiness of Sources of Information on Nutrition, Health, and Food Regulations



We also asked mothers where they would look if they wanted additional *trusted* information on heavy metals. While mothers previously said the sources they trust the most for nutrition and health were their child's doctor and academic research, the places they would seek trusted information on heavy metals is actually government agencies and brands/food company websites. It is also interesting that mothers had relatively high trust for their friends and family when it comes to information on health and nutrition (see Figure 21, above), but only one in five mothers would seek information from them when it comes to heavy metals (see Figure 22, below).

Figure 22. Distribution of Sources of Information Mothers Would Look to If They Wanted Additional Trusted Information on Heavy Metals



## D. Open-ended Questions

Mothers were optionally asked to list up to three baby food brands they are currently feeding their babies. The top ten brands listed are shown in Figure 23 below. By far, Gerber brand baby food was more frequently listed, followed by Beech-Nut and Happy Baby Organics.

Figure 23. Current Baby Food Brands Respondents Reported Currently Feeding Their Babies (Open-Ended)

|                     | Number of Responses |
|---------------------|---------------------|
| Gerber              | 563                 |
| Beech-Nut           | 181                 |
| Happy Baby Organics | 69                  |
| Similac             | 56                  |
| Once Upon A Farm    | 55                  |
| Enfamil             | 50                  |
| Earth's Best        | 49                  |
| Parent's Choice     | 48                  |
| Little Spoons       | 33                  |
| Great Value         | 29                  |

We also asked mothers an optional, open-ended question about anything else they wanted to share with industry leaders about their baby/toddler food needs. Verbatim responses were thematically grouped. Overall, the majority of responding mothers said they worried about the safety of ingredients in baby food. A mother with young children from Oregon said “I don’t understand why we are so far behind when it comes to the harmful things allowed in any food, let alone baby food.”

Many mothers stated that they opt to make the majority of their own baby food because they can not be sure store-bought baby food is safe. In fact, a mother with young children from New York said, “I cook 98% of my children’s food. Don’t trust baby food companies.”

Some mothers also thought that it would be beneficial to increase transparency in food labels and ingredients. Mothers would then be able to make more informed-based decisions when it comes to their children’s food and nutrition. Other mothers thought that the labels and ingredients should be easier to understand. For example, a mother of young children from Washington said “ In the nutritional section, list the ingredients in plain language.”

Based on some of the responses, it was also clear that some mothers believe contaminants are intentionally added to baby foods instead of occurring naturally, as in the case with many heavy metals. An Arkansas mother of young children said “Why would a company CHOOSE to put harmful things into a precious baby’s food.”

*Figure 24. Responses to Open-Ended Question: “Is There Anything Else You’d Like to Share with Industry Leaders About Your Baby/Toddler Food Needs?”*

|                                             | Number of Responses |
|---------------------------------------------|---------------------|
| Safety of ingredients                       | 25                  |
| Homemade food                               | 14                  |
| Use more organic foods                      | 8                   |
| Increase transparency (ingredients, labels) | 8                   |
| Increase regulations and testing            | 6                   |
| Use more natural/whole foods                | 6                   |
| Nutritional content                         | 6                   |
| Improve taste                               | 5                   |
| Low brand/company trust                     | 4                   |
| Limit/remove artificial dyes                | 3                   |
| Make more affordable                        | 3                   |
| Decrease added sugars                       | 3                   |
| Use more fresh fruits/veggies               | 2                   |
| Other                                       | 2                   |
| Make safe/healthy food more convenient      | 1                   |
| Increase awareness of metals in food        | 1                   |

## E. Demographics

Demographic questions were asked to ensure the sample population was representative of the US population. The survey data were weighted to conform with US Census data by education, race/ethnicity, income, and region.

