

# **Agricultural Mothers' Conversations & Decision-Making about Food**

## **Introduction & Literature Review**

Women are the primary food buyers in the majority of American homes and are more concerned with learning about food than their male counterparts (CFI, 2015; PLMA, 2013). In an effort to increase consumer knowledge about food systems and agriculture, agricultural organizations have encouraged farmers and agriculturalists to communicate about agriculture through emotion and building personal relationships (Folta, 2018; Perry, 2018; Sfiligoj, 2017; Steimel, 2016; USB, 2014). Due to women's role as the predominant food purchaser in the majority of homes, including acting as nutrition gatekeepers, and their relationships with others (CFI, 2015; PLMA, 2013; Robles et al., 2014), it is important to understand how women are making these decisions and if it is the result of their personal relationships with others. This research sought to discover if mothers in agriculture have any questions about food and agriculture, as well as where they go to answer those questions.

### **Communication about Food**

A movement toward food transparency and conversing about food has been a topic of public concern in recent years. Howard (2005) found in a survey of five counties on the Central Coast of California that 59.8% of survey respondents did not believe they knew enough about how their food is grown, processed, transported, and sold. This desire for transparency has influenced an increased want for interactions between food consumers and food producers. A study in Florida found both producers and consumers valued social interactions between the two groups; this element was one of the biggest benefits of selling or buying locally produced food (Conaway & Goodwin, 2013).

Consumers' attitudes about an issue are thought to be related to communication transparency, and Rumble and Irani (2016) recommended practitioners combine transparent communication and personal relevance, especially identification of shared values, when communicating to their audience. Arnot et al. (2016) found that farmers are among the groups who are considered responsible for sharing information about food. Arnot et al. recommended those involved in the food system should communicate *with* consumers (i.e., have a two-way conversation with consumers) rather than force feed them statistics to build trust. While two-way communication with consumers is recommended, consumers are more likely to prefer to use search engines for gaining information about food-related information, particularly mothers and Millennials (Center for Food Integrity [CFI], 2018).

Face-to-face contact remains the predominant method of all communication (Hampton et al., 2009). In regard to sensitive information, which food may be considered as such by some people, it is thought that individuals may be more likely to share with strangers than people they are close to (Derlega & Chaikin, 1977). This is explained by Derlega and Chaikin's (1977) strangers on the train phenomenon that asserts people will share information with strangers they would not share with those they know because of the impression that they will never see the stranger again. The phenomenon is a form of interpersonal communication, which has long existed in agricultural communications, albeit typically targeted within the industry rather than externally (Agunga, 1989). Of note, mothers are more likely than fathers to use Facebook, which has the

potential to connect individuals with strangers across the world, to connect with other parents (Laws et al., 2019).

Various studies have analyzed the decisions consumers make when purchasing food. Kim et al. (2018) suggested organic food purchasing decisions are influenced by social pressure, and “purchasers of organic food may want to resist efforts to promote organic food if its appeal is largely a way of demonstrating social status among those who already have it” (Kim et al., 2018, p. 380). A study by Gorham et al. (2015) found that consumers have different perspectives regarding what different terms mean, and what they mean in terms of certain foods. Some participants in the study considered local foods to be those that were grown in an area closer to them rather than within the entire state, whereas others considered local food to be anything grown in their country (Gorham et al., 2015). Goodwin et al. (2011) found that messages that were positively received included preservation of natural resources, stewards of the land, wide-open green pastures, and sustainable growth. Participants reported their perceptions of agricultural messaging were based on media and advertisement content (Goodwin et al., 2011). Goodwin et al. (2011) said agricultural communicators should focus on consumer viewpoints to improve the effectiveness of messaging. The specific consumer viewpoint we addressed in this study was that of mothers in agriculture.

## **Women and Food**

“Women are occupied in and preoccupied with food on a daily basis, irrespective of class, culture, and ethnicity” (Allen & Sachs, 2012, p. 24). Although strides have been made in gender equality, domestic roles like homemaking, grocery shopping, and food preparation are still often considered women’s realms (Cockburn-Wooten et al., 2008). “Women spend at least twice as much time as men doing domestic chores, an imbalance particularly marked in food labor” (Allen & Sachs, 2012, p. 31).

