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Mississippi leads the nation in child obesity, chronic diseases, poverty, and food insecurity. Stemming the long-term consequences of high obesity rates will require a cultural attitude and behavioral shift towards healthy eating. This study explored the perceptions, beliefs, practices, and self-efficacy towards healthy eating among limited resource Mississippi parents to inform a SNAP-Ed social marketing campaign. A statewide telephone survey was conducted with income-eligible or current SNAP recipients who provided or prepared food for children in their household. Likert-type scale questions measured intrapersonal factors, self-efficacy, and practices regarding healthy eating, such as shopping and meal planning. A total of 206 surveys were analyzed. Seventy-nine percent (n=163) of participants were currently receiving SNAP benefits. Healthy eating was perceived as balanced meals and fruits and vegetables. Though 60% agreed that cost was a barrier to eating more fruits and vegetables, 90% of participants had positive attitudes and beliefs towards healthy eating. In summary, Mississippi parents with limited resources were interested in providing healthy balanced meals but faced cost as the major barrier. A social marketing message with this population can be effective in emphasizing affordable healthy meals.

Keywords: healthy eating, low income, limited resource, children, SNAP, families, Mississippi, social marketing

Introduction

The U.S. prevalence of obesity for children is an alarming 17% (Ogden et al., 2015), making it one of the primary public health burdens in the U.S. A growing number of children experience chronic health problems such as type II diabetes, hypertension, and other adult-onset adverse health outcomes during childhood. Moreover, childhood obesity may be associated with an increased likelihood of adult obesity (Freedman et al., 2007; Kaur et al., 2015; Singh et al., 2008).

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Social inequalities such as socioeconomic status (Singh et al., 2010) and food insecurity (Kaur et al., 2015) may explain disproportionate obesity rates among minority adults and children. Mississippi has one of the highest rates of childhood obesity (Robert Wood Johnson Foundation, 2017, 2018) compounded by high rates of poverty and food insecurity. About 20% of Mississippi residents live below the federal poverty rate, while in many counties, the poverty rate is estimated as high as 35%. Poverty rates for children in Mississippi are estimated to be as high as 28% (U.S. Department of Agriculture-Economic Research Service, 2017). About 20% of Mississippi households are estimated to be food insecure, and 7.3% are deemed to have very low food security; these rates are significantly higher than the national averages of food insecurity (12.7% and 5.0% respectively) (Coleman-Jensen et al., 2016).

To reduce the risk of obesity and chronic diseases, the U.S. Dietary Guidelines for Americans recommended a balanced diet along with physical activity for a healthy lifestyle (U.S. Department of Health and Human Services & U.S. Department of Agriculture, 2015). Healthy eating was defined by the U.S. Dietary Guidelines, as “healthy dietary patterns over a lifetime, emphasizing vegetables and fruits, planning fresh meals cooked at home, and offering variety” (U.S. Department of Health and Human Services & U.S. Department of Agriculture, 2015). National data and literature suggest that while most Americans are not meeting these recommendations for healthy eating (Andreyeva et al., 2015), taste and convenience have been cited as priorities over nutrition or health for many decades (Glanz et al., 1998). Those who have limited resources and are food insecure are particularly vulnerable to lower dietary quality (Andreyeva et al., 2015; Krebs-Smith et al., 2010) and may suffer from both obesity and hunger. The literature discusses that the reasons why food insecure populations are both hungry and obese are multifactorial; these factors may include the availability of fresh foods, accessibility, and cost (Drewnowski, 2004; Laraia et al., 2017; Robinson, 2008). These factors, in turn, influence personal perceptions and confidence that healthy eating is possible on a budget (Dammann & Smith, 2009). Preventing the further growth of childhood obesity, in the context of poverty and food insecurity, will require a major cultural attitude and behavioral shift towards healthy eating.