Figure 25. Frequencies of Demographics

|                              |                                      | Number of Respondents | Percent (%) |
|------------------------------|--------------------------------------|-----------------------|-------------|
| <b>Number of Children</b>    | 1                                    | 303                   | 32.0%       |
|                              | 2                                    | 332                   | 35.0%       |
|                              | 3                                    | 184                   | 19.4%       |
|                              | 4                                    | 76                    | 8.0%        |
|                              | 5+                                   | 53                    | 5.6%        |
| <b>Children's Ages</b>       | 0-6 months                           | 198                   | 20.3%       |
|                              | 7-12 months                          | 173                   | 17.8%       |
|                              | 1-3 years                            | 478                   | 49.1%       |
|                              | 4-7 years                            | 444                   | 45.6%       |
|                              | 8-13 years                           | 274                   | 28.1%       |
|                              | 14+                                  | 171                   | 17.6%       |
| <b>Race/Ethnicity</b>        | American Indian or Alaska Native     | 12                    | 1.3%        |
|                              | Asian or Asian American              | 61                    | 6.4%        |
|                              | Black or African American            | 137                   | 14.5%       |
|                              | Hispanic or Latino/a                 | 143                   | 15.1%       |
|                              | Multiracial                          | 29                    | 3.1%        |
|                              | Native Hawai`ian or Pacific Islander | 3                     | 0.3%        |
|                              | White or Caucasian                   | 563                   | 59.3%       |
| <b>Political Affiliation</b> | Very Liberal                         | 103                   | 10.9%       |
|                              | Liberal                              | 168                   | 17.7%       |
|                              | Moderate                             | 400                   | 42.1%       |
|                              | Conservative                         | 164                   | 17.3%       |
|                              | Very Consercative                    | 93                    | 9.8%        |
|                              | Other                                | 21                    | 2.3%        |

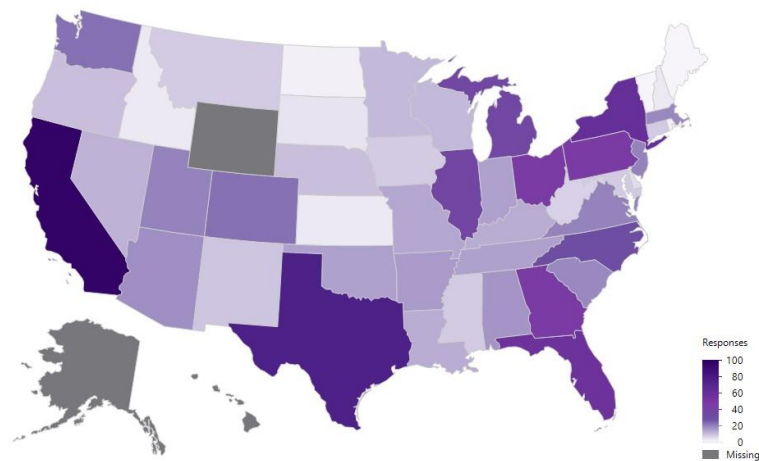
Figure 25. Frequencies of Demographics, Continued

|                                |                                          | Number of Respondents | Percent (%) |
|--------------------------------|------------------------------------------|-----------------------|-------------|
| <b>Education Level</b>         | 12th grade or less                       | 95                    | 10.0%       |
|                                | Graduated from high school or equivalent | 186                   | 19.6%       |
|                                | Some college, but no degree              | 182                   | 19.2%       |
|                                | Associate degree                         | 90                    | 9.5%        |
|                                | Bachelor's degree                        | 246                   | 25.9%       |
|                                | Advanced degree                          | 151                   | 15.9%       |
| <b>Mothers' Age</b>            | Under 20                                 | 12                    | 1.2%        |
|                                | 20-25                                    | 126                   | 13.3%       |
|                                | 26-30                                    | 168                   | 17.7%       |
|                                | 31-35                                    | 228                   | 24.1%       |
|                                | 36-40                                    | 212                   | 22.4%       |
|                                | 41-45                                    | 119                   | 12.6%       |
|                                | 46+                                      | 82                    | 8.7%        |
| <b>Annual Household Income</b> | \$0 - 30,000                             | 166                   | 17.6%       |
|                                | \$31,000 - \$60,000                      | 190                   | 20.0%       |
|                                | \$61,000 - \$100,000                     | 204                   | 21.5%       |
|                                | \$101,000 - \$150,000                    | 161                   | 17.0%       |
|                                | \$151,000 - \$200,000                    | 90                    | 9.5%        |
|                                | \$200,000+                               | 137                   | 14.4%       |
| <b>US Region</b>               | Northeast                                | 161                   | 17.0%       |
|                                | South                                    | 368                   | 38.8%       |
|                                | Midwest                                  | 195                   | 20.6%       |
|                                | West                                     | 225                   | 23.7%       |