Women bear extra mental work when having to consider nutrition, what different family members like and dislike, and planning when and where meals occur (Allen & Sachs, 2012). Mothers are more likely than fathers to use the internet to look up information about health and nutrition for them and their children (Laws et al., 2019). Women with children are more concerned with nutrition than women without children, and of course women with children have to consider children’s food preferences in addition to their own (Raskind et al., 2017). A study by Johnson et al. (2011) showed mothers play a large role in influencing their children’s later food-related decisions and are typically responsible for their children’s diets. Women are more likely than men to make healthier purchases (Chrisinger et al., 2018).

The Private Label Manufacturers Association (PLMA) in 2013 noted the majority of women do the majority of household shopping, typically without help from others in the home. CFI found women are more concerned about food system issues than men, and mothers in particular are more concerned about food cost increases than other groups (2015). Women are also less likely to be accepting of biotechnology use with food than men, including after knowledge of biotechnology increases (Moerbeek & Casimir, 2005; Qin & Brown, 2007; Simon, 2010).

Women’s role in food purchasing has been analyzed to determine the thought processes, methods, and other factors involved in their role. Cockburn-Wooten et al. (2008) determined grocery shopping “positioned... women within traditional discourses of housewife and mother, thus restricting their access to clearly defined and valued leisure time” (p. 407).

There is variability within the population of women for food-related behaviors and perceptions. Women with higher levels of education are associated with making healthier purchases (Chrisinger et al., 2018). Lawrence et al. (2009) found that women with lower educational attainment had less support for eating healthily and more self-perceived constraints on their food choices for them and their families. Beyond education, self-perception also matters. Johnson et al. (2011) found mothers who had a healthy self-identity tended to make healthier choices for themselves and their children. When mothers lacked a healthy self-identity, they experienced guilt over the food decisions they made for themselves and their children (Johnson et al., 2011). A CFI (2018) study found mothers feel pressure from others to provide healthy food for their children yet feel less pressure to eat healthy themselves.

Nutrition label use has received attention from researchers. Women are more likely than men to use nutrition labels (McLean-Meynsse, 2001; Zhang et al., 2017). Robles et al. (2014) found that higher self-efficacy for reading nutritional facts was correlated with healthy eating for women. McLean-Meynsse (2001) found that parents – the majority of whom were mothers – were more likely than non-parents to look at fat content when looking at nutrition labels. But nutrition label use is limited. Kakinami et al. (2016) found that parents’ – the majority of whom were mothers like the McLean-Meynsse study – nutrition knowledge was associated with lower BMI, waist circumference, and percent body fat in their children, but nutrition label use did not have the same associations.

## **Women in Agriculture**

Women’s involvement with food is not limited to that of consumer or preparer; they are also involved with the production piece of the industry. Women’s roles in agriculture have been found to differ from men’s roles. In particular, women are overrepresented in lower-wage roles and underrepresented in management and business ownership (Allen & Sachs, 2012). O’Brien (1986) found many dairy farm women were predominantly involved in farm management decisions rather than doing manual farm work traditionally done by men. Beach (2013) found that many involved in agriculture considered women to have a supporting role in production agriculture. When two farmers interviewed for the study were asked if they thought their children would take over the farm, they responded they did not because they have daughters, which to them meant it was obvious the daughters would not farm (Beach, 2013). Pilgeram and Amos (2015) found that although the number of women working as a primary farm operator was increasing, many still acquired their farmland by marrying a man who already had land. Keller (2014) found women who farmed in Wisconsin faced “institutional, interactional, and symbolic levels of the gender system as they attempted to be recognized as farmers” (p. 75). The majority of women in agriculture and with agricultural backgrounds do not consider themselves to be their farm’s primary operator (Beach, 2013). The gendered differences in agriculture and farming lead to men and women having different experiences in agriculture and therefore have a different story to tell about the industry (Beach, 2013; O’Brien, 1986; Pilgeram & Amos, 2015).

## **Feminist Standpoint Theory**

While studies using feminist theory in agricultural communications have not been found, relevant research about this topic can be found in other disciplines. The basic tenet of feminist standpoint theory is “women’s lives are systematically and structurally different from men’s lives

and, that these differences produce different (and differently complete) knowledges” (Wood, 2005, p. 61). Hekman (1997) argued feminist standpoint theory remains relevant even after the original feminist movement due to the unique experiences of women.