The Supplemental Nutrition Assistance Program (SNAP) is the largest of the U.S. Department of Agriculture’s (USDA) nutrition assistance programs and aims to provide relief from food insecurity and improve the nutritional status of low-income individuals (USDA, 2017). SNAP-Ed is a federally funded grant program that provides nutrition education and obesity prevention to persons eligible for the program. The purpose of the SNAP-Ed Program is to assist eligible families in making food choices consistent with the U.S. Dietary Guidelines definitions of healthy eating (USDA, 2017). For example, SNAP-Ed encourages individuals who are making food choices for their families to learn about nutrition and plan meals on a budget. Among many nutrition education strategies, SNAP-Ed supports social marketing as an effective method to guide SNAP recipients to healthy eating on a budget (USDA, 2017). Social marketing is a type of nutrition education intervention that can reach a large population (Thomson & Ravia, 2011).

Using social marketing, SNAP-Ed could shift the current food environment to a culture of healthy eating.

Social Marketing and Formative Research

Social marketing is the concept of changing behavior on a population level by marketing a socially desirable change. “Social marketing is the application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programs designed to influence the voluntary behavior of target audiences to improve their personal welfare and that of their society.” (Andreasen, 1995, p. 7). Social marketing is implemented as a type of nutrition education and promotion campaign, but its goal is more than just communicating facts. The goal of social marketing is to change behavior for a greater social good (Andreasen, 1994, 1995).

Social marketing is deemed successful when large populations voluntarily change behavior to a new behavior that will be beneficial to them (Andreasen, 1995). Behavior change includes strengthening a desired behavior and/or eliminating an undesirable behavior. It is the behavior change bottom line that makes social marketing resemble commercial marketing in comparison to most health promotion methods.

To better capture the effectiveness of a social marketing campaign on behavior change, formative research should be conducted prior to the campaign. The critical point of formative research for social marketing is to determine the customer orientation, which includes (a) narrowing the target consumer, (b) what are their perceptions, attitudes, and intrapersonal factors, and (c) barriers and challenges to making behavior change. Most importantly, formative research can surmise if the target consumer is ready to change behavior (Andreasen, 1994, 1995). For example, if a large proportion of the target audience has no knowledge about healthy eating or has rejected healthy eating, then social marketing is not appropriate. In that case, large segments of the audience will need basic education to be informed of the topic and start the process of changing attitudes. On the other hand, if the target audience is knowledgeable and has some positive attitudes, the implication would be that the social marketing campaign could be successful in changing behavior (Andreasen, 1994).

The understanding of customer orientation is then used to develop the marketing mix (the product, price, place, and promotion). After thoroughly understanding the target customer and barriers, marketing methods can be applied to refine a message that offers an exchange, or alternate behavior (Cairns & Stead, 2009). In this case, a message would support healthy eating and address barriers.

Literature Review

Researchers have recognized the low diet quality and high rates of obesity among children and adults in Mississippi. Most of the literature from Mississippi which documents community

perceptions of health problems were primarily focused regionally on the Delta region (Gray et al., 2016; Huye et al., 2014; Johnson et al., 2008; McCabe-Sellers et al., 2007; Ndirangu et al., 2007; Smith et al., 1999; Tucker et al., 2005; Yadrick et al., 2001). Among the literature that discusses intervention planning, one study described focus groups to be used in the planning of a nutrition intervention (Huye et al., 2014). One statewide study explored the acceptance of changing school environments to provide healthful beverages in vending machines (Brown & Tamminen, 2009), while another statewide survey asked teachers their perspective on implementing nutrition competencies in their lesson plans (Lambert et al., 2010). While these studies demonstrated the need for and feasibility of health and nutrition intervention, there have not been any statewide studies that documented the perceptions and intrapersonal factors of healthy eating among limited resource parents. This current study will fill a gap and provide formative research for a statewide social marketing campaign.

Purpose

This study investigated perceptions and intrapersonal factors influencing healthy eating in Mississippi to inform SNAP-Ed's social marketing strategy. The focus of the study was adults who provided food in households with children, essentially parents and caretakers of children.

