The Food Factor: Perceptions of the Brand

Introduction

Cooperative Extension systems are facing challenges like dwindling budgets and shifting legislative priorities (Varea-Hammond, 2004) and are increasingly expected to provide evidence of success (Gregory-North, 2015; Monaghan, Ott, & Wilber, 2013). Despite these challenges, Extension programming must function effectively to stay connected with constituents and reach Extension goals. While behavioral outcomes have been an objective for many years, Extension agents have been encouraged to consider innovative programming strategies to promote behavioral outcomes (Argabright, McGuire, & King, 2012; Martin & Warner, 2016; Sanagorski, 2014). Social marketing has been identified as a way to increase behavioral outcomes in Extension (Martin & Warner, 2016; Monaghan et al., 2013; Sanagorski, 2014; J Skelly, 2005), though it is underutilized (Warner, Stubbs, Murphrey, & Huynh, 2016).

Branding is a proposed solution to build stronger relationships between social marketing campaigns and behavioral outcomes, although branded social marketing programs have had limited Extension application. Evans (2013) said, "Social marketing uses branding and other commercial marketing techniques to influence individual behaviors, whose widespread practice would make them, 'Fun, easy, and popular, (Smith, 1999)'" (p. 172). Several studies identified a need for further research surrounding the use of branding in social marketing programs, specifically looking at the effects of brand attributes and associations on behavioral outcomes (Aaker, 1996; Evans, 2013; Evans & Hastings, 2008; Keller, 1998a; Leonard & Morey, 1996). Evans and Hastings (2008) said, "The strategic use of brands and branding in public health, based on behavioral theory, to change specific knowledge, attitudes, and health behaviors is a relatively new approach" (p. 287). Consequently, social and health branding is still a growing strategy in social marketing (Lefebvre, 2013), one that Extension could benefit from adopting. More specifically, social marketing has been proposed as an effective way of promoting healthy eating behaviors (Aschemann-Witzel, Perez-Cueto, Niedzwiedzka, Verbeke, & Bech-Larsen, 2012; Beall, Wayman, D'Agostino, Liang, & Perellis, 2012; Freeland-Graves & Nitzke, 2013; Grier & Bryant, 2005; Hastings, 2006; Henley, Raffin, & Caemmerer, 2011; Herrick, 2007; Stead, Arnott, & Dempsey, 2013), which could be applied to *The Food Factor*.

The Food Factor

The Food Factor is a weekly Extension mass media program that communicates research-based information about food and nutrition to families (Mississippi State University Extension Service, 2016d). The program was first produced in 2014 and is hosted by Natasha Haynes, a Mississippi State University Extension Service agent with more than 15 years of experience (Mississippi State University Extension Service, 2016d). Each episode lasts approximately 90 seconds (Mississippi State University Extension Service, 2016b). The show airs on five television stations in the state of Mississippi. The show airs on WAPT in Jackson, WLOX in Biloxi, WTOK in Meridian, WTVA in Tupelo, and WABG in Greenville.

The Food Factor also airs as a segment on *Farmweek*, another Mississippi State University Extension Service mass media program (Mississippi State University Extension Service, 2015). *Farmweek* is a 30-minute program that covers current farming and consumer news, as Mississippi's oldest and only agricultural weekly news show, which first aired on October 3,

1977. The program airs on Mississippi's Public Broadcasting Service channel and nationally on RFD-TV with past episodes archived on their webpage and YouTube channel (Brubaker, Settle, & Gregory-North, 2016). While *The Food Factor* has not previously conducted any viewership studies directly, partial viewership may be attributed due to its debut on the *Farmweek* program in 2014. *Farmweek*'s evaluators estimated, "Approximately 367,149 Mississippi residents viewed *Farmweek* in 2014 compared to 224,654 in 2000" (FleishmanHillard, 2014).

The Food Factor uses social media platforms, yet operates under Mississippi State University Extension Service and does not have its own media presence on all social media platforms, such as Pinterest and YouTube. As of December 2016, *The Food Factor* had nearly 850 likes on Facebook and Mississippi State University Extension Service has more than 13,400 likes (Mississippi State University Extension Service, 2016a). On Twitter, *The Food Factor* had 265 followers and Mississippi State University Extension Service had nearly 4,000 followers. Mississippi State University Extension Service has produced more than 130 episodes of *The Food Factor*, which are archived on *The Food Factor*'s website and the Mississippi State University Extension Service's YouTube channel. While no viewership data has been collected for *The Food Factor* to date for news station viewership, information is available regarding the number of views from Mississippi State University Extension Service's YouTube channel and *The Food Factor* playlist. *The Food Factor* had 20,762 views from January 1, 2015, thru December 6, 2016. The total minutes watched was 36,665. Mississippi State University Extension Service has over 2,800 channel subscribers with over 1,306,829 views over all the playlists since February 2010 (Mississippi State University Extension Service, 2016b).

Theoretical Framework and Literature Review

Franzen and Moriarty (2009) define a brand as a "Complex, interrelated system of management decisions and consumer reactions that identifies a product (goods, services, or ideas), builds awareness of it, and creates meaning for it" (Franzen & Moriarty, 2009, p. 6).