Figure 26. Distribution of Respondents' States of Residence

| State         | Responses | Percent | State           | Responses  | Percent     |
|---------------|-----------|---------|-----------------|------------|-------------|
| Alabama       | 17        | 1.8%    | Nevada          | 12         | 1.2%        |
| Arizona       | 18        | 1.9%    | New Hampshire   | 3          | 0.3%        |
| Arkansas      | 16        | 1.6%    | New Jersey      | 20         | 2.1%        |
| California    | 98        | 10.3%   | New Mexico      | 9          | 0.9%        |
| Colorado      | 23        | 2.4%    | New York        | 61         | 6.4%        |
| Connecticut   | 8         | 0.8%    | North Carolina  | 31         | 3.2%        |
| Delaware      | 5         | 0.6%    | North Dakota    | 2          | 0.2%        |
| Florida       | 57        | 6.0%    | Ohio            | 46         | 4.8%        |
| Georgia       | 46        | 4.8%    | Oklahoma        | 15         | 1.6%        |
| Idaho         | 3         | 0.3%    | Oregon          | 10         | 1.0%        |
| Illinois      | 37        | 3.9%    | Pennsylvania    | 46         | 4.9%        |
| Indiana       | 15        | 1.5%    | Rhode Island    | 2          | 0.3%        |
| Iowa          | 8         | 0.8%    | South Carolina  | 19         | 2.0%        |
| Kansas        | 3         | 0.3%    | South Dakota    | 4          | 0.4%        |
| Kentucky      | 13        | 1.3%    | Tennessee       | 15         | 1.6%        |
| Louisiana     | 13        | 1.4%    | Texas           | 76         | 8.0%        |
| Maine         | 1         | 0.1%    | Utah            | 20         | 2.1%        |
| Maryland      | 8         | 0.8%    | Vermont         | 1          | 0.1%        |
| Massachusetts | 19        | 2.1%    | Virginia        | 20         | 2.1%        |
| Michigan      | 36        | 3.8%    | Washington      | 23         | 2.5%        |
| Minnesota     | 11        | 1.1%    | Washington D.C. | 2          | 0.2%        |
| Mississippi   | 8         | 0.8%    | West Virginia   | 7          | 0.8%        |
| Missouri      | 14        | 1.5%    | Wisconsin       | 11         | 1.1%        |
| Montana       | 8         | 0.9%    |                 |            |             |
| Nebraska      | 10        | 1.0%    | <b>TOTAL</b>    | <b>949</b> | <b>100%</b> |

Figure 27. Distribution Map of Respondents' States of Residence



# Key Findings

**Nearly all moms (almost 97%) look for terms like "all natural," "pure," or "organic" when purchasing baby and toddler food, associating these labels with health and safety.**

Across the United States, mothers are focused on providing the best care and nutrition for their children. Mothers look for labels associated with health and safety. Thus, labels are highly influential in purchasing decisions, with 58% of mothers 'always' looking for these words when shopping. Terms such as 'organic' and 'clean' are less frequently prioritized, suggesting varying views on what contributes to children's health and safety.

**While the majority of moms are concerned about heavy metals in baby food, nearly half (44%) of moms have never heard of AB 899.**

While nearly half (44%) of mothers have never heard of AB 899, a California law mandating baby food manufacturers to test for heavy metals and publicly share results, most mothers (88%) believe such legislation could significantly impact their lives. This disconnect between awareness and perceived impact underscores a gap in community education efforts by legislators. Many mothers are deeply concerned about the presence of heavy metals in baby food, with 60% expressing moderate to high concern, while only 28% have heard of AB 899, signaling a need for greater awareness efforts.

**Despite limited awareness of AB 899, the majority (88 percent) of moms feel the legislation could impact their daily lives.**

Despite widespread concerns over heavy metals in baby food, nearly half are unaware of AB 899, although 88% believe the legislation could have an impact on their daily lives. This highlights a gap in awareness that could be addressed to better inform and empower consumers. Mothers prioritize health and safety when selecting baby food, with almost 97% seeking labels such as "all natural," "pure," or "organic." Transparency in food labels and reporting of contaminants could significantly shift the way mothers shop.

# Summary and Conclusion

Count on Mothers collaborated with the Clean Label Project to discover Mother's biggest concerns about heavy metals in children's food. This study builds off the Count on Mother's October study on the Safe School Meals Act, and the prior June and July reports that revealed food issues (nutrition, access, and safety) and industry manufacturers as some of mothers' greatest concerns. In addition, this study reflects current legislative initiatives to make testing and labeling of heavy metals in children's food mandatory. We conducted a national survey to understand how these issues and initiatives impact mothers. Close to 1,000 mothers across the United States participated.