Standpoint theory builds in an analysis of power relations, describing dominant conceptual schemes as the outcome of knowledge produced exclusively from the social activities of the powerful in society (typically, although not necessarily, men). It is then argued that a more complete basis for knowledge can only be found by starting from the perspective of women’s experiences and lives, as well as from the lives of other social groups ordinarily excluded from the dominant social order. (Henwood & Pidgeon, 1995, pp. 14-15)

Feminist standpoint theory in qualitative research does not seek to “hold up a mirror to participants’ views” (Henwood & Pidgeon, 1995, p. 15); instead it seeks to give voice to individual women’s experiences.

As a result of feminist movements throughout the 20<sup>th</sup> century, women’s involvement in the workplace and other pieces of the public sphere has increased in the past half-century (Frejka et al., 2018), but mothers in particular still perform the majority of domestic responsibilities in the home (Kurtz, 2012), which shows a need for further research on mothers’ involvement in domestic spheres and their decision-making processes. Male involvement at home remains significantly lower than women’s involvement at home, creating what is called the second shift (Frejka et al., 2018). The second shift is the concept that modern women will often work one shift at work and then perform a second shift of domestic work in their homes (Frejka et al., 2018). Because women experience life differently than men, it is important that research about women continues to seek to describe their life experiences such as parenting and food buying (Wood, 2005).

Allen and Sachs (2012) discussed women’s role along various points in the food chain through the lens of feminist standpoint theory. They noted even as women engage in efforts to change the food system, those efforts are not “generally identified as feminist projects, in the sense of being strategically oriented toward improving gender relations” (p. 23). They divided women’s role in the food system into three domains: material (i.e., formal workforce), sociocultural (i.e., work done at home), and corporeal (i.e., physical and emotional connections to food). They stated the three domains, including the connections between them, need to be studied and adequately theorized.

### **Problem Statement**

Women are thought to encounter social pressures when purchasing food. As a result, agriculturalists are encouraged by agriculturally related organizations to communicate with others about the food and agriculture industry (Stebner et al., 2015). Common rhetoric has encouraged communication based in interpersonal communications, however there is very little research existing in the agricultural communications discipline about the interpersonal communication of mothers (Tevis, 2018). Research is needed to determine how mothers are sharing and receiving information about food and how their food purchasing decisions are affected.

### **Purpose & Research Questions**

The purpose of this study was to describe how Oklahoma mothers in agriculture engage in communication about food. Two research questions guided this study:

1. How are mothers sharing and receiving information about food?
2. How does information they receive affect mothers' food purchasing decisions?

## **Methods**

This phenomenological study investigated mothers' interpersonal communication habits via qualitative semi-structured interviews. Qualitative research, while lacking the generalizability of quantitative research, allows for more depth to better understand specific situations (Whittemore et al., 2001). Phenomenology in particular is used when trying to understand people's lived experiences regarding a particular phenomenon (Creswell et al., 2007). In-depth interviewing provides a way to understand how individuals feel about a phenomenon they are experiencing and to contextualize that phenomena (McCracken, 1988). Interviews allow researchers to discover how a participant feels about a phenomenon in the participant's own words, allowing for more understanding of a participant's experiences than surveys would allow (Creswell & Poth, 2018).

The population for this study was mothers with children at home from agricultural backgrounds in a 60-mile radius of Stillwater, OK, which has both livestock and crop production in the area. Participants with agricultural backgrounds were targeted to see if they were communicating to consumers in the ways recommended by agricultural organizations and to discover where the mothers get their information about food if they need it. Participants were purposefully selected through county Extension agents, who had contact with the sample group through Annie's Project, 4-H volunteer involvement, and other Extension programming. Additional snowball sampling occurred via recommendations of participants as they were interviewed. For qualitative research, it is recommended researchers use purposive samples because "social processes have a logic and a coherence that random sampling can reduce to uninterpretable sawdust" (Miles & Huberman, 1994, p. 27). The snowball method of sampling "identifies cases of interest from people who know people who know what cases are information-rich" (Creswell & Poth, 2018, p. 159). In this study, participants were purposively selected through their connections with Extension agents because it ensured that the participants were involved in the agricultural industry and had children living in their homes. While the initial sampling was limited to those who were connected with their local Extension agents, this limitation was mitigated by the snowball sampling that did not depend on the Extension agents.