Methods

Study Design and Data Collection

This descriptive study was conducted by administering a statewide telephone survey in 2014 with persons aged 18 and older who provided or prepared food in their household. The survey protocol was developed jointly by the staff from the Office of Nutrition Education, SNAP-ED program, and a contracting survey research group. Both cellular and landline telephone numbers were obtained from public lists and randomly dialed with computer-assisted techniques. Each telephone number was dialed a maximum of eight times. Completed interviews lasted no more than 12 minutes and were conducted by trained staff from the contracting group.

Eligibility

Participants were required to be aged 18 or older and provide or prepare food in their household. Participants were included in this survey based on their eligibility for SNAP. They were asked two screening questions: (a) if they were currently receiving SNAP benefits and (b) household size and monthly income. Those who met the criteria for SNAP benefits were asked to complete the survey. Survey participants were also required to speak English.

Survey

The development of the survey question items was guided by both the theory of planned behavior (Ajzen, 1991) and the social cognitive theory (Bandura, 2001). The questions were adapted from literature which had applied these behavioral theories (Armitage & Conner, 1999).

Healthy eating was defined by the U.S. Dietary Guidelines as “healthy dietary patterns over a life time, emphasizing vegetables and fruits, planning fresh meals cooked at home, and offering variety” (U.S. Department of Health and Human Services & U.S. Department of Agriculture, 2015). Individual and intrapersonal factors were conceptualized as values, attitudes, beliefs, barriers, and practices/behaviors regarding healthy eating. Survey items were developed to measure healthy eating in terms of fruits and vegetables, their availability, accessibility, ability to cook, providing tasty food, and convenience. The survey measured shopping practices that can make food more affordable. Response choices were Likert-type scales. A personal perception of ‘healthy eating’ was collected through an open-ended question, “What does healthy eating mean to you?”

Value/importance was measured in the following nine items. They were towards spending less money, providing healthy food, providing tasty food, providing a meal that is easy to prepare, providing a meal quickly, knowing how to cook, knowing how to plan meals and grocery shop, and offering variety or excitement. These value items towards healthy eating were measured on a 4-point Likert-type scale from *not at all important* to *very important*.

Beliefs about healthy eating were measured in four items. Statements included, “I think of myself as a healthy eater,” “I think of myself as someone who is concerned with healthy eating,” “I think cooking meals at home is important for my health,” and “I think of myself as a good cook.” These belief items were measured from *strongly disagree* to *strongly agree*.

Attitudes towards healthy eating were measured in four items. Statements included, “Eating healthy makes me feel good about myself,” “Eating fruits and vegetables helps to maintain a healthy weight,” “Eating fruits and vegetables can improve my health,” “Eating healthy means eating boring food,” and “Fruits and vegetables are not very tasty.” These items were measured on a 4-point Likert-type scale of agreement from *strongly disagree* to *strongly agree*.

Barriers to healthy eating were defined as accessibility of fruits and vegetables, cost, finding time to cook, knowing how to cook, and perceptions of the family towards home-cooked meals. These five items were measured on a 4-point Likert-type scale of agreement from *strongly disagree* to *strongly agree*.

Practices/behaviors were measured with six items that included planning meals ahead of time, comparing prices before you shop, shopping with a grocery list, cooking foods without adding salt, using the nutrition facts label to make food choices, and shopping at the local farmer’s

market. Each item was measured on a 5-point frequency scale from *never*, *rarely*, *sometimes*, *usually*, and *almost always*.

Self-efficacy was measured by the participant's report of confidence on a 4-point Likert-type scale from *not at all confident* to *very confident*. Items included confidence to prepare mostly home-cooked meals, eat enough fruits and vegetables, plan meals ahead of time, shop with a grocery list based on planned meals, learn more about healthy foods, eat more healthy foods.

Analysis

Descriptive statistics were used to summarize demographic characteristics, values/importance, attitudes, beliefs, barriers, and behaviors/practices. Univariate frequencies were conducted in IBM SPSS 25. Responses to the open-ended question were classified into themes. Within each theme, phrases were then categorized based on commonality of phrases.