Overall, the survey reveals that mothers prioritize certain key phrases on food packaging, with "all natural" and "pure" being the most frequently ranked as the most important. Nutritional content is also significant but ranks lower, indicating that while health-conscious labels are crucial, other factors such as ingredient transparency and perceived quality play an influential role. Interestingly, demographic factors such as income and education level significantly impact mothers' preferences, with lower-income and less-educated mothers tending to prioritize the words "all natural" and "pure," while more educated and higher-income mothers lean toward words like "organic" and "specific ingredients."

The survey also highlights growing concern about the potential presence of heavy metals like lead, arsenic, cadmium, and mercury in baby food, with over half of the respondents expressing moderate to high levels of concern. While awareness of new legislation such as California's AB899 remains relatively low, most mothers still perceive it to have a significant impact on their daily lives. Despite limited awareness, a large majority of respondents stated they would prefer baby food brands that have been tested and certified to meet safety standards for harmful metals. Demographic factors, including income, age, and education, influenced this preference, with younger, lower-income, and less-educated mothers less likely to choose brands with such certifications.

Mothers also expressed a high level of trust in government agencies, doctors, and academic research as their primary sources of information on health, nutrition, and food regulations. However, when it comes to seeking information specifically about heavy metals, mothers were more inclined to rely on government sources and food company websites. Many mothers noted they also looked to their friends and family for trusted information. Trust in traditional news media and social media was notably lower, with many mothers preferring direct sources such as their child's doctor or government agencies for accurate and reliable information. This suggests

that trust in sources is pivotal when discussing sensitive topics like food safety and contaminants.

Finally, responses to open-ended questions revealed a strong desire for greater transparency in food labeling and ingredients, with many mothers expressing concerns over the safety and quality of store-bought baby food. Some mothers even choose to prepare homemade baby food to avoid perceived risks associated with commercial products. There is a sense of mistrust toward baby food companies, with some mothers questioning the intentional inclusion of harmful substances in food products meant for vulnerable children.

In summary, the findings underscore the importance of labeling and its influence on purchasing decisions; the widespread concern over heavy metals in baby food; the lack of awareness of current and suggested legislative initiatives despite beliefs that legislation will impact the lives of families. The desire for more accessible and understandable information, coupled with a growing demand for safer food products, suggests that the food industry may need to adjust its practices to meet consumer expectations for both quality and transparency; and current legislation, with proper education and communication campaigns, may garner strong support amongst US mothers.

# Citations

Bair EC. A Narrative Review of Toxic Heavy Metal Content of Infant and Toddler Foods and Evaluation of United States Policy. *Front Nutr.* 2022 Jun 27;9:919913. doi: 10.3389/fnut.2022.919913. PMID: 35832055; PMCID: PMC9271943.

Centers for Disease Control and Prevention. (n.d.-a). *About childhood lead poisoning prevention*. Centers for Disease Control and Prevention.  
[https://www.cdc.gov/lead-prevention/about/index.html#:~:text=CDC%20uses%20a%20blood%20lead,deciliter%20\(%C2%B5g%2FdL\).](https://www.cdc.gov/lead-prevention/about/index.html#:~:text=CDC%20uses%20a%20blood%20lead,deciliter%20(%C2%B5g%2FdL).)

Closer to Zero: Reducing Childhood Exposure to Contaminants from Foods. 2024 Dec 3. U.S. Food and Drug Administration  
<https://www.fda.gov/food/environmental-contaminants-food/closer-zero-reducing-childhood-exposure-contaminants-foods>

Davis MA, Gilbert-Diamond D, Karagas MR, Li Z, Moore JH, et al. (2014) A Dietary-Wide Association Study (DWAS) of Environmental Metal Exposure in US Children and Adults. *PLoS ONE* 9(9): e104768. doi:10.1371/journal.pone.0104768

Denniss E, Lindberg R, & McNaughton SA. (2023, July). Quality and accuracy of online nutrition-related information: A systematic review of Content Analysis Studies. *Public health nutrition*.  
<https://pmc.ncbi.nlm.nih.gov/articles/PMC10346027/#:~:text=Quality%20and%20accuracy%20results,evaluated%20these%20topics%20was%20small.>

Schaefer HR, Flannery BM, Crosby LM, Pouillot R, & Santillana SM. (2023, August 26). Reassessment of the cadmium toxicological reference value for use in human health assessments of foods. *Regulatory Toxicology and Pharmacology*.  
<https://www.sciencedirect.com/science/article/pii/S0273230023001551?via%3Dihub>

Understanding Food Labels. The Nutrition Source. (2024, November 15).  
<https://nutritionsource.hsph.harvard.edu/food-label-guide/>