

Hunger and Food Well-Being: Advancing Research and Practice

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Abstract

This article explores the paradigm of Food Well-Being (FWB), “a positive psychological, physical, emotional, and social relationship with food,” for those who experience hunger. Building on the insights derived from two sources—research across a range of disciplines including marketing and the practices of the nonprofit Hunger Task Force to alleviate hunger and advance FWB—the authors explore the five domains of FWB: food availability, food socialization, food literacy, food marketing, and food policy as they relate to people who experience hunger. The authors establish a research contribution by extending the FWB paradigm to include people experiencing hunger and by applying this extended paradigm to illuminate the impact of hunger on people’s FWB. Finally, the authors propose research to guide researchers, policy makers, and nonprofits toward generating FWB for all.

Keywords

food well-being, hunger, social change, transformative consumer research, food insecurity

Nothing touches the consciousness as much as hunger. It brings into man’s immediate consciousness the social injustices and inequalities, the divisions between man and man that encrust social structures everywhere.

B. R. Sen, FAO Director-General (1957–67)

“Have there been times in the past year when you did not have enough money to buy food?” Fifteen percent of Americans answered “yes” to this Gallup-Healthways question posed in its 2016 assessment of well-being (Gallup-Healthways 2018). Hunger, even for a short period due to unexpected expenses or an income shortfall, poses an acute and immediate hardship and can have a devastating impact on a person’s, as well as a family’s, well-being (Borsch and Kjærnes 2016). Worse, a short-term or temporary experience with hunger may lead to a more enduring struggle with food access. Chronic hunger, in turn, results in a multitude of adverse mental and physical outcomes, including drained and depleted well-being (Ke and Ford-Jones 2015; Weinreb et al. 2002). Despite the abundance of food in the United States, one in eight households in 2016 lacked stable access to food and experienced hunger, which led to diminished health and well-being for the people in those households (Hunger in America 2016).

In 2011, Block et al. proposed a radical shift in how people should think about their relationship with food, introducing the

Food Well-Being paradigm with the goal of achieving “a more positive, holistic understanding of the role of food in a person’s overall well-being” (p. 5). The Food Well-Being (FWB) paradigm presents an integrated framework for understanding the relationship between food and well-being, particularly for people who have adequate or abundant access to food. FWB, however, remains largely unexplored for people whose access to food is compromised (i.e., people experiencing hunger). A vital question lingers unanswered: What is people’s relationship with FWB when they experience food scarcity as compared to adequacy or abundance? Our research fills this gap. We offer a contribution by extending the FWB paradigm to include people experiencing hunger. We apply this extended paradigm to reveal the impact of hunger on people’s FWB and to advance FWB for people who experience hunger.

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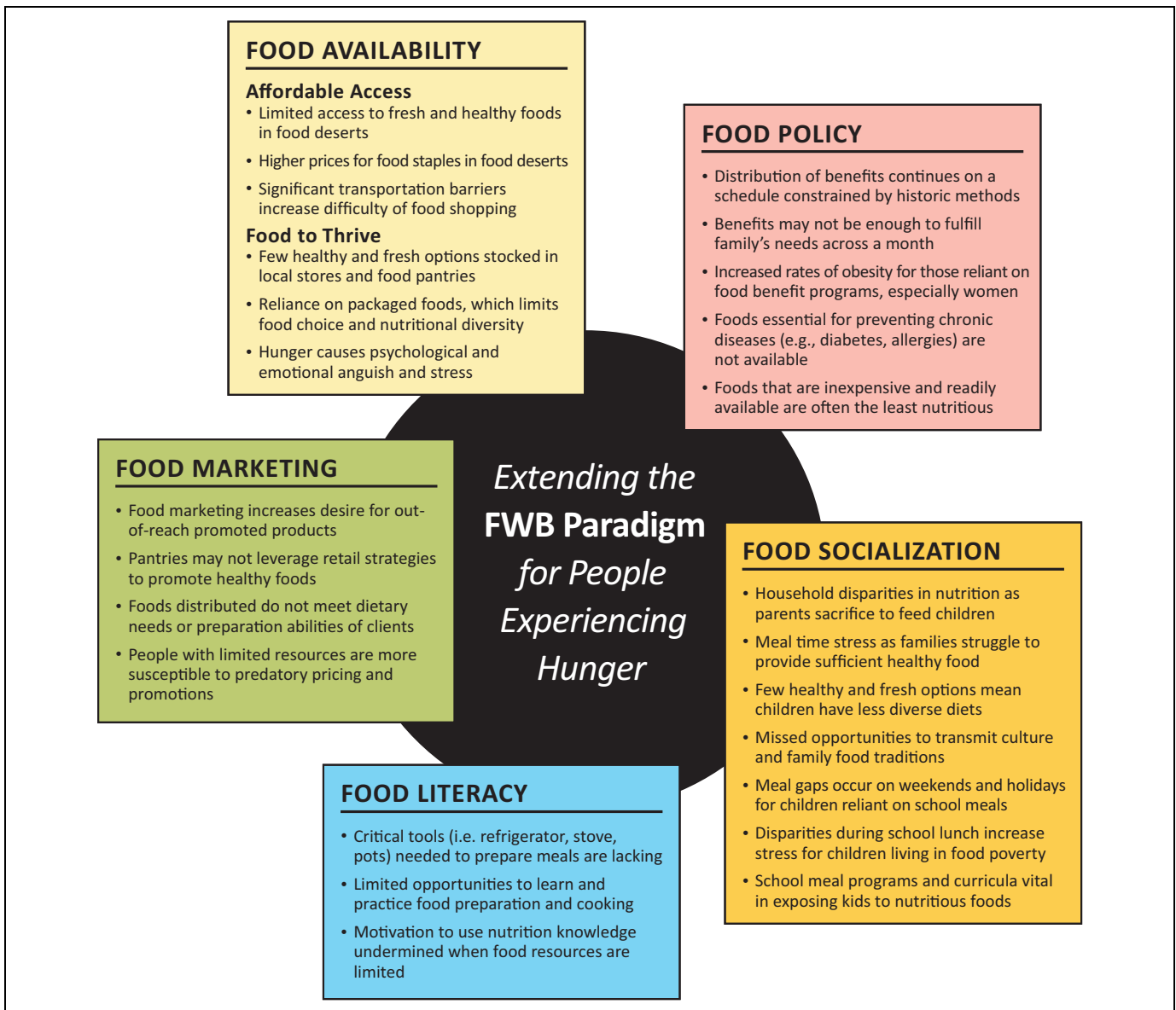