Sampling occurred until data saturation was reached. Saturation occurs when no new information is discovered about the topic (Creswell & Poth, 2018). Roughly half of the participants were recommended by Extension personnel, and the other half were recommended by participants. The sample consisted of nine mothers between the ages of 25 and 60. All participants had at least one child who lived in their home. They resided in a five-county area of north central Oklahoma. The participants were all White.

**Table 1***Descriptions of study participants*

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Name	Description
Amber	Family farms/ranches; homeschooled her children; has two pre-teen children
Bailey	Family ranches; grew up out of state; has an elementary aged child and a toddler
Carly	Primary operator of her family's farm; partner works off-farm; has two teenagers
Dora	Family farms part-time, both she and her partner work off-farm; has one child out of the house, a teenager, and two pre-teens
Ellie	Family is beginning to re-enter production agriculture, both she and her partner work off-farm; has a toddler
Fran	Family owns a value-added beef operation where she holds most of the direct marketing responsibilities, interacts with customers on a daily basis; has one elementary aged child and one toddler
Ginny	Family has a small farm, both she and her partner work off-farm; has one child that is a teenager and one that is a pre-teen
Holly	Family farms/ranches, she works off-farm; has one child that is a toddler
Ivy	Family ranches; officer in a county agricultural organization; has two children that are pre-teens and one that is a toddler

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The interview guide was developed based on previous women in agriculture and food purchasing studies (Beach, 2013; Cairns & Johnston, 2018; Cockburn-Wootten et al., 2008; Kim et al., 2018). A researcher who was not on the author team with experience conducting qualitative interviews reviewed the instrument and gave feedback to improve the questions. The interview began with questions establishing the participants' demographics and progressed into questions about how they make food purchasing decisions and where they get their information about food purchasing (Creswell & Poth, 2018). Questions were then asked about participants' conversations about food and food purchasing, and who they have food purchasing conversations with. Except for two phone interviews, the interviews were conducted in various places in the participants' towns that were convenient for the participants. Interviews were audio recorded for internal consistency and to ensure accuracy during analysis (Creswell & Poth, 2018). Following the completion of the interview, the file was removed from the recording device and saved to an encrypted computer file. Audio files were transcribed verbatim to ensure the accuracy of quotations and to make it possible to code the interviews for analysis (Creswell & Poth, 2018).

Constant comparative method was utilized to analyze the data. In constant comparative method, the data "are not coded extensively enough to yield provisional tests.... The data are coded

only enough to generate, hence, to suggest, theory” (Glaser, 1965, p. 438). The constant comparative method can suggest a number of hypotheses that can be applied to a general phenomenon, but while hypotheses about a general phenomenon are suggested, constant comparative method does not provide conclusions that can be made about all data or all phenomena (Glaser, 1965). Constant comparative method or analysis is useful in research using interviews because “Employing a systematic comparative analysis allows for a thorough understanding of how the question response process is informed by respondents’ unique social locations” (Ridolfo & Schoua-Glusberg, 2011, pp. 434-435).

After transcribing the audio recordings, the transcripts were analyzed to find common themes among the interviews to determine widely held sentiments by the sample. The transcripts were coded to determine where individuals are receiving or sharing information, and the types of information the individuals wish they had access to. If the participants identified any individuals as someone they considered an expert on an issue, those experts were considered to have social capital. In addition, if participants reported feeling social pressures from those around them, it was determined social capital had a role in that pressure.

Credibility, transferability, dependability, and confirmability are terms typically used to describe rigor in qualitative research (Creswell & Poth, 2018; Flick, 2009; Lincoln & Guba, 1985). “Credibility refers to the accuracy of the documentation, the reliability of the producer of the document, the freedom from errors” (Flick, 2009, p. 258). Interviews were audio recorded and transcribed verbatim to ensure the information included in the findings were free from errors. The reflexivity statement provided at the end of the methods section was also used to aid credibility (Hadi & Closs, 2015). Transferability is the extent to which the research findings can be applied in settings other than that of the study (Flick, 2009). A thick description of the data collection and analysis process was provided to allow a future researcher to repeat this study, or to make it transferable (Lincoln & Guba, 1985). Dependability is the qualitative research criteria that replaces quantitative research’s reliability and was accomplished by providing rich description of the methods and maintaining an audit trail of the research process (Lincoln & Guba, 1985). Finally, confirmability is the neutrality of a study (Flick, 2009) was also established by maintaining an audit trail (Lincoln & Guba, 1985). Lincoln and Guba (1985) identified that raw data, data reduction and analysis products, data reconstruction and synthesis products, process notes, materials relating to intentions and dispositions, and instrument development information should be included in an audit trail for an auditor to perform their duties (Lincoln & Guba, 1985).