Strong brands are familiar to consumers and have strong, favorable, and unique associations (Keller, 1998a). Once a brand's identity has been established, consumers must be able to recognize the brand in order to select it, therefore achieving the goals of the brand. After awareness has been achieved, consumers can move to brand loyalty, maintaining or retaining consumers' preference for the brand's selection (Franzen & Moriarty, 2009).

Brand Awareness

Brand awareness is, "The presence of a brand in the mind of consumers" (Aaker, 1996, p. 330). Brand awareness has been identified as a weakness of Mississippi State University Extension (Mississippi State University Extension Service & Office of Agricultural Communications, 2015). Brands cannot achieve their goals without brand awareness. Consumers are overwhelmed with a large number of messages, which creates a challenge for brands and increases the need for them to stand out. Without brand awareness, consumers cannot be expected to purchase the product or complete the behavioral change as intended (Baldauf, Cravens, & Binder, 2003; Cizmeci, 2015). Creating brand awareness has been noted as the first and most important step in marketing (Cizmeci, 2015).

Brand awareness is a combination of two concepts called brand recognition and brand recall (Kim & Kim, 2016). Brand recognition is the ability of consumers to identify that they have been exposed to a brand previously when given a cue (Holden, 1993; Keller, 1998b). Brand recall is

providing a consumer with a product category and asking them to recall brands from the category. Brand awareness exists along a continuum from a simple recognition to an in-depth knowledge of the brand (Momany & Alshboul, 2016). It does not only include the brand name or being previously exposed to it, but it can also mean that consumers can link the logo, name, and other connotations to the brand (Cizmeci, 2015).

Brand awareness is vital to customer decision making because without awareness, communication is impossible (Cizmeci, 2015; Keller, 1993; Kim & Kim, 2016). Brands that are more well-known than others are recalled more frequently and easily, where only a small number of brands are considered (Tybout & Calkins, 2005). Establishing brand awareness should be a priority for organizations, as brands with strategic awareness are stronger than brands that have general awareness (Kim & Kim, 2016). By growing brand awareness, the reach of the brand is also increased (Aaker, 1996). Holden (1993) said, "Despite the importance of brand awareness to brand choice, consumer researchers have given little attention to developing an understanding of awareness as a construct" (p. 383).

In the case of mass media programs, viewership may be considered an indicator of brand awareness. As the audience is exposed to the brand through viewership, they may be more likely to continue to select it in the future as they gain familiarity. For non-viewers, they may gain exposure to the brand through a variety of channels, such as friends or family, commercials, social media suggestions, or promotional items. However, social media has been identified as a way to increase brand awareness and engagement (Momany & Alshboul, 2016).

Sub-branding

Several relationships exist between brands, such as sub-brands. Sub-brands are defined as combinations of brands with a subordinate or superordinate brand alongside the main brand, which adds specific meaning (Franzen & Moriarty, 2009, p. 381). For example, Jeep is a sub-brand within the Fiat Chrysler main brand. To effectively disseminate program information and goals, creating alliances between two public health brands may help foster success (Evans, 2013), such as Mississippi State University Extension Service and *The Food Factor*. In this instance, *The Food Factor* serves as a sub-brand because it operates under Mississippi State University Extension Service's brand, despite the fact that *The Food Factor* brand has its unique logo and other brand attributes.

Creating these strategic collaborations is vital for health promotion social marketing campaigns (Evans, 2013). Sub-brands that fit well within the primary brand should experience a symbiotic relationship. Successful primary brands may help create visibility and exposure for the sub-brand and vice versa (Franzen & Moriarty, 2009). These collaborations can help establish trust and brand loyalty (Marchak, 2015). This is important as people who trust the main brand are more likely to use sub-brands.

Even though sub-brands and primary brands can benefit from collaborations, they may also cause some challenges for the organization. One issue with the use of sub-brands is that they can be costly to promote and maintain (Franzen & Moriarty, 2009; Marchak, 2015; Tybout & Calkins, 2005), hurt brand consistency by causing complications through multiple identities being involved (de Chernatony, 2006), cause confusion for consumers (Franzen & Moriarty, 2009; Marchak, 2015; Tybout & Calkins, 2005), and possibly force organizations to restructure themselves in order to accommodate the sub-brand (Marchak, 2015). If the sub-brand and primary brand struggle to coexist harmoniously, it can put a strain on the primary brand (Franzen

& Moriarty, 2009; Marchak, 2015; Tybout & Calkins, 2005). It can negatively affect brand loyalty, trust, and the primary brand's image (Marchak, 2015).