Figure 1. Extending the FWB paradigm for people experiencing hunger.

Our conceptual approach to extending FWB and exploring this paradigm for people experiencing hunger integrates related research with practical insights from a nonprofit that works to deliver FWB to people who have inadequate food access. Building on food, well-being, and poverty research in a broad array of fields including medicine, nutrition, economics, entrepreneurship, social science, and marketing, we explore and synthesize research that affects FWB for those experiencing hunger and living with food poverty. Following Deighton et al.'s (2010, p. 2) prescription for crafting a research contribution for a conceptual piece, our research introduces a new perspective (the perspective of those experiencing hunger) to the FWB paradigm, integrates extant research on hunger, explores hunger's impact on FWB, and provides "a powerful yet simplified view that adds clarity" to our understanding of FWB for people who are hungry. As Deighton et al. (2010)

advised, we visually depict the FWB paradigm for those experiencing hunger, highlighting the unique challenges of hunger and the core barriers it presents to FWB in Figure 1.

Concurrently, in keeping with Ozanne et al.'s (2017, p. 1) relational engagement approach, which suggests broadening research contribution and impact to include "the creation, awareness, and use of knowledge to [effect] societal impact," our research team collaborated with the nonprofit Hunger Task Force to explore how FWB is being advanced for those experiencing hunger. A nationally recognized antihunger leader and innovator, Hunger Task Force is both a food bank that provides food to people experiencing hunger and an advocacy organization promoting and influencing public policy and legislation to alleviate hunger. Hunger Task Force delivers a comprehensive array of programs to advance FWB for those experiencing hunger, including a MyPlate food bank

initiative, a Mobile Market, and an urban farm. Thus, as Ozanne et al.'s (2017) relational engagement approach prescribes, we also build our research contribution through our nonprofit collaboration, which allows us to apply the extended FWB paradigm and illuminate ways to advance FWB for people experiencing hunger.

In this article, we broaden our understanding of hunger by exploring the concepts of food poverty and food insecurity. We then introduce Hunger Task Force's efforts to alleviate hunger and advance FWB. Next, we synthesize and integrate research on hunger and FWB with the initiatives and programs of Hunger Task Force, examining each of the five domains of FWB. Finally, using the insights gleaned from exploring hunger and FWB, we put forth recommendations to guide research, practice, and policy directed at improving the lives of people experiencing hunger and advancing FWB for all.

Hunger

What do you eat when the money runs out? For Mu Tah, her husband, Ta Lah Aet, and their three children, it's rice and fermented fish paste. Mu Tah and Ta Lah Aet grew up in Burma and came to the United States as refugees. Now, the family is struggling to establish itself here. Ta Lah Aet explained, "I'm doing all I can. I want to be able to provide for my family." The family lives simply. The parents sleep in the living room on the floor, while the children get the bedroom. Winter is tough. Without a car, they have long walks to the bus stop, which makes normal errands, like grocery shopping, arduous. Money runs out every month, and the family goes without food as the end of the month nears. They've learned how to make simple meals and drink lots of water to stave off hunger. (Aet Family, Clients, Hunger Task Force)

The Aet family's story provides a window into the constant worry and struggle hungry families face when trying to survive. In addition to not being able to provide enough food "to stave off hunger," the poor nutritional quality of the meager meals on which this family relies has the potential to diminish their health and well-being. Furthermore, their struggle with hunger may be a key factor in trapping the Aet family in poverty and limiting their opportunities for escape. In this article, we explore food poverty and food insecurity to understand and contextualize the unique challenges and obstacles hunger presents to FWB.

Understanding Hunger and Food Poverty

Food poverty, the "sequencing of the experience of hunger," begins with a worry about not having enough food, progresses to a reduction in the quality of food consumed, and, finally, results in the consumption of an inadequate quantity of food (Sarlio-Lahteenkorva and Lahelma 2001, p. 2880). Thus, food poverty is the progressive experience of hunger at the individual and societal levels. Figure 2 depicts the experience of hunger and food poverty.