Results

A total of 411 surveys were completed. In addition, 122 eligible participants listened to the introduction, partially completed the survey, then refused; thus resulting in a 77.1% cooperation rate. For this current study, only those who reported children living in the house were selected for further analysis ($n = 206$).

Seventy-nine percent ($n = 163$) of households with children were currently receiving SNAP benefits at the time of the survey. Most survey participants were female (82.5%, $n = 170$), African American (68.9%, $n = 142$), and under the age of 44 (74.7%, $n = 154$). Most of the survey respondents reported being either single, separated, divorced, or widowed (66.1%, $n = 136$). The demographic profile of the study participants and the characteristics of their households are presented in Table 1.

Table 1. Demographic Characteristics of Respondents and their Households (N = 206)

Characteristics	n (%)
Gender	
Female	170 (82.5)
Male	36 (17.5)
Ethnicity	
Non-Hispanic	197(95.6)
Hispanic	6 (2.9)
Refused	3 (1.5)
Race	
African American	142 (68.9)
White	52 (25.2)
Other	10 (5)
Refused	2 (1.0)

Characteristics	<i>n</i> (%)
Age	
18-24	26 (12.6)
25-34	74 (35.9)
35-44	54 (26.2)
45-54	23 (11.2)
55+	29 (14.1)
Marital Status	
Married	57 (27.7)
Unmarried couple	12 (5.8)
Single	89 (43.2)
Divorced	23 (11.2)
Widowed	10 (4.9)
Separated	14 (6.8)
Refused	1 (0.5)
Education	
Grades 1-8	3 (1.5)
Grades 9-11	38 (18.4)
Grade 12 or GED	81 (39.3)
Some college	47 (22.8)
College graduate (4+ yrs)	16 (7.8)
Some graduate studies	2 (1.0)
Masters, Doctorate, Other	2 (1.0)
Refused	1 (0.5)
Employment	
Employed for Wages	91 (44.2)
Self-employed	9 (4.4)
Out of Work (gt 1 year)	13 (6.3)
Out of Work (lt 1 year)	13 (6.3)
Homemaker	31 (15.0)
A Student	13 (6.3)
Retired	9 (4.4)
Unable to Work	23 (11.2)
Choose not to Work	2 (1.0)
Refused	2 (1.0)
Household Demographics	<i>n</i> (%)
Number of People in Household	
2 people	16 (7.8)
3 people	57 (27.7)
4 people	61 (29.6)
5 people	39 (18.9)
6 people	20 (9.7)
7 or more	13(6.3)
Number of Children Under 18	
1	72 (35.0)
2	76 (36.9)
3	38 (18.4)
4	13 (6.3)
5	7 (3.4)
SNAP benefits	
Yes	163 (79.1)
No	43 (20.9)

Table 2 shows the responses to the statements about values regarding healthy eating and preparing home-cooked meals. Most participants (> 80.1%) stated that knowing how to cook and providing healthy meals was very important. Knowing how to plan meals and spending less money was very important for many participants (> 70%). Providing a meal quickly or one that is easy to prepare were reported to be very important by less than 40% of the study population.

Table 2. What is Important When Preparing Home Cooked Meals (N = 206)

Statement	Very Important n (%)	Somewhat Important n (%)	Slightly Important n (%)	Not at all Important n (%)	Not sure n (%)
Knowing how to cook	173 (84.0)	26 (12.6)	3 (1.5)	3 (1.5)	1 (.5)
Providing healthy food	165 (80.1)	40 (19.4)	0 (0.0)	1 (.5)	0 (0.0)
Knowing how to plan meals and grocery shop	162 (78.6)	38 (18.4)	5 (2.4)	1 (.5)	0 (0.0)
Spending less money	150 (72.8)	32 (15.5)	13 (6.3)	10 (4.9)	1 (.5)
Providing tasty food	130 (63.1)	63 (31.1)	8 (3.9)	3 (1.5)	1 (.5)
Getting the whole family involved	122 (59.2)	43 (20.9)	18 (8.7)	22 (10.7)	1 (.5)
Offering variety or excitement	116 (56.3)	57 (27.7)	24 (11.7)	7 (3.4)	2 (1.0)
Providing a meal that is easy to prepare	80 (38.8)	71 (31.5)	37 (18.0)	16 (7.8)	2 (1.0)
Providing a meal quickly	61 (29.6)	72 (35.0)	45 (21.8)	28 (13.6)	0 (0.0)