Explaining researcher bias helps the audience to understand how a researcher’s bias could affect the research (Creswell & Poth, 2018). Speaking as the lead author, I have been involved in the agricultural industry through youth organizations such as 4-H and FFA. Furthermore, I have attended conferences that encouraged women in particular to communicate about the agricultural industry through conversation topics thought to be traditionally female: food preparation and child rearing. I identify as a feminist, and my feminist views on how women are communicated to and the roles they are societally expected to fill colors my perceptions of the communications they receive. Speaking as second author, I have been involved in the agricultural industry through the ranching industry, as well as 4-H involvement. I also identify as a feminist. As third author, I have been involved in agriculture all of my life including growing up on a farm and participating in 4-H, FFA, and other agricultural groups and organizations. I believe in equality for all. Throughout this study, every attempt was made to remove author viewpoints from that of the participants and to keep an open mind when analyzing the data. Quotations are provided as evidence for the

interpretations made from the participants' statements and included any results that were discrepant.

## **Findings**

### **RQ 1: How Are Mothers Sharing and Receiving Information about Food?**

#### *Information sharing is often limited to certain scenarios*

All of the participants reported when they learn new information about food they share it with others, although the new information they learned and the methods they used varied. Many mothers reported sharing new information with others they thought would have an interest in that information, although other participants said they share information on Facebook or another social media site to reach the most people with their information. Some of the participants reported that generally the only information they shared was not about food but about what to do with food, such as new cooking recipes.

Fran reported she tended to share new information only with those who she felt would be particularly interested:

We have actually a number of [customers] who know a lot about properties of food, both synthetic and natural... those are the type of customers that if I find something interesting, then I'll ask about it or I'll tell them about it.

Fran explained the majority of the information she shares with others about food and agriculture is in her role working with customers, but she does encounter questions from other parents about agriculture and food when dropping her kids off for school:

If I have just delivered a calf, a lot of times I'm dressed in the, you know, the clothes I was at the farm with. Some [parents] will give me this look and won't say anything. But some of them will ask like, "what do you do?"

Fran shared that most often other parents will ask her about hormones in food and antibiotics. She said when she is asked about these topics, she shares what she knows and encourages those asking to do their own research.

Carly, who works as the primary operator of her family's farm, shared she is comfortable sharing new information with most people and tries to do so. She shared about a time where she had a discussion with her cardiologist about animal fat and its effect on the human body, which led to new training for dietitians at the clinic. Carly also explained she tries to share information about food and agriculture in a one-on-one setting whenever she gets the chance:

I spend a lot of time just trying to not like be an activist standing in the front of a room speaking, but being that mom who stands next to you in the line at the grocery store and says, "it's okay that they were out of organic Turkey Broth, you can use this and here's why." You know, that kind of thing. Lead from the back, if you will.

Ivy, who is an officer in her county's cattlemen's group and whose family operates a cattle ranch, shared when given the opportunity to share with others about food and agriculture

through cattlemen's or another agricultural organization, she takes the opportunity. However, she shared she did not often share outside of those forums because she felt most of the people she interacts with have the same views on food and agriculture she does. If she found out anything new about food, Ivy said she would be most likely to share it with her sister.

### *Information receiving is mainly online*

All nine participants reported they receive most of their information about food from the internet, and they typically search online for something if they want to learn more about it. A few participants reported more specific sources of information but emphasized the internet is where they get the majority of their information about food. None of the mothers identified anyone specific within their social circles that had social capital when it comes to food.

Ellie listed bloggers like Farm Babe and Dairy Carrie as well as the social media profiles of researchers like Kevin Folta and Jayson Lusk as places where she goes for information about food. She also mentioned a large Women in Agriculture Facebook group and a Facebook page called Ag Bio World as sources she considers reliable when she wants information about food or agricultural practices:

There's this major Women in Ag group on Facebook that's got like 75,000 people in it, so you can ask questions on there and you're going [to] get a variety of answers, but you know, a lot of the women are doing that specific at home, whether it's growing strawberries commercially, you pretty well find a commercial producer on there for just about anything. And so, I mean if you wanted to get somebody very not, you know, very true to the source, um, that'd be one place to go if you don't know.