Food poverty extends our understanding of the experience of hunger given that "many people eat what they can afford, not

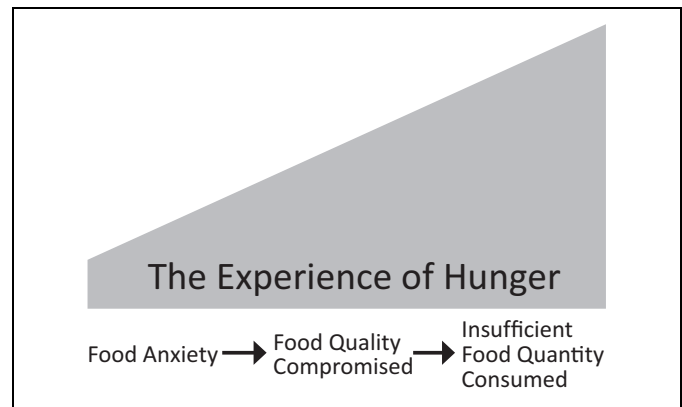


Figure 2. Food poverty: the progressive experience of hunger.

what they want" or need for health and well-being (Food Ethics Council 2017). The anxiety and stress people feel as they worry about having enough to eat and the trade-offs they make (e.g., parents skipping a meal to feed their children) diminish physical and mental well-being. Studies show that people living with food poverty are more likely to be overweight (Condon et al. 2015), undernourished (Bush and Welsh 2015), and depressed (Leung et al. 2015) and have trouble sleeping (Ding et al. 2015). Food poverty and economic poverty are strongly related. Although it is widely believed that poverty is a root cause of hunger (World Hunger 2016), research also shows that the reverse can be true: hunger and chronic undernutrition can cause poverty by significantly diminishing physical, mental, and social well-being, ultimately crippling education and earning opportunities (Victora et al. 2008).

Millions of people in the United States struggle with food poverty (Gallup-Healthways 2018). Individuals and families from vulnerable population segments—those with a disability, immigrant families, members of single-parent households, the elderly, the unemployed, and individuals with chronic health conditions—are significantly more likely to experience food poverty (Beaulieu 2014). Employment does not solve hunger. The working poor who earn low wages or rely on part-time jobs, temporary positions, or jobs with inconsistent hours and limited benefits are also at high risk of food poverty. A large, national sample revealed that 53.5% of people experiencing food poverty were from families in which the head of household was employed (Alaimo et al. 1998). Furthermore, African American, American Indian, and Hispanic households experience food poverty at higher rates than white, non-Hispanic households (Beaulieu 2014; Chilton and Booth 2007).

Food poverty is one of the most pressing social justice issues of our generation (Mizgata 2010). Drawing on Sirgy's (2008) framework of ethical perspectives for examining consumer well-being, the concept of food poverty and research conducted to advance food well-being are grounded in both the ethics of social justice and the ethics of human development and quality of life. Many researchers, scholars, and human rights advocates argue that because equal access to sufficient, healthy food that people want to eat is a right, citizens and policy makers alike

have a duty to ensure that this right is afforded to all. Of course, food is essential to optimum growth and development, which in turn leads to a better quality of life. However, this ethical perspective also addresses aspects of FWB, such as satisfaction, happiness, and a shift toward a “positive, holistic” relationship with food (Block et al. 2011, p. 5) for those experiencing hunger. Next, we introduce the policy concept of food insecurity and explore its relationship to hunger.

Understanding Hunger and Food Insecurity

The United States Department of Agriculture (USDA), World Food Program, and many other governmental agencies and policy makers focus on the concept of food insecurity. These organizations consider people to be food insecure if they do not have access at all times to sufficient, safe, nutritious food needed to maintain a healthy and active life (World Food Program 2018; USDA 2018). Food insecurity focuses on three critical factors: availability, accessibility, and utilization. These three dimensions of insecurity are inherently successive, meaning that each is dependent on the prior condition being met:

1. **Availability:** First and foremost, there must be a sufficient supply of food available to meet the nutritional and energy needs of people everywhere, but particularly of people within a specific area or region.
2. **Accessibility:** Available food is made accessible to the people who need it via outlets ranging from retail stores and local markets to food assistance programs sponsored by governments and nonprofits.
3. **Utilization:** Utilization considers not only whether consumers want the food that is available but also whether they have sufficient knowledge, ability, and opportunity to safely clean, store, and prepare the food.

Thus, the policy-oriented term “food insecurity” refers to a food environment and set of societal challenges that prevent people living within a specific region from accessing and utilizing available food.

In examining the problems of hunger and food insecurity, scholars and advocates agree with Nobel Laureate Amartya Sen’s central thesis that lack of *access* to food, rather than its availability, is the main cause of hunger (Barrett 2010; Dreze and Sen 1989). In effect, although abundant food may be available, much of it does not reach people experiencing hunger. The director of the United Nations Food and Agriculture Organization, General José Graziano da Silva (2011–present), stated in response to an assessment of access to food and food waste: “We simply cannot allow one-third of all the food we produce to go to waste or be lost because of inappropriate practices, when 870 million people go hungry every day” (FAO 2013). Future research should examine the coexisting problems of hunger and food waste in specific geographic regions or communities. At the same time, it is important that research conducted to investigate innovative joint solutions to hunger and food waste honors the central tenet of the United Nations Food

and Agriculture Organization: the right to “feed oneself with dignity” (FAO 2018).