Television and Mass Media Programs and Interventions

Bertrand, O'Reilly, Denison, Anhang, and Sweat (2006) define mass media interventions as, "Any programs or other planned efforts that disseminate messages to produce awareness or behavior change among an intended population through channels that reach a broad audience" (p. 568). Several studies have concluded that mass media is an effective way to influence the public's health behaviors by themselves or in addition to other programs (Abroms & Maibach, 2008; Bertrand et al., 2006; Noar, 2006; Randolph & Viswanath, 2004), although the effects are often modest (Noar, 2006). Successful health media campaigns have well-designed messages that are received by the target audience with effective reach and frequency (Abroms & Maibach, 2008, p. 221). The mass media often portrays unhealthy images, which provide competition for healthy messages featured in social marketing campaigns (Marshall-Chester, 1990). Additionally, healthy campaigns often use medical jargon or focus on treatment rather than prevention. Despite these challenges, however, using mass media presents a positive opportunity for health promotion (Marshall-Chester, 1990) due to its wide reach, appeal, and cost-effectiveness (Randolph & Viswanath, 2004). More research is needed to identify how the mass media can strategically influence health behavior practices (Abroms & Maibach, 2008).

Extension mass media programs.

Extension is in a unique position. Awareness of the brand is low. Only 26.0% of members of the American public was aware of the organization in one study (Settle, Rumble, McCarty, & Ruth, 2017). While awareness was low, trust in the organization and its communications were high compared to other agricultural and natural resources organizations among those who were aware of the organization (Settle et al., 2017). This indicates that while the organization is effective once it reaches members of the public, Extension has not been doing a good job of fostering initial levels of awareness.

Boone, Sleichter, Miller, and Breiner (2007) found that television was not a strong media preference for existing Extension users, though mass media may be an effective way to reach potential Extension users. According to Nazari, Bin, and Hassan (2011), "Mass media offers effective channels for communicating agricultural messages, which can increase knowledge and influence behavior of audience members" (p. 931). In this case, *The Food Factor* provides an opportunity to share agricultural, nutritional, and other food-related information with individuals who may not be reached regularly or at all by traditional Extension efforts. Mass media may be an effective way to reach a larger audience outside of the traditional Extension audience (Boone et al., 2007; Woodson, Lindner, & Lawver, 2008).

More traditional means of mass communication have had mixed results for Extension. Telg et al. (2007) reported that Florida Extension agents did not favor mass media, such as television and radio programs, but another evaluation found that the public's only contact with Extension was through the mass media in one Wisconsin county (Fett, Shinners-Gray, Duffy, & Doyle, 1995). Fett et al. (1995) hypothesized that mass media exposure of Extension may lead to more in-person contacts. Mass media was considered an attractive option due to a large reach of audiences for the cost. However, the study identified that it may not be ideal as it limits the potential for engagement and feedback through one-way communication.

Web programs are another form of mass media, which is utilized by *The Food Factor*. In a study of the online Spend Smart, Eat Smart web program, adults indicated that they disliked programming that utilized lecture style without audience engagement and speaking above their comprehension level (Francis, Martin, & Taylor, 2011). Participants preferred programs that were short, with 24-hour access, and had an energetic speaker. Relating to the topics of nutrition education, participants requested topics about shopping on a budget and cooking.

Purpose and Research Objectives

The purpose of this study was to determine the perceptions surrounding *The Food Factor* brand. The research objectives guiding the study were:

1. To describe the public's use and awareness of *The Food Factor*;
2. To describe the viewers' perceptions and skills learned related to watching *The Food Factor*; and
3. To compare the non-viewers' perceptions of *The Food Factor* between branded and non-branded *The Food Factor* episodes.

Methods

This study used a quantitative survey to assess viewer and non-viewer perceptions of *The Food Factor* brand. A researcher-developed survey instrument was used to collect information about food-related skills and perceptions of *The Food Factor* using Qualtrics. Several questions, particularly those examining brand perceptions, were adapted from a previous *Farmweek* evaluation questionnaire developed by FleishmanHillard and Mississippi State University Extension Service (Brubaker et al., 2016).

The sample for this study consisted of a representative sample of 404 Mississippi residents over the age of 18 contacted by Qualtrics as an online panel to participate in the study. Nonprobability quota sampling was used to ensure the sample was representative of Mississippi population for sex, Hispanic status, and race. All respondents were asked about their unaided awareness of *The Food Factor* program, which determined the survey path they took (Figure 1). Viewers completed questions about viewing frequency, their current behaviors, and their intent to start or continue existing behaviors related to *The Food Factor* content. Non-viewers were asked the same behavior questions and also watched an episode of *The Food Factor* to assess their perceptions. The episode was hosted on YouTube and embedded in the questionnaire. Non-viewers were randomly assigned to see either an episode with a branded introduction or the same episode without the branded introduction to see how it affected their perceptions and behavioral intents. The branded introduction included the show's name, the name of the host, and Mississippi State University Extension Service. *The Food Factor* episode shown to non-viewers was about how to choose a healthy breakfast cereal. All respondents answered Extension questions, which are not included in this publication, and demographic questions, such as their household income, location, size of household, household role, race, Hispanic status, and sex.