Ivy shared that while she knows she should research more about the information she finds on the internet, she tends to take the information she sees at face value because she is too busy to research more about it. She stated, "I think when I can find something that's fast and convenient that tries to use like just natural ingredients, then I am like, I'm more tempted to put it in my cart." After Ivy's three-year-old daughter was diagnosed with Type I Diabetes, she had to learn more about food and change the way she had previously cooked for her family. However, this did not affect the amount of time she has to put into food preparation, and she still takes most things she reads online at face value. Ivy shared that in order to provide her daughter with a beverage variety, yet also limit sugary drinks, she had bought the sparkling water La Croix until she read an article about a concerning ingredient in the beverage:

Well I was buying those like La Croix for my little three-year-old because I didn't want her to drink pop, but she likes that fizzy. But then I saw something negative, and so I did look it up online [to see if it was true].... If I see like an article, like the example I gave about the La Croix, because my daughter like, loved those. I can't remember what they said was in it, but I was like, dang it.

Dora, whose child also has a sensitivity to red food dye, said beyond the internet, she looks to her child's pediatrician and specialists for information about what food to feed her family.

Carly expressed frustration that she did not feel like individuals who are supposed to be experts in food and nutrition were actually educated about the information they were sharing with

people. She shared during her time working with a dietitian at a rehabilitation facility from a health complication she had, she felt the dietitian's information was outdated:

The most upsetting thing to me about that experience was finding that we had to meet with a dietitian once a month or something. And her data was from the '80s. And I could tell that when she was telling us, and I met with her three times, and I would go out and call a good friend of mine who lives in [another state], and say you can't believe what she's telling us. [The dietitian] was my age. So I knew she'd gone to college in the '80s. I said it's as if she's not updated anything since she went to college. And finally one day she gave us a handout and it was dated in 1984, and that's what she was giving us. And you know, I'm not going to say science itself changes, but our understanding of science that the things that science has revealed to us changes.

As a result of this experience, Carly has become frustrated with individuals who are supposed to be food and nutrition experts and now does most of her food research herself. She did report that she shared her concerns with her doctor at the rehabilitation facility and was optimistic he would encourage the dietitian to update the nutritional information they were providing to patients.

## **RQ 2: How Does Information They Receive Affect Mothers' Food Purchasing Decisions?**

All participants had at least 50% of the food purchasing responsibility in their homes. Three of the participants shared purchasing responsibility equally with their partners, and the other six were the sole food purchasers in their homes. Because of this, it was important to identify how these mothers with agricultural backgrounds are making their purchasing decisions.

### ***Concerns about food are common***

While many of the participants initially expressed they have no concerns about food and agriculture, many later identified items they wished they knew or they wished they knew more about. Participants also identified concerns about the marketing of food products (e.g., labels), processed foods, food sensitivities, and food waste.

Amber, who works as a homemaker and homeschools her children, shared while her primary food concern is price, she is also very intentional about avoiding processed food and grocery shops by sticking to the outside edges of the grocery store, where she feels like she purchases the least amount of processed food. She stated, "My philosophy is you just stay on the outside of the grocery store, for the fresh stuff and stay out of the middle." Fran shared the same concerns about processed food and echoed the shopping the edges approach:

When we shop the supermarket, we shop the, the, um, the edges. We don't shop a lot in the middle, and we really try to stay away from processed food. So I think that's probably the rule in our home is to try to buy real food with as few ingredients as possible.

Ginny expressed she also has concerns about processed food, but her family is so busy sometimes they have to go with what foods are easiest. She noted, "We avoid artificial sugars. I mean we try to avoid that. We try to avoid processed stuff, but we also are realistic in making our lives work."

Dora shared her food concerns stem from her child's sensitivity to red food dye:

You know, our 11-year-old has had some processing issues and stomach issues and anxiety issues. Bless his heart. He's kind of been through it. But it made me do a lot more research on red dye in food and things along those lines.... We haven't eliminated that from his diet, and he's fine now, but it's taken a lot of doctors and medicines, which I'm not a fan of.

Because of her child's sensitivities, the majority of Dora's conversations surrounding food and her associations with food have to do with red food dye.