The term “food insecurity” was popularized in the 1990s as policy makers tried to develop a standardized definition of hunger and a way to measure it among “difficult to sample populations” (Anderson 1990; Wunderlich and Norwood 2006). Although individuals may consume enough calories daily to meet or exceed recommended daily intake, the food they consume may lack nutritional diversity and undermine their well-being. Thus, the concept of food insecurity incorporates both “access to nourishing food and not merely access to calories” (Dimitri and Rogus 2014, p. 26) as well as the requisite knowledge, skills, and supportive equipment or supplies people need to make the food edible and palatable (i.e., utilization). However, food insecurity is generally defined and measured at a household level, whereas the experience of hunger is an individual condition (USDA 2018; Wunderlich and Norwood 2006). This distinction is important because although government agencies and programs that intend to benefit hungry people have a need to measure and distribute benefits at a household level, such aggregation in assessing and reporting food insecurity may underestimate hunger (Jones, Ngure, Pelto, and Young 2013). For example, households with children are more likely to be food insecure than households without children, which puts more people at risk of hunger (Coleman-Jensen et al. 2015). In 2006, the USDA changed its category descriptions used to measure food insecurity and hunger at the household level on a four-level continuum ranging from “high food security” to “very low food security.” The category of “very low food security” replaced the category labeled “food insecurity with hunger” (USDA 2018). Critics argue that the elimination of the word “hunger” from this descriptor shifts the public’s perception and masks their understanding of the problem (Pinstrip-Andersen 2009). For example, hunger may not occur uniformly within a household, as some family members (i.e., parents) make sacrifices to feed others (i.e., children). Collectively, these concerns imply that the current measurement of food insecurity may cloud the public’s understanding of hunger in their communities (Chilton and Rose 2009).

Next, we build on our understanding of hunger gleaned from examining food poverty and food insecurity to extend the FWB paradigm and advance FWB for all.

Alleviating Hunger and Advancing FWB

“We’re not just helping to feed people, we are helping people to be healthier, making a big difference in their day-to-day lives,” said the food pantry staff member standing near the pantry’s fresh produce, a display of oranges, cabbage, broccoli, peas, carrots, lettuce, and collard greens. At this food pantry, clients select their own groceries and are encouraged to read labels to understand nutrition information and portion sizes. Pantry cooking demonstrations offer recipes for unfamiliar foods such as hummus and couscous, exposing clients to new food experiences and teaching

preparation techniques to maximize a client's food resources.
(Staff Member, Hunger Task Force Food Pantry)

Building on a relational engagement approach to increase the societal impact of our research (Ozanne et al. 2017), we began by seeking to identify and collaborate with a nonprofit organization alleviating hunger and advancing FWB for people experiencing hunger. Our search for a nonprofit research partner recognized for public policy and programmatic innovations advancing FWB led us to Hunger Task Force (HTF), a nationally recognized antihunger leader. Through their programs and advocacy efforts addressing hunger, HTF is advancing FWB for people living with food poverty in Milwaukee, Wisconsin. Milwaukee, the 31st largest city in the United States, has the second-highest poverty rate in the nation, with more than one in four people—and more than 50% of its children—experiencing hunger (Kennedy 2015). HTF ensures a “Free and Local” safety net for more than 50,000 people in Milwaukee every month, supplying its partners—52 pantries, 12 soup kitchens, 80 senior centers, and 10 homeless shelters—with food, free of charge. By contrast, most food banks charge their partners for food by the pound.

In this article, we examine several innovative and integrative programs HTF has deployed to advance FWB for people experiencing hunger. These include: becoming the first food bank in the nation to transition its food pantries to meet the USDA's MyPlate nutrition guidelines, operating a 208-acre urban farm that delivers Wisconsin produce to people experiencing hunger, and bringing fresh food markets into Milwaukee's food deserts. In addition, HTF engages in lobbying and advocacy work to tackle hunger by influencing public policy at the local, state, and national levels. This includes fighting for strong federal nutrition programs including the Supplemental Nutrition Assistance Program (SNAP); school meals; summer meals; the Women, Infants, and Children (WIC) program; and senior nutrition programs. Table 1 highlights the HTF programs we profile and provides outcome measures to illustrate how these programs are advancing each domain of FWB.

Hunger and the Food Well-Being Paradigm

Building on extant research and the work of HTF, we explore FWB as it relates to individuals and families who experience hunger, as well as societal efforts to advance FWB and combat food poverty. Here, we extend the FWB paradigm to people experiencing hunger and examine each of the five domains of FWB: food availability, food socialization, food literacy, food marketing, and food policy. For each domain, we synthesize and integrate extant research on food, well-being, and hunger from marketing and other disciplines—including nutrition, medicine, and social science—to understand FWB for those experiencing hunger. Then, for each domain of FWB, we highlight an HTF program or policy initiative that is advancing FWB. By bringing together research and the practices and programs of HTF, we extend the FWB paradigm to people experiencing hunger, apply this extended FWB paradigm to

discern how FWB is being actualized for those experiencing hunger, and seek to further academic research as well as non-profit and public policy practice to advance FWB for all. Although there are differences in all five domains of FWB between people experiencing hunger and those who have adequate or abundant food, these differences are most pronounced for food availability. Thus, we begin our review with food availability.

Food Availability

At the individual level, the FWB paradigm explores how food availability and people's choices influence not only food consumption but also the selection of healthy options, and it recognizes that societal factors, particularly limited access to available food, constrains food options for those living with food poverty. As highlighted in our discussion of food insecurity, experts generally agree that although sufficient food is available in developed economies, ensuring access to that food for people who experience hunger is the primary challenge (Barrett 2010; Dreze and Sen 1989). So, although the total amount of food available in the United States is more than sufficient to feed everyone, many hurdles must be overcome to ensure access to enough healthy food to nourish hungry individuals and families. Here, we focus on extending the FWB paradigm to include those experiencing hunger in food-rich environments such as the United States. Future research should explore food access problems and solutions in underdeveloped economies that have limited available food. As we examine the food availability dimension of FWB, we separate this dimension into two parts: (1) efforts to address systemic societal challenges to providing affordable access to available food and (2) efforts to ensure people experiencing hunger have access to nutritious food to thrive.