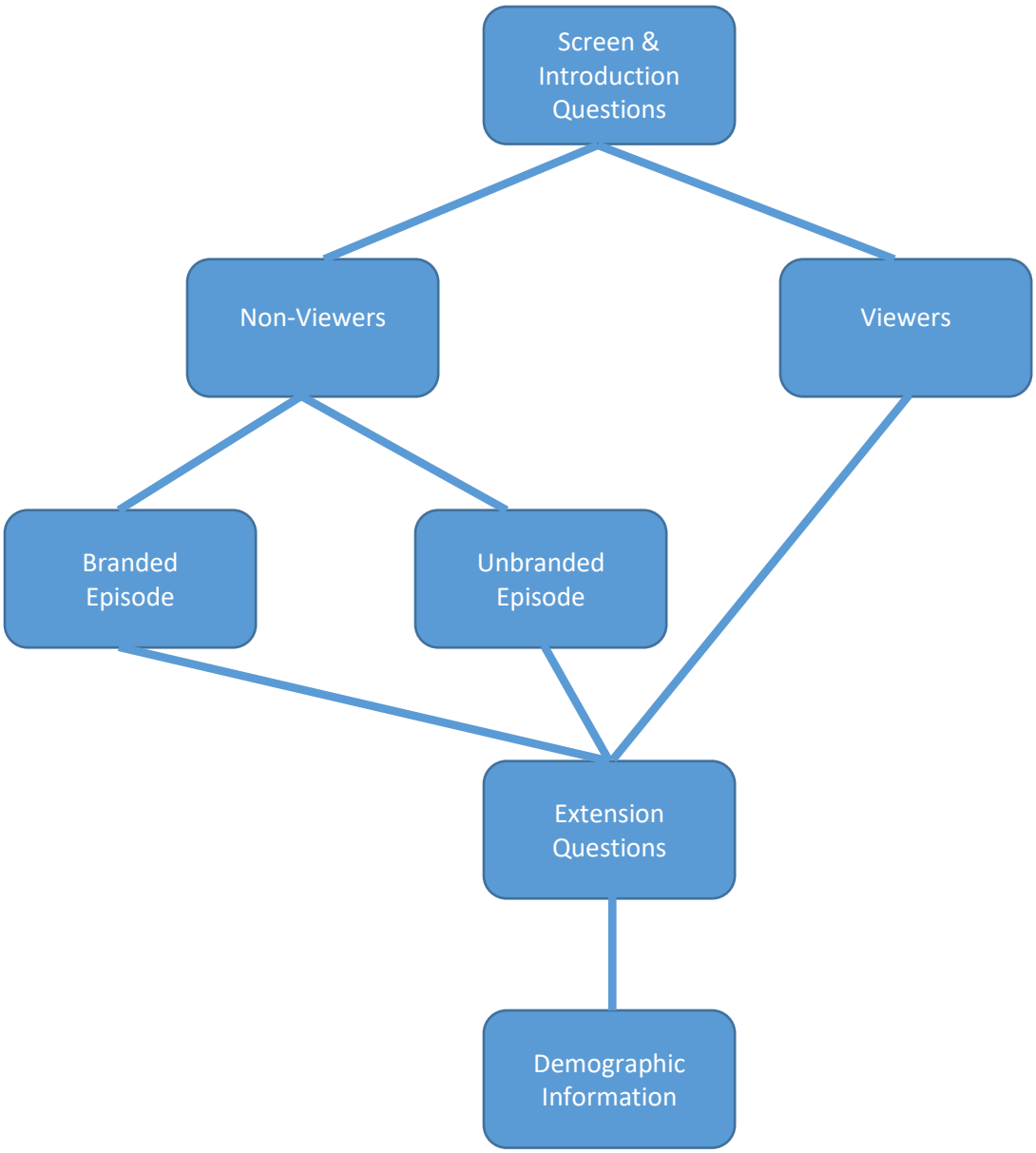

Figure 1. The survey flowchart shows that all respondents received screening and introduction questions, and then they were split into viewers and non-viewers.

The instrument was reviewed by a panel consisting of the Director of Agricultural Communications, two evaluation specialists, and *The Food Factor* Media Relations Manager. Four cognitive interviews were conducted to gain feedback to determine if respondents understood the intent of the survey questions and elicit feedback on survey usability (Dillman, Smyth, & Christian, 2014). Reliability was assessed for both viewer and non-viewer sections of the questionnaire post hoc using Cronbach's Alpha. Viewers were asked about their overall opinion of *The Food Factor* as semantic differential items (e.g., boring to exciting, accurate to inaccurate). The reliability for this portion of the survey was .93. Reliability was also assessed for the reasons that people watched *The Food Factor* and was .92. Reliability was assessed for

non-viewers for a 5-point scale (e.g., Unlikely to Likely) when asked about concepts such as trusting the show and the likelihood of believing that *The Food Factor* cares. Non-Viewer Group #1 (Non-Branded) had a reliability score of .95. Non-Viewer Group #2 (Branded) had a reliability score of .92.

Results

Demographics

Frequencies were calculated to describe the demographic characteristics (e.g., race, income level, household size, etc.) of the sample. Quota sampling was used to ensure the participants' racial demographic makeup was representative of Mississippi's population, according to the 2010 U.S. Census Bureau. The majority of the sample was White (59.7%) followed by Black or African American (38.9%), with 97.8% of the sample being of non-Hispanic or Latino origin.