Holly shared her biggest concerns about food is the misleading labeling of many products in the grocery store: "There's a lot of just like fake labeling, I guess. That is annoying to me." She specifically identified non-GMO labeling, gluten free labeling, and restaurants calling their food "clean" as labels she disagrees with and feels like are misleading consumers.

Carly shared she has a lot of concerns about food waste in our food system, and therefore, she always makes sure to take home leftovers when she eats at a restaurant:

Food waste is a big concern of mine. My own home is not as good at that as we should be. Everything we don't eat goes to the chickens, but still I consider that waste even though I know they're recycling it, if you will. I get very frustrated.... But I just think worldwide, especially in the U.S., it's really almost exclusively in the U.S., food waste is something that we really need to pay attention to. And there's different reasons for that. I think one of the primary ones is people buy what they feel pressured to buy, and then they get home and they don't really want it or like it.

Carly also shared she is very concerned by what she feels is a common belief in the U.S. and Europe that organic food is better, and she does not feel that it is accurate.

## **Conclusions and Implications**

### **RQ 1: How Are Mothers Sharing and Receiving Information about Food?**

Mothers are predominantly receiving information from the internet, and this information is impacting their food purchasing decisions, like with Ivy and her daughter's La Croix. This is consistent with findings mothers prefer to utilize search engines when looking for information about their food (CFI, 2018). Beyond a generic Google search, participants identified bloggers, scientists, and doctors as reliable sources of information about food, which is consistent with previous research (CFI, 2018). Some participants shared frustration about individuals who are positioned as experts about food or nutritional information having inaccurate or outdated information they were sharing.

As far as sharing information, some participants are using face-to-face interactions with strangers, acquaintances, friends, and family to share about agriculture and food if they have the chance. Others utilize Facebook and other social media to share articles about food or to correct an individual's comment, which is of note given that mothers are more likely than fathers to use Facebook to connect with other parents (Laws et al., 2019). However, still others, like Ivy, only share information about food and agriculture when provided a forum that is explicitly for sharing that information. The participants' willingness to share information with those they are close to, and their references to their friends, mothers, and sisters, is consistent with previous research

showing the closeness of female friendships and their basis on talking and support (Aleman, 2010; Walker, 1994). Several participants shared concerns they would cause tension with their acquaintances if they shared about food and agricultural issues, which is consistent with the strangers on a train phenomenon (Derlega & Chaikin, 1977).

## **RQ 2: How Does Information They Receive Affect Mothers' Food Purchasing Decisions?**

The way information the mothers received affected their food purchasing decisions was expressed through their concerns about processed food and the impact of various foods on their children, which is consistent with research that showed the most searched food topics are ingredients in food, impact of food on health, and food safety (CFI, 2018). Past research has shown that women tend to have more food-related safety concerns than men (Moerbeek & Casimir, 2005; Qin & Brown, 2007; Simon, 2010). However, although many agricultural organizations are encouraging women with agricultural backgrounds to become experts on food in their social circles (Perry, 2018), these women have concerns of their own about the ingredients in processed foods, food waste, and the marketing of food in the grocery store, which shows there is a gap in what information is available to them. Mothers will change their purchasing habits if they read something negative about a product, which shows that information that they receive about food does affect their buying habits.

The majority of the mothers in the study were the primary food purchasers and preparers in their families, which was consistent with previous research (Frejka et al., 2018). In addition, six of the women worked away from home in addition to their domestic responsibilities, which is evidence of the second shift concept that women experience (Frejka et al., 2018). The second shift concept is most prevalent, which is evidence of the unique feminist standpoint that mothers have (Frejka et al., 2018). Furthermore, the women in the study described making food purchasing decisions based on concern about their children's health, which is consistent with past research showing women tend to take in others' dietary needs and restrictions when making food decisions (Allen & Sachs, 2012; Cockburn-Wooten et al., 2008; Johnson et al., 2011; Raskind et al., 2017). as well as the fact women tend to take others' dietary needs and preferences into consideration when making food decisions.