Affordable access. Even when people have the financial means to purchase the food they want and need, critical factors in their external environment can make that food inaccessible. Block et al. (2011) highlighted food deserts, geographic areas generally in low-income urban neighborhoods devoid of retail enterprises offering healthy and fresh foods, as critical barriers to access. As the locations of grocery stores shifted from urban neighborhoods to suburban locations, people's access to fresh foods in low-income neighborhoods diminished in ways that exacerbated food poverty. Small convenience stores in these areas offer fewer fruits and vegetables (Bodor et al. 2008) than highly processed, shelf-stable foods, and research has clearly established that the “amount of healthful foods available on supermarket shelves correlates to the diet quality of the residents in the area” (Dimitri and Rogus 2014, p. 23). Without access to fresh and healthy foods, it is difficult to advance the FWB of those living with food poverty.

Also consider the fact that healthy, fresh foods cost more in urban areas where poverty is high. Moreover, there is evidence to suggest that price premiums for high-quality, nutritious foods in low-income urban neighborhoods may actually have

Table 1. Hunger Task Force Programs to Advance FWB.

FWB Domain	HTF Programs to Advance FWB	Program Outcomes
Food Availability		
Affordable Access	Fresh Picks Mobile Market	<ul style="list-style-type: none"> • 20,000 customers served since inception and 36.3% growth in unique customers from 2016 to 2017 • 50 types of fresh fruits and vegetables offered along with meat and dairy products • 36 stops in the food deserts of Milwaukee with special emphasis on senior centers, social service agency locations, and low-income housing complexes
Food to Thrive	MyPlate Pantry	<ul style="list-style-type: none"> • Six pantries converted to MyPlate Pantries in 2016, and 20 conversions planned for 2017–18 • The six initial MyPlate Pantries served healthy foods to 37,514 individuals in the first seven months of revised operations • Across HTF's network, the MyPlate Pantry initiative has increased milk distribution by 40%, vegetable distribution by 41%, and fruit distribution by 26%
Food Socialization	HTF Farm	<ul style="list-style-type: none"> • 70 acres planted • 25 varieties of fruits and vegetables harvested • 6,000 volunteers producing and learning sustainable farming practices • Over 750,000 pounds of fresh fruit and vegetables produced to feed the hungry throughout Milwaukee • 2,000 students educated about fresh foods, and pre/posttests show a 12.3% increase in the trial of new fruits and vegetables
Food Literacy	Education Efforts in Schools	<ul style="list-style-type: none"> • 2,000 school children learn about MyPlate nutrition standards and how fresh food is grown through HTF curriculum delivered in schools and at the HTF Farm • 6,000 volunteers learn about the effort to raise, collect, and distribute healthy foods that meet USDA nutrition standards • 40% of students who participate in HTF's "Eating from the Garden" nutrition education curriculum reported eating more servings of fruits and vegetables
Food Marketing	Food Marketing and Retailing	<ul style="list-style-type: none"> • 63,000 Jars of Peanut Butter were collected during the "Wanted: Peanut Butter" donor marketing campaign to increase supply of healthy, shelf-stable protein • Taste tests and cooking demonstrations in six MyPlate Pantries are increasing client interest in selecting more healthy foods • Mobile Market billboards reached 10.7 million people, and radio ads reached 734,630 people during a two-month period • The "Well Fed Means Less Lead" informational campaign targeted neighborhoods where 2,851 children test high for lead. This program had a digital reach of 12,022 and led to 802 educational conversations
Food Policy	Lobbying, Activating Citizens	<ul style="list-style-type: none"> • 100% of eligible schools in the Milwaukee Public School district and 68.2% of eligible students participated in school breakfast programs, with 49% of schools using alternative breakfast delivery (in-classroom) to increase participation • Over the last ten years, school breakfast participation increased by 171.2% among eligible children in Wisconsin • 65,409 suppers were served at meal sites to supplement summer meal programs • In 2016, HTF had 127 face-to-face meetings on antihunger public policy issues with Wisconsin elected officials • In 2016, Voices Against Hunger grew from 1,707 to 2,281 members, and these members sent a total of 303 direct messages to elected officials

increased over the past 40 years. In the late 1960s, researchers compared food prices in an urban area of Los Angeles with prices in a more affluent neighborhood only ten miles away. Although the cost of cereal and bakery goods; dairy products; canned fruit and vegetables; and other foods (margarine, coffee, salad dressing, and sugar) was higher in the low-income urban area, when fresh produce and meat were included in the analysis, the price differences between the urban and suburban

neighborhoods were not significant (Marcus 1969). Fast-forward 40 years to a study comparing food access in urban and suburban areas, which concludes that "even after controlling for differences in the competitive environments and economies of scale across stores," the poorest neighborhoods pay more for their groceries (Talukdar 2008, p. 467). Worse yet, those who can least afford to pay price premiums for food are also the least likely to have transportation options that provide

access to lower-priced shopping options outside of their own neighborhood (Talukdar 2008). Even those living in food deserts who have the financial resources to purchase food elsewhere face barriers to access such as a lack of reliable, convenient, and safe transportation. Furthermore, people who do travel outside of their neighborhoods to shop may experience other forms of discrimination, as they may feel as though others perceive them as outsiders (Crockett and Wallendorf 2004). Affordable access to food becomes even more challenging when poverty is combined with mobility constraints, which diminishes the prospects for FWB among those living with food poverty. Finally, future research should explore alternative market solutions such as online grocery platforms that have the potential to offer solutions to the problem of affordable access to fresh and healthy foods in food deserts.