Table 3 shows the responses to the statements about attitudes and beliefs towards eating healthy. Overall, most participants strongly agreed or agreed on these statements. Participants strongly agreed or agreed that eating healthy makes them feel good about themselves. Participants strongly agreed or agreed that vegetables and fruits help to maintain a healthy weight and can improve health. Almost all participants agreed or strongly agreed that cooking meals at home was important for health; almost all participants agreed or strongly agreed that they were good cooks. About 94% agreed or strongly agreed that they were concerned with healthy eating; however, most of these were not in strong agreement. About 27% of participants agreed or strongly agreed that eating healthy meant eating boring food, while about 16% strongly agreed or agreed that fruits and vegetables were not very tasty.

Table 3. Attitudes and Beliefs Towards Eating Healthy (N = 206)

Statement	Strongly Agree n (%)	Agree n (%)	Disagree n (%)	Strongly Disagree n (%)	Not Sure n (%)	Refuse n (%)
Eating healthy makes me feel good about myself	120 (58.3)	85 (41.3)	0 (0.0)	0 (0.0)	1 (.5)	0 (0.0)
Eating fruits and vegetables helps to maintain a healthy weight	116 (56.3)	86 (41.7)	1 (.5)	0 (0.0)	3 (1.5)	0 (0.0)
Eating more fruits and vegetables can improve my health	111 (53.9)	87 (42.2)	5 (2.4)	0 (0.0)	3 (1.5)	0 (0.0)
I think cooking meals at home is important for my health	101 (49.0)	103 (50.0)	2 (1.0)	0 (0.0)	0 (0.0)	0 (0.0)
I think of myself as a good cook	101 (49.0)	95 (46.1)	8 (3.9)	0 (0.0)	2 (1.0)	0 (0.0)
I think of myself as someone who is concerned with healthy eating	69 (33.5)	126 (61.2)	9(4.4)	0(0.0)	1 (.5)	1 (.5)
Eating healthy means eating boring food	9 (4.4)	48 (23.3)	113 (54.9)	32 (15.5)	3 (1.5)	1 (.5)
Fruits and vegetables are not very tasty	3 (1.5)	32 (15.5)	125 (60.7)	44 (21.4)	2 (1.0)	0 (0.0)

Table 4 shows the responses to barriers to healthy eating. Most participants (>90%) strongly agreed or agreed with the statements that their family likes the foods cooked and that the participant knows how to cook many different vegetables. There was a little more variation in responses to the statements about cost, availability, and time. About 35% agreed or strongly agreed that there was a lack of quality fruits and vegetables, almost 60% agreed or strongly agreed that it is expensive to eat healthily, and about 18% agreed or strongly agreed that time was an issue in preparing home-cooked meals.

Table 4. Barriers to Healthy Eating (N = 206)

Statement	Strongly Agree n (%)	Agree n (%)	Disagree n (%)	Strongly Disagree n (%)	Not Sure n (%)	Refuse n (%)
My family likes the foods I cook	92 (44.7)	107 (51.9)	6 (2.9)	1 (.5)	0 (0.0)	0 (0.0)
I know how to cook many different vegetables	72 (35.0)	116 (56.3)	83 (17)	1 (.5)	0 (0.0)	0 (0.0)
It is expensive to eat healthy	46 (22.3)	75 (36.4)	67 (32.5)	17 (8.3)	1 (.5)	0 (0.0)
It is hard to find quality fruits and vegetables in my community	25 (12.1)	48 (23.3)	111 (53.9)	20 (9.7)	2 (1.0)	0 (0.0)
It is hard to find the time to prepare healthy, home-cooked meals	12 (5.8)	58 (12.2)	97 (47.1)	37 (18.0)	2 (1.0)	0 (0.0)

Table 5 compares planning, shopping, and food choice behaviors. In general, the population practiced price strategies most often. More than half usually or almost always planned meals, and about half used a grocery list. Using the nutrition facts label is practiced by about 33% of the participants. About 30% report to usually or almost always cook foods with less sodium.