## **Recommendations**

### **For Practitioners**

Practitioners in the agricultural communications field should utilize the information in this study to understand the need to share information with mothers with agricultural backgrounds before asking these individuals to position themselves as an expert on food and agriculture in their communities. By understanding that women tend to share information with their close friends and family rather than strangers, practitioners can help to equip women with agricultural backgrounds with the ways they can best share about food and agriculture and keep from alienating those they care about. This includes helping them to realize what their shared values are when they are trying to communicate (Rumble & Irani, 2016). In addition, it is important to encourage women to share with those they are close to because that closeness causes their information to hold more weight than information from a stranger (Dubois et al., 2016). Furthermore, they need to equip mothers with the tools to build relationships and share their stories about agriculture and food rather than

just telling them to do so. Finally, practitioners need to be aware that mothers in agriculture have concerns about food that need addressed so they can be comfortable advocating for the industry. The mothers in the study, as in past research, were the primary food buyers in their homes (CFI, 2015; Cockburn-Wooten et al., 2008; PLMA, 2013; Robles et al., 2014) and their concerns about food were often rooted in their concerns about needs and wants of their family members (Allen & Sachs, 2012; CFI, 2018; Johnson et al., 2011; Laws et al., 2019).

All of the participants in this study reported referencing online sources for information about food and agriculture, which shows agricultural organizations should continue to be proactive in their online presence and share accurate information about the industry. This is consistent with Howard's (2005) finding that more and more people prefer to receive information about food via online sources. In addition, practitioners should utilize social media groups and bloggers to share information about food and agriculture, as it is the way some participants shared information with others, and past research has shown mothers want to connect with other parents on Facebook (Laws et al., 2019). Furthermore, high-profile social media profiles have a heightened perceived trustworthiness (Stebner et al., 2015).

Agricultural communications educators should use the results of this study to help their students have a realistic understanding of the ways mothers in agriculture communicate about food. Furthermore, the concerns the participants in this study have about food and agriculture show that simply because someone is involved in agriculture does not mean they are an expert on the industry or lack concerns about the food they buy for their families.

## **For Future Research**

Future research should assess perspectives outside of White mothers with an agricultural background. Intersectionality (e.g., connections between race, gender, and class) is an important aspect of feminist research because women are not a single category (Allen & Sachs, 2012; Fenton, 1995). "Women speak from multiple standpoints, producing multiple knowledges" (Fenton, 1995, p. 363). This argument for intersectionality in feminist research would encourage future researchers to seek out women of various economic backgrounds, different geographic locations, ethnicities, and life stages. The women who participated in this study were all White mothers in heteronormative relationships in a few counties of Oklahoma. Future research should assess the communication habits and perceptions of women in different geographical regions, from different races, different socioeconomic backgrounds, and other variances of diversity.

More research should be done to assess the social pressures mothers face when purchasing food and how they either do or do not identify those pressures, which is important because research has shown mothers' self-perceptions are related to making healthier choices for themselves and their families (Johnson et al., 2011). Many participants in this study initially reported not feeling social pressures when buying food but then related anecdotes that illustrated them feeling social pressures. The intricacies of these social pressures and which foods and agricultural products they are related to could be beneficial for further understanding why mothers buy what they buy. Specifically, studies that ask mothers to identify products that make them the most self-conscious when purchasing or that track how often mothers purchase products with certain labels could show the influence of social pressure on buying habits. Future research should also consider performing a social network analysis on one community of women to determine if there are women in that community who hold a larger amount of social capital than others and assess how the women who hold social capital share and receive information with others.

Two participants in this study had children with special dietary concerns that changed the way the mothers bought and prepared food. The effect children's dietary sensitivities and allergies have on mothers' food purchasing decisions is another line of inquiry that should be pursued. Food sensitivities and allergies are becoming more well-known, and mothers of children with those issues are likely to have a different perspective of food issues than other mothers. Subsequent research showing how the mothers of children with food-related sensitivities affect their children's later food purchasing decision-making and overall health would also be beneficial.

Qualitative interviews can be utilized to describe a phenomenon that is happening and give voice to those who are experiencing it (Creswell & Poth, 2018). Future research should seek to uncover why mothers communicate about food and agriculture, as well as seek to describe the larger populations through quantitative methods. By utilizing a mixed methodology approach to this topic, researchers could uncover a way to motivate mothers to share more about food and agriculture. Future research should also address how mothers decide which information they find online is trustworthy given that searching for food-related information online is a common activity (CFI, 2018).

Finally, similar research with men should also be done. Although men were intentionally excluded from this study to focus on women who are primary food buyers, more households are sharing domestic duties like grocery shopping (Frejka et al., 2018), and so men's decision-making process when food purchasing is becoming more relevant over time.

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