The most common response for household income was $21,000 to $39,000 (*n* = 120, 29.7%). The second most common response was an income less than $20,000 (*n* = 110, 27.2%). The least common responses for income level were $40,000 to 59,000 (*n* = 67, 16.6%), $60.000-79,000 (*n* = 56, 13.9%), and $80,000 or more (*n* = 51, 12.6%). A household of two (*n* = 112, 27.7%) and three (*n* = 99, 24.5%) were most represented, followed by a single-person household (*n* = 73, 18.1%). A slight majority did not have any children younger than 18 in the household (*n* = 223, 55.2%). The second most frequent response was one child (*n* = 112, 24.3%), followed by two children (*n* = 55, 13.6%).

To describe the public's use and awareness of *The Food Factor*

Frequencies were used to describe the public's use and awareness of *The Food Factor*. When asked what organizations come to mind when thinking about healthy lifestyles, nutrition, and well-being, respondents were not able to recall Mississippi State University, Mississippi State University Extension, or *The Food Factor* as an unaided response. One respondent said, "Mississippi un," but it was not determined if they intended Mississippi State University as their response. Another respondent mentioned, "Four H clubs," which was the closest link to Mississippi State University Extension. There were themes of organizations respondents listed, including medical associations and hospitals, weight-loss and nutrition diet programs, fitness centers and spas, insurance companies, government organizations, nutrition and fitness brands or retailers, and media outlets (e.g., books, magazines, websites, apps, etc.).

Respondents were mostly unaware of *The Food Factor* (*n* = 319, 79%). Only 85 (21%) respondents were aware of *The Food Factor*. Those who had been aware of *The Food Factor* (*n* = 85, 21%) were asked follow-up questions to determine their level of awareness and familiarity with the program (Table 1). When asked about the organization that produces *The Food Factor*, unprompted, the most common response among viewers was "I don't know" (*n* = 34, 40%). Only four respondents correctly identified "Mississippi State University Extension Service/Mississippi State University" (*n* = 4, 4.7%) as the producer of *The Food Factor*. Common incorrect responses were The Food Network, The Cooking Channel, or similar channels/organizations (*n* = 16, 18.8%), perhaps due to the nutrition/food-oriented nature of *The Food Factor*. Viewers most commonly identified themselves as being slightly familiar with *The Food Factor* (*n* = 42, 49.2%). Only seven respondents were very familiar with *The Food Factor* (*n* = 7, 8.2%), while 12 respondents were not familiar at all with *The Food Factor* (14.1%).

Television (*n* = 49, 57.6%) was the most popular medium where *The Food Factor* viewers came into contact with the brand when respondents were presented multiple avenues of media exposure. *The Food Factor*'s YouTube channel (*n* = 41, 48.2%) followed television, as these avenues are the primary media channels used. Viewers were also exposed to the brand on Facebook (*n* = 36, 42.4%). Viewers identified seeing *The Food Factor* brand in print (*n* = 32, 37.6%) on the Mississippi State University Extension website (*n* = 32, 37.6%) within the past three months. *The Food Factor* Pinterest board (*n* = 26, 30.6%), *The Food Factor*'s Twitter account (*n* = 25, 29.4%), and the official Mississippi State University Extension's social media accounts (*n* = 25, 29.4%) were less common mediums where viewers were exposed to the brand. Snapchat was the least common response for *The Food Factor*'s brand exposure (*n* = 19, 22.4%). This channel could have received lower responses due to the recent creation of *The Food Factor*'s Snapchat or a varying demographic of the audience, compared to Snapchat users.

Table 1
The Food Factor's *Viewers' Level of Awareness*

Question	*n*	Percent
What organization produces the television show, *The Food Factor*?[a]		
I don't know	34	40.0
The Food Network, The Cooking Channel, or similar channel/organization	16	18.8
Mississippi State University Extension/Mississippi State University (correct answer)	4	4.7
How familiar are you with *The Food Factor*?		
Not familiar at all	12	14.1
Slightly familiar	42	49.4
Somewhat familiar	19	22.4
Moderately familiar	5	5.9
Very familiar	7	8.2
In the past 3 months, have you seen *The Food Factor* mentioned in the following outlets?		
Television	49	57.6
The Food Factor YouTube channel	41	48.2
Facebook	36	42.4
Print (magazines, newspapers, etc.)	32	37.6
Online on Mississippi State University Extension's website	32	37.6
Pinterest	26	30.6
On Mississippi State University Extension's social media accounts	25	29.4
Twitter	25	29.4
Snapchat	19	22.4

Note. The number of respondents is *n* = 85.
[a] There were 85 responses to the question, but only key responses are in the table.

To describe the viewers' perceptions and skills learned related to watching *The Food Factor*

Analysis of the second objective included frequencies, means, and standard deviations to describe the viewer's perceptions of *The Food Factor*. The total number of *The Food Factor* viewers was 85 respondents. A 5-point Likert-type scale was used to determine how well *The Food Factor*'s viewers felt that their needs were being met as a program that provides healthy lifestyle choices (1 = *Extremely well* to 5 = *Not well at all*). Of viewers, 32.9% of respondents felt that *The Food Factor* was meeting their needs extremely well as a program that provides healthy lifestyle choices (*n* = 28, 32.9%), followed by *very well* (*n* = 22, 25.9%), *moderately well* (*n* = 21, 24.7%), *slightly well* (*n* = 8, 9.4%), and *not at all well* (*n* = 6, 7.1%).