Table 5. Frequency of Shopping and Meal Planning Practices/Behaviors (N = 206)

How often do you...	Almost Always n (%)	Usually n (%)	Sometimes n (%)	Rarely n (%)	Never n (%)	Not Sure n (%)
Compare prices	104 (50.5)	33 (16.0)	44 (21.4)	13 (6.3)	12 (5.8)	0 (0.0)
Shop with a grocery list	74 (35.9)	26 (12.6)	60 (29.1)	15 (7.3)	13 (15.0)	0 (0.0)
Plan meals ahead	65 (31.6)	44 (21.4)	62 (30.1)	19 (9.2)	16 (7.8)	0 (0.0)
Cook foods without salt	39 (18.9)	25 (12.1)	66 (32.0)	30 (14.6)	46 (22.3)	0 (0.0)
Use nutrition facts	37 (18.0)	32 (15.5)	55 (26.7)	29 (14.1)	53 (25.7)	0 (0.0)
Shop at local farmer's markets	15 (7.3)	20 (9.7)	60 (29.1)	20 (9.7)	88 (42.7)	3 (1.5)

Table 6 shows the responses to statements regarding self-efficacy. Overall, almost the whole sample (>79%) rated themselves very confident and confident in their ability to practice healthy eating strategies while on a budget. Over 65% stated they were very confident they could prepare mostly home-cooked meals.

Table 6. Self-Efficacy for Healthy Eating Practices (N = 206)

How confident are you that you can...	Very Confident n (%)	Confident n (%)	A Little Confident n (%)	Not at all Confident n (%)	Refused n (%)
Prepare mostly home cooked meals	134 (65.0)	67 (32.5)	4 (1.9)	0 (0.0)	1 (0.5)
Eat more healthy	99 (48.1)	89 (43.2)	17 (8.3)	1 (0.5)	0 (0.0)
Learn more about what healthy foods are	89 (43.2)	96 (46.6)	15 (7.3)	6 (2.9)	0 (0.0)
Shop with grocery list based on meals that you plan	87 (42.2)	81 (39.3)	15 (7.3)	23 (11.2)	0 (0.0)
Eat enough F&V	85 (41.3)	96 (46.6.)	15 (7.3)	10 (4.9)	0 (0.0)
Plan meals	83 (40.3)	81 (39.3)	27 (13.1)	15 (7.3)	0 (0.0)

Open-ended Question

When asked “what does healthy eating mean to you,” participants offered short phrases of information. The phrases seemed to be divided into two main themes: those that indicated a view on what you can do to eat healthily, and those that indicated a message of what you need to stop doing in order to be healthy. The most frequent phrases, overall, were related to “balanced meals” and “vegetables and fruits;” both phrases would be in a view of what you can do or action-oriented. Those who mentioned balanced meals provided details that each food group should be in each meal; they said, “well rounded diet” and “food groups.” Phrases included with the fruits and vegetables category were “salads,” “greens,” or “green vegetables.” Other phrases that were related to action were “eating lean meats,” “drinking healthy drinks” (milk, water or orange juice), and consuming “enough vitamins.” Participants also mentioned consistent meals (not eating late, three meals/day), appropriate portion sizing, and cooking methods (baking, boiling). Many participants indicated that healthy eating meant wellness; for example, participants mentioned “feeling better,” “living longer,” “staying in shape,” and “better immune system.” The phrases related to messages of “no” were “reducing sugar,” “no sweets,” “no junk food or fast food,” and “limiting calories and sodium.”