Advancing FWB: affordable access. In food deserts in low-income urban neighborhoods, convenience stores or gas stations often take the place of traditional grocery stores despite the fact that they are largely devoid of fresh food options. The expansive food deserts of Milwaukee are typical, as they lack grocery stores and access to fresh whole foods. HTF research on affordable access confirms that not only do convenience stores in Milwaukee's food deserts have more limited product selection but prices are also significantly higher—in some cases as much as 40% higher—than prices in traditional grocery stores (Hess 2016). Compounding the problem, the transportation challenges of low-income residents and limited mobility seniors living in food deserts put affordable, fresh food out of reach.

In October 2015, HTF transformed a former NASCAR trailer into a grocery store on wheels, the Fresh Picks Mobile Market, to address these affordable access issues and to advance FWB. The Mobile Market, a partnership between HTF and the region's largest grocer, Pick 'n Save, brings affordable access to fresh and healthy foods directly into neighborhoods where residents are living with food poverty. The Mobile Market makes 36 stops each month throughout Milwaukee at low-income senior centers, food pantries, and community centers. It offers more than 50 types of fresh fruits and vegetables, as well as meat and dairy products curated to be culturally appropriate for each Milwaukee neighborhood. This unique program offers residents a choice-based food shopping experience conveniently located in their neighborhood. Mobile Market operations are funded entirely by private donors and grants, including a USDA Food Insecurity Nutrition Incentive (FINI) award. This grant provides a 25% discount to Mobile Mart customers to keep food prices low. In addition, HTF tracks outcomes and metrics such as inventory and sales data—including types of food purchased, methods of payment, and total sales—to inform future strategies and replicate the program's successes in increasing affordable access to healthy foods in food deserts. Total sales for the Mobile Market in 2017 were \$258,947, a 50.7% increase over 2016's sales of \$171,834. Since its inception, the Mobile Market has served more than twenty thousand people, with a 36.3% increase in clients served from 2016 to 2017. This program demonstrates that low-income individuals,

particularly seniors on fixed incomes with low monthly SNAP benefits, will use their available resources to purchase healthy foods, and it dispels the myth that affordable access, eating healthy, and advancing FWB is outside of the budget of people living with food poverty.

Food to thrive. Individuals may consume enough calories to satisfy physiological hunger, but the food they consume may lack the nutritional diversity needed to thrive. A review of studies investigating the relationship between food insecurity and the prevalence of obesity concluded that within some segments, and for women in particular, there is strong evidence that obesity increases when people experience higher levels of food insecurity (Larson and Story 2011). Therefore, beyond making food accessible, people need "access to nourishing food" to thrive and to achieve well-being (Dimitri and Rogus 2014, p. 26).

The problem of access to high-quality, nutritious food is multifaceted. An extensive USDA examination of diet quality compared three groups: families who receive SNAP benefits, those who qualify but do not receive benefits, and those with higher incomes not eligible for food benefits. This study found a clear pattern of obesity rates, reporting that, "SNAP participants were more likely than either income-eligible or higher-income nonparticipants to be obese (40% versus 32% and 30%, respectively)" (Condon et al., p. X). The SNAP participants and their low-income counterparts who did not have benefits were less likely to select unhealthy alternatives (e.g., salty snacks and sweets) but were also less likely to choose certain healthy foods (e.g., whole grains and low-fat dairy) than the higher-income comparison group (Condon et al. 2015). Finally, those with SNAP benefits consumed fewer fruit and vegetable servings than either of the other two groups (Condon et al. 2015). Studies of the shopping habits of families who receive SNAP benefits show that people work hard to "stretch their food dollars" as far as they can and devote extensive time to locating low-cost alternatives to feed their families (Wiig and Smith 2009, p. 1,727). Further, prior research demonstrates that people who struggle with food poverty are more likely to rely on cheap fast food to feed their families (Grier et al. 2007), sacrificing the nutritional quality they need to thrive. Although federal nutrition programs work to increase food access, this research provides evidence that diet quality may suffer as people turn to low-cost processed foods to stretch their limited resources. Future research should investigate incentive systems or other innovative market mechanisms to stimulate demand for healthy foods among people shopping with benefit dollars.

The poor quality of the diets of those who experience food poverty and rely on food donated to pantries to supplement their food supply may be exacerbated by the grocery items stocked in many food pantries. Some of the items frequently donated to food pantries fail to meet federal nutrition guidelines because they are high in sodium (i.e., canned soups) or lack substantial nutritional value (i.e., ramen noodles). Other items such as canned fruit and fruit juices offer nutritional content but may contain added sugar, which is particularly

problematic for pantry clients that have chronic health conditions such as diabetes. Another factor contributing to public perceptions regarding donations to food banks may be food banks' marketing and food solicitation efforts, which tend to minimize the cost of a healthy meal. An analysis of USDA data to estimate the cost of healthy affordable meals found that the "minimum purchase price for one person was \$9.28" but dropped to as low as \$4.17 per person for a family of four because "some of the foods had to be purchased in minimum quantities" (Drewnowski and Eichelsdoerfer 2010, p. 3). However, in an effort to demonstrate the impact of donors' gifts in a way that motivates giving, organizations may note that each dollar donated provides multiple meals for a single family (Feeding America 2018).