Means and standard deviations were reported to describe the viewer's reasons for watching *The Food Factor* (Table 2). The scale ranged from 1 = *Strongly disagree* to 7 = *Strongly agree*. Respondents agreed most that they watched *The Food Factor* to gain knowledge or skills (*M* = 4.61, *SD* = 1.84). The next reason viewers watched *The Food Factor* was for enjoyment or relaxation (*M* = 4.41, *SD* = 1.90), followed by for entertainment (*M* = 4.38, *SD* = 1.79). Viewers were least likely to agree that they watched *The Food Factor* to connect with their peers (*M* = 3.72, *SD* = 1.78), to escape or distract themselves (*M* = 4.04, *SD* = 1.87), or because it was featured on another program, such as *Farmweek* (*M* = 4.05, *SD* = 1.94). Viewers overall felt that *The Food Factor* was meeting their needs. The semantic differential scale (*M* = 3.57) indicated respondents had a slightly positive view of *The Food Factor*.

Table 2
Viewers' Perceptions of The Food Factor

Items	*M*	*SD*
I watch *The Food Factor*.[a]		
To gain knowledge or skills	4.61	1.84
For enjoyment or to relax	4.41	1.90
For entertainment	4.38	1.79
To pass time	4.16	1.99
Because it is featured on another program that I already watch	4.05	1.94
To escape or distract myself	4.04	1.87
To connect better with my peers	3.72	1.78
Semantic Differential		
Negative/Positive	3.52	1.29
Bad/Good[c]	3.74	1.22
Boring/Exciting	3.42	1.24
Inaccurate/Accurate[c]	3.68	1.13
Impractical/Practical	3.49	1.27
Not Evidence-Based/Evidence-Based	3.51	1.19
Dull/Fun	3.29	1.31
Outdated/Modern	3.35	1.32
Uneducational/Educational[c]	3.88	1.12
Uninteresting/Interesting	3.47	1.21
Unentertaining/Entertaining[c]	3.73	1.11

Useless/Valuable[c]	3.75	1.09
Uninspiring/Inspiring	3.42	1.35
Unengaging/Engaging[c]	3.56	1.25
Unapproachable/Approachable	3.58	1.27
Unmotivating/Motivating[c]	3.62	1.24
Grand Mean	3.57	0.85

Note. The total number of respondents was $n = 85$.
[a] Scale ranges from 1 = *Strongly disagree* to 7 = *Strongly agree*.
[b] Scale ranges from 1 = *Negative, Bad, Boring,* etc., to 5 = *Positive, Good, Exciting,* etc.
[c] Items reverse-coded.

Viewers were also asked their likelihood to recommend *The Food Factor* to others, such as friends, family, co-workers, etc. The 5-point likelihood scale ranged from 1 = *Extremely likely* to 5 = *Extremely unlikely*. Viewers were likely to recommend *The Food Factor* to others ($M = 2.15$, $SD = 1.02$). Table 3 shows viewers' skills learned from watching *The Food Factor* episodes over the past 3 months. Viewers most commonly learned where to go for information about growing their own fruits and vegetables (80.9%), how to properly wash fruits and vegetables before cooking or eating (78.8%), and proper food storage temperatures to avoid bacteria growth and spoilage (76.6%), although more than half of all viewers identified learning the topics from each of the selected episodes. Fewer viewers identified themselves as learning about how to grow and use microgreens to make healthy meals (55.3%), how to boil eggs (61.7%), and how to use the correct amount of bleach to sanitize the kitchen (66.0%).

Table 3
Viewers' Skills Learned from The Food Factor

In the past 3 months, have you learned any of the following from *The Food Factor*?	Yes	Percent
Places to go for information about growing your own vegetables and garden	38	80.9
How to properly wash fruits and vegetables before cooking or eating them	37	78.8
Proper food storage temperatures to avoid bacteria growth and spoilage	36	76.6
The benefits of eating home cooked meals as a family	35	74.5
Honey is a natural sweetener and can be used to replace sugar in some foods	34	72.3
How to select healthy cereal	34	72.3
How to make and freeze healthy muffins	34	72.3
The benefits of superfoods, like cranberries	33	70.2
How to use the correct amount of bleach to sanitize your kitchen before and after cleaning	31	66.0
How to boil eggs	29	61.7
How to prepare pumpkins for cooking and baking	28	56.6
How to reinvent holiday leftovers	27	57.4
How to grow and use microgreens, like basil, to make healthier meals	26	55.3

Note. Only respondents who have viewed the show in the previous three months before completing the questionnaire answered these items ($n = 47$).