Discussion

Formative research for social marketing informs policy regarding decisions about how to develop the marketing strategy by gaining an understanding of consumer orientation. In addition, formative research helps inform decisions regarding the effectiveness of a social marketing campaign and whether it was appropriate for the audience or if another type of nutrition education would be warranted. The findings of this study, both knowledge and large population support for healthy eating, suggest that a social marketing campaign in Mississippi can be successful by emphasizing positive attitudes, addressing the barriers, and increasing self-efficacy (Andreasen, 1995). This descriptive study adds to the growing body of literature on healthy eating and is the first to confirm a positive understanding in Mississippi. Despite living in one of the most obese, poor, and food-insecure states in the U.S., African American women and other caretakers of children, according to this study, had positive attitudes, beliefs, and accurate perceptions of what healthy eating means. This study also supports other reports in the literature that women and other caretakers of children with limited resources want to regularly consume fruits and vegetables but find the lifestyle to be expensive (Acheampong & Haldeman, 2013; Dammann & Smith, 2009).

Formative research for social marketing should fully identify the barriers to making behavior change. According to this study, the cost of fruits and vegetables was a pertinent barrier. Cost is commonly cited in the literature as a barrier to healthy eating by parents, mostly women, and grandparents taking care of children (Griffith et al., 2016; Higgins & Murray, 2010; Horning & Fulkerson, 2015; Kicklighter et al., 2007). In a state that is as impoverished as Mississippi, cost as a barrier may not be surprising. The literature suggests, however, that cost can mean more than a financial burden. For example, Yeh et al. (2008) reported that African American mothers with limited resources said fruits and vegetables did not have a shelf-life, and their children did not eat them. Though mothers were willing to buy healthy foods, they did not find value in food that was not used in its entirety when children did not eat it (Yeh et al., 2008). Further development of a social marketing campaign would be enhanced with additional study in Mississippi on the full meaning of cost and alternatives that can help motivate this population to overcome the cost of healthy foods.

Time to prepare fresh home-cooked meals, ease of preparation, and taste (Antin & Hunt, 2012; Fulkerson, 2018; Jabs et al., 2007; Robinson, 2008) have been cited repeatedly in the literature as important factors which may limit healthy eating. These factors were important in this study as well, although not as important as cost. A recently published national study by Aggarwal et al. (2016) and another by Smith et al. (2013) suggested a new trend that limited resource mothers were prioritizing health and nutrition over these factors as attitudes towards food may be changing. This current study in Mississippi supported this changing trend, but still, these factors should be considered carefully in developing the campaign.

Positive beliefs and high self-efficacy do not always translate into practice. While a large proportion of participants were concerned with healthy eating and believed they had the confidence to eat healthier, about half reported to sometimes, rarely, or never use nutrition facts labels or practice planning meals ahead (Table 5). Being able to read and interpret the nutrition labels requires a minimal knowledge of nutrition. Planning meals may help with increasing the variety and taste of home-cooked meals as well as save money (Haven et al., 2014; USDA, 2017). To provide more depth to the social marketing campaign, both nutrition labels and planning meals should be part of the campaign. Additional study should be conducted to clarify what further barriers prevent limited resource families from planning their meals.

Strengths, Limitations, and Future Directions

This is the only large population, statewide study in Mississippi that demonstrated how parents and caretakers for children think about healthy eating. This is also the first study to document a large population support for healthy eating, which may indicate a behavioral shift towards a new norm for healthy eating.

As this was a telephone survey, some respondents may have provided responses that were socially desirable (Di Noia et al., 2016). This study showed that preparing foods at home was valued as part of healthy eating; however, the concept of home-prepared food may need more definition and exploration. The authors also recognized that barriers such as cost needs to be clarified beyond financial constraints.

A social marketing campaign on healthy eating could be effective in Mississippi. To build on these findings and further develop the campaign, focus groups should be conducted to provide more contextual data on barriers, especially cost, for healthy eating in Mississippi.

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