When people lack access to foods that provide the essential vitamins and nutrients needed to thrive, the obvious signs of hunger and malnutrition are often hidden from public view (Burchi, Fanzo, and Frison 2011). For example, although empty calories can sustain life, inadequate nutrition can lead to chronic health problems. Furthermore, hungry people in need of food support may feel shame or guilt, subsequently going to great lengths to hide the fact that they are struggling to meet their families' nutritional needs. Depending on the specific negative emotions they feel and their attribution of the source of those feelings, they may not respond positively to programs or organizations that try to help make nutritious meals accessible (Han, Duhachek, and Agrawal 2014). Chilton and Booth (2007, p. 120) explored how "hunger of the body," experienced when food is scarce, is often accompanied by "hunger of the mind," which they described as "psychological and emotional anguish related to the stress of poverty, ill health, and exposure to violence." Experiencing food poverty causes extreme stress, as people worry about having enough food for both today and tomorrow. Thus, food to thrive is essential to people's mental and physical health and well-being, and it is critical to advancing FWB for people experiencing hunger.

Advancing FWB: food to thrive. In 2017, HTF became the first food bank in the nation to adapt the USDA's MyPlate nutrition guidelines as its emergency food distribution and allocation strategy. HTF's MyPlate initiative focuses on collecting and distributing nutritious food to thrive from the five main food groups: vegetables, fruits, whole grains, protein, and dairy. Over 80% of the HTF MyPlate pantries are choice-based pantries, meaning people select foods as they would in a grocery store environment as opposed to the pantry providing a specific basket of foods. Compared to the entire HTF pantry network in which approximately 50% of pantries are choice-based, converting pantries to the MyPlate model not only offers a wider selection of healthy foods but also offers clients a choice in the healthy foods they take home to feed their family. Each pantry is outfitted with MyPlate posters and healthy eating materials including "shelf talkers" that outline nutrition information and describe how a particular food item fits within the USDA MyPlate guidelines.

HTF's MyPlate transition also includes an overhaul of how pantries collect and sort donated food items. HTF MyPlate Food of the Month messaging educates and informs donors, volunteers, and the media about the healthy foods that are in short supply, allowing HTF to be sure all pantries can offer foods that support a healthy and well-balanced diet designed to advance FWB. HTF outcomes and metrics reflect MyPlate's success. Across the HTF network, the MyPlate Pantry initiative has increased milk distribution by 40%, vegetable distribution by 41%, and fruit distribution by 26%. Donations of highly processed foods including ramen noodles decreased from 12.2% to 10.1% of total donations in 2017. Over 16,000 volunteers are being educated on the new food sorting procedures during their volunteer sessions, reminding everyone of HTF's commitment to providing nutritious food to thrive and advancing FWB for those living with food poverty.

Food Socialization

According to the FWB paradigm, food socialization is the process by which consumers learn about food within "a person's cultural realm" (Block et al. 2011, p. 7). Parents, family members, caregivers, and institutions such as schools each play a role in the food socialization process by offering explicit exposure to an array of foods, as well as by providing an implicit path for learning about and forming a relationship with food through everyday incidental exposure. In contrast to families that have access to adequate or abundant food, families that rely on food banks may not only have far less exposure to diverse foods but may also find lessons learned about food challenging and potentially adverse. This is because families typically rely on food as a way to transmit culture and traditions from one generation to the next. Gathering at the family dinner table is considered a positive parenting tactic for starting conversations and strengthening family relationships. However, families experiencing food poverty may find the dinner table less inviting when there is not enough for all to eat or when the food options presented do not satisfy family members. And so, although a key goal of the FWB paradigm is to develop and nurture a positive relationship with food, family meals and conversations about food may increase stress and anxiety (Chilton and Booth 2007) for consumers experiencing food poverty, rather than helping transmit knowledge, beliefs, and traditions to the next generation.

Beyond being a source of stress, living in a household where food is scarce or limited can have other effects that diminish FWB. According to HTF, demand is lowest at food banks in February. Consumers, armed with modest tax rebates, report that February is the one time of year when they can "feel normal" by shopping "at the regular grocery store" rather than relying on the limited-choice environment of their local food pantry. The language chosen here is important, as it provides a window into the internal emotional struggle people experience when food choices are limited. Western consumers often view a plentiful-choice environment as a right, so restricting choice is viewed as a threat to their self-concept (Markus and

Schwartz 2010), and many feel marginalized by the experience. Further research shows that when consumers feel financially restrained, they seek out unhealthy, energy-dense foods (Briers and Laporte 2013) rather than healthy, nutrient-dense foods, perhaps choosing indulgent foods as a treat or source of emotional comfort. In this way, people experiencing hunger may seek out occasions, such as tax refund season or times when short-term financial gains materialize, to escape the psychological constraints of their limited food environment.

Children who grow up experiencing hunger are deeply affected by the cycles of food scarcity and access. Research on the connections between poverty, self-esteem, and materialism demonstrate that the “social comparisons of material wealth are more important for life satisfaction” for those who live in poverty (Chaplin, Hill, and John 2014, p. 80). When families cannot fulfill basic needs such as adequate, nutritious food, children’s psychological health suffers as their quality of life, life satisfaction, and well-being decline (Martin and Hill 2012). Witnessing the highs and lows of access and the way others behave in the marketplace may not only increase materialism among these children but also set them up for poor eating habits in the future. In addition, people who experience resource constraints or threats to their food supply may eat in ways that increase their risk of obesity (Dhurandhar 2016; Conden et al. 2015). When marketplace conditions or anxiety about food access triggers threat emotions and consumers feel they have little control over their situation, evidence suggests they cope by using avoidance strategies (Duhachek 2005). However, with limited food sources available, marketplace avoidance may not be a viable option. Mounting conflict, frustration, mistrust, and ultimately a sense of hopelessness may add to the stress individuals feel as they struggle with hunger. These negative emotions not only interfere with family relationships but also with the relationships between families and the social change agents working to assist them. Furthermore, negative food experiences and emotions may lead children and adults to form lifelong unhealthy relationships with food, which is in direct opposition to the central goal of the FWB paradigm to move toward a “positive, holistic understanding of the role of food in a person’s overall well-being.” (Block et al. 2011, p. 5).