To compare the non-viewers' perceptions of *The Food Factor* between branded and non-branded *The Food Factor* episodes

Objective 3 used frequencies, means, standard deviations, and an independent samples t-test to compare the non-viewers' perceptions of *The Food Factor* between branded and non-branded episodes of *The Food Factor*. Non-viewers were split into two groups, where some watched a branded and some watched a non-branded episode of *The Food Factor*. Both groups saw the same episode, however, only one had the branded introduction left intact. Non-Viewer Group #1 (n = 161) saw the non-branded episode. Only 12.4% of respondents (n = 20) were able to correctly identify Mississippi State University University Extension Service/Mississippi State University as the producer of *The Food Factor*. A smaller number of respondents (n = 6) were able to partially recognize *The Food Factor* brand by identifying the show or the host as the program producer. Non-Viewer Group #2 (n = 158) watched the branded episode with a full introduction. Thirty-eight percent of those respondents in Group #2 (n = 57) correctly identified Mississippi State University Extension Service/Mississippi State University as the producer of *The Food Factor* and 21 believed the show or the host produced the program.

Both groups of non-viewers were compared to determine their perceptions of *The Food Factor*. A similar number of respondents in Group #1 (93.2%, n =161) and Group 2 (91.8%, n = 158) reported being able to understand the content and messages in the episode. When respondents were asked if they would feel comfortable selecting a healthy breakfast cereal on their own after watching the episode, both groups felt comfortable completing the behavior (Group #1 = 88.8% vs. Group #2 = 88.0%). When asked about their ability to identify the organization that produces *The Food Factor*, a stronger majority of those who watched the branded video (Group #2 = 64.4% vs. Group #1 = 46.0%) were able to identify the producer.

Table 4
Non-Viewer Perceptions of The Food Factor

	Group #1 (Non-Branded)		Group #2 (Branded)	
After watching this clip, how likely are you to do the following?	*M*	*SD*	*M*	*SD*
Select a healthy breakfast cereal	3.89	1.20	3.87	1.15
Believe that *The Food Factor* cares about you and your family	3.79	1.06	3.78	1.18
Trust *The Food Factor* show	3.73	1.10	3.75	1.14
Believe *The Food Factor* is a credible source	3.72	1.15	3.70	1.22
Consider future advice from *The Food Factor*	3.65	1.20	3.70	1.16
Watch *The Food Factor* in the future	3.48	1.19	3.44	1.34
Recommend *The Food Factor* to others	3.48	1.19	3.37	1.28
Grand Mean	3.68	1.02	3.65	1.02

Note. Scale ranged from 1 = *Unlikely* to 5 = *Likely*. The number of respondents in this Group #1 was n = 161. The number of respondents in this Group #2 was n = 158.

An independent samples t-test was conducted to compare the non-viewers' perceptions of *The Food Factor* between the branded and non-branded episodes (Table 4). A grand mean was used for both groups. This test did not reach statistical significance; $t(314) = 0.251$, $p = .802$. These results suggest that there was not a significant difference between the non-branded Non-Viewer Group #1 ($M = 3.68$, $SD = 1.02$) and branded Non-Viewer Group #2 ($M = 3.65$, $SD = 1.02$) videos.

Conclusions

To describe the public's use and awareness of *The Food Factor*

Objective 1 analyzed the publics' awareness of *The Food Factor* and Mississippi State University Extension Service. This study found a lack of awareness for both *The Food Factor* and Mississippi State University Extension Service. The brand recall measure indicated that there was a lack of awareness at the unaided level. The wide range of answers could be explained due to the unaided nature of the question, as viewers had to produce this information from memory, unlike non-viewers who were exposed to an episode and then asked the same question. Another reason for the lack of awareness could be contributed to Extension's brand positioning, as it may not be positioned in the public's mind as a health brand. Instead, people may more strongly associate the Extension brand with agriculture or natural resources, rather than taking into account the other program areas, such as nutrition and wellness.

The brand recognition measures also indicated a lack of awareness at the aided level. These results are not surprising considering that Mississippi State University Extension has previously self-identified brand awareness as an organizational weakness (Mississippi State University Extension Service & Office of Agricultural Communications, 2015). However, Mississippi State University Extension has established brand awareness as a priority (Mississippi State University Extension Service & Office of Agricultural Communications, 2015), acknowledging that brands with strategic awareness are more successful and are stronger than brands that have general awareness (Kim & Kim, 2016). By growing the Extension brand and awareness, the reach of the brand is also increased (Aaker, 1996), which is a goal of Extension (Mississippi State University Extension Service & Office of Agricultural Communications, 2015).

Previous studies have also shown that awareness relates to action (Baldauf et al., 2003; Cizmeci, 2015). Without adequate awareness, *The Food Factor* will not be able to share its knowledge to encourage others to change behaviors, as well as achieving other Mississippi State University Extension goals. Without influencing or changing these localized behaviors, *The Food Factor* and Mississippi State University Extension will likely be unable to achieve its larger, societal impacts, in this instance influencing obesity and other weight-related diseases (Kotler & Lee, 2016).

To describe the viewers' perceptions and skills learned related to watching *The Food Factor*

The purpose of Objective 2 was to describe the viewers' perceptions and skills learned related to watching *The Food Factor*. By understanding the perceptions toward a brand, a stronger brand may be developed, which will help improve social marketing (Franzen & Moriarty, 2009; Glanz, Rimer, & Viswanath, 2008; Keller, 1998a). Overall, viewers had a slightly positive perception of *The Food Factor*. Specifically, viewers believed the brand was inspiring, interesting, and good. Viewers were also likely to recommend *The Food Factor* to

others. These results are encouraging for *The Food Factor* because viewers who are more likely to perceive the brand positively may be more likely to interact with the brand in the future or complete the behavior changes as promoted (Baldauf et al., 2003; Franzen & Moriarty, 2009; Keller, 1998a).

When examining behaviors related to *The Food Factor*, more than half of all viewers identified learning about the selected topics from each episode. The most-learned behaviors from episodes included where to go for information about growing their own fruits and vegetables, how to properly wash fruits and vegetables before cooking or eating, and proper food storage temperatures to avoid bacteria growth and spoilage. The show has some recurring segments, but there was no pattern in the responses to indicate the segments were more salient than regular episodes. The lack of trends within these categories may signify that viewers are confused about what types of skills and behaviors they should be learning or that the content is not standing out in their minds.

To compare the non-viewers' perceptions of *The Food Factor* between branded and non-branded *The Food Factor* episodes

This study could not conclude that branding the episodes was making a difference in non-viewers' perceptions, despite the fact that many previous studies have identified branding as an important strategy in social marketing. It is possible that this study did not see significant effects for several reasons. One possibility is that the level of exposure experienced by non-viewers in this instance was not enough to make a difference in their minds, as non-viewers only saw one 90-second video. Repeated exposures could make a difference, but that was not feasible to address in this study. It is also possible that the branded introductions are not enough exposure to make a difference given that the brand is not well known (Settle et al., 2017). Another possible explanation for the lack of effect of branding was that *The Food Factor*'s branding has not been implemented effectively. When branding is not used strategically, it tends to be ineffective at achieving the brand's goals (Aaker, 1996; Asbury, Wong, Price, & Nolin, 2008; Baldauf et al., 2003; Cizmeci, 2015; Franzen & Moriarty, 2009; Keller, 1998a; Kim & Kim, 2016). Other studies have shown that effective branding helps produce results and achieves organizational goals, such as The truth, VERB, and The Heart Truth (Aaker, 1996; Asbury et al., 2008; Baldauf et al., 2003; Cizmeci, 2015; Evans, 2013; Evans & Hastings, 2008; Franzen & Moriarty, 2009; Keller, 1998a; Kim & Kim, 2016).

Recommendations

This study provides several recommendations for *The Food Factor* and those conducting future research. *The Food Factor* could provide more consistent use of the brand during episodes. By increasing the brand consistency, public recognition and recall of *The Food Factor* could be improved. Additionally, by increasing consistent brand use, the public's level of familiarity with the program should rise. As people are more familiar with a brand, they may be more likely to recommend or share it with others.

Overall, the introduction did not make a significant difference in the non-viewers' perceptions of *The Food Factor* brand. A cursory analysis of *The Food Factor* episodes indicates a lack of branding beyond the introduction. To improve branding within episodes, *The Food Factor* could mention Mississippi State University Extension during the episode, use subtitles to direct users to Extension resources or more *The Food Factor* episodes. The show could also

visually identify itself and the Mississippi State University Extension brand by placing the logo in the corner during the episode or by using branded items in production, such as wearing Extension shirts, aprons, or using Extension-branded tools like cutting boards, placemats, bowls, or promotional items.

The Food Factor needs to create a visual identity of the program's brand beyond the introduction because the introductions are removed on some news stations. The show also lacked other ties to Extension. Therefore, Mississippi State University Extension Service should have a dominant presence over the sub-brand of *The Food Factor* to maximize the benefits of brand partnerships. By associating *The Food Factor* with the Extension brand, there are mutual benefits, such as increased awareness, credibility, and trust. For instance, as the public engages with *The Food Factor*, they could be exposed to the Mississippi State University Extension brand and learn about the resources and services that are provided by the organization, outside of *The Food Factor*. Consequently, as the public becomes comfortable with and aware of both brands, behavior change is more likely to follow (Aaker, 1996; Baldauf et al., 2003; Cizmeci, 2015; Franzen & Moriarty, 2009; Keller, 1998a).

This study identifies several areas of further research. One area of future research should look at the use of social marketing programs in Extension to more definitively provide advice for implementation of social marketing concepts. This becomes increasingly important as Extension is faced with budget cuts and shifting legislative priorities (Montgomery, 2016; Varea-Hammond, 2004), especially as social marketing has been thought to provide a way to more efficiently direct Extension resources and budgets by working with target audiences to maximize the behavioral outcomes in relation to inputs (Andreasen, 2002; Evans & Hastings, 2008; Skelly Hill, & Singletary, 2014). Because this study is limited to addressing one media program in one state, more research across a variety of settings is warranted.

Future research should be conducted on *The Food Factor* to further understand the audience's awareness and use of the brand, as well as to determine how to improve perceptions of the brand. To gain an in-depth understanding and more accurately reflect the population's perceptions of *The Food Factor* brand, other research techniques, such as the use of focus groups, could be used to overcome quota sampling as a limitation. It would also be advantageous for other Extension mass media programs to be studied in several other states because these results are only the findings for *The Food Factor* in the state of Mississippi.

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