Schools can play a critical role in food socialization for children vulnerable to hunger by increasing students’ food access through school breakfast and lunch programs. However, a side effect of recent steps to increase the healthfulness of school meals is the growing problem of food waste. Cohen et al. (2015) compared the approaches of two groups of schools regarding increasing demand for healthy foods and reducing waste. One group redesigned the school cafeteria line, including changes to the line’s setup (vegetables at the front of the line) and the order of item placement (healthy beverages in front of those with added sugar), and installed signage designed to draw attention to healthy choices. The other group of schools relied on chefs to reformulate and create recipes that not only utilized healthy ingredients but also tasted good. Although both groups initially showed increases in the number of students

choosing healthy alternatives, employing chefs to improve “food quality and palatability was a more effective long-term method to increase consumption of healthier school foods” and resulted in less waste (Cohen et al. 2015, p. 426). These findings are important because they stress that shifting consumption to include more healthful choices takes time (e.g., the chef-led intervention lasted seven months), as altering behavior from trial to acceptance and finally to preference requires repeated exposure to new, healthy foods. The findings also reveal that although choosing healthy options is an important first step, long-term acceptance of such foods may rely more on palatability and taste. Much more research is needed to understand how to shift and expand the palates of children and adults toward healthy foods that advance FWB.

Schools play an especially important role in exposing students who have constrained food access at home to fresh and healthy foods and helping them learn to like these new foods. However, for many students, school meals may also be a source of stress and worry as children compare their lunch options with those of their peers. For example, some schools have separate queues for à la carte or cash only lines in which food choices differ from subsidized lunch options. This demarcation makes those eligible for free or reduced-price lunch overtly visible to others and creates stigma that leads some students to forgo lunch rather than consume the food available to them (Bhatia, Jones, and Reicker 2011; Pogash 2008). As one high school student stated in an interview with the *New York Times*, “(l)unchtime is the best time to impress your peers . . . being seen with a subsidized meal lowers your status” (Pogash 2008).

Food shopping is another way parents teach consumption and marketplace knowledge to children, training them to evaluate and compare prices, examine and interpret food labels, and make informed food choices, as well as imparting a broader array of planning and budgeting skills. For consumers who experience food poverty, opportunities for children to observe these essential marketplace skills and learn to be smart and savvy consumers may be missed. Research on the shopping habits of mothers who receive SNAP benefits reveals that they try to avoid taking children to the grocery store, as the children’s requests for specific foods affect how they spend their benefits and undermines their ability to stretch their monthly allocation as far as it can go (Wiig and Smith 2009). Furthermore, opportunities to learn about the vast array of food, where it comes from, its nutritional benefits, and how different food choices affect health and well-being are also missed when people face limited food choices. Also, children who have an opportunity to learn about food by participating in growing it may be more willing to try new foods and consider eating them (Libman 2007). As food is one way we transmit cultural practices, those experiencing food poverty may miss opportunities to transfer these cultural practices, as well as marketplace knowledge, from one generation to the next.

Advancing FWB: food socialization. HTF operates a 208-acre urban farm that provides over 25 varieties of fresh fruits and vegetables for Milwaukee-area residents experiencing hunger.

Annually, The Farm grows and distributes more than 750,000 pounds of produce to HTF's network of food pantries, soup kitchens, homeless shelters, and low-income senior centers, which increases the health and nutrition of families, enables HTF to provide culturally appropriate foods to residents of Milwaukee's diverse neighborhoods, supports positive food socialization, and advances FWB. HTF operates The Farm through a private-public partnership with Milwaukee County, as well as with support from Milwaukee-based Harley-Davidson Inc. and more than six thousand community volunteers who plant, grow, and harvest fruits and vegetables.

The HTF Farm is also home to a nutrition education program operated in partnership with local elementary schools serving low-income students. In 2017, 2,000 Milwaukee Public School students participated in HTF's education initiative at The Farm. HTF measures educational outcomes, including students' learning and consumption of fresh foods, by administering before and after surveys to both students and parents. For example, at the end of the school year, the number of HTF students who reported trying a new fruit or vegetable increased by 12.3%. Milwaukee's Public School district reported that 78.7% of its students were from economically disadvantaged families (MPS 2017), demonstrating how this HTF program reaches a high proportion of students at risk of hunger. At The Farm, students experience a demonstration kitchen, quarter-acre school garden, and a visitor center with classroom space. They learn about nutrition and how to prepare healthy recipes, and they work in the garden's 28 raised beds. The program also features chefs from local restaurants who lead cooking demonstrations. Each student receives a copy of HTF's *Healthy Kids Cookbook* filled with simple recipes for children to make at home. Low-income students from Milwaukee schools are engaged in programming throughout the growing season that helps them develop a positive, personal relationship with healthy food and advances FWB for children vulnerable to hunger.

Food Literacy

The FWB paradigm defines food literacy as a concept consisting of three components: factual knowledge about food and nutrition, procedural knowledge such as food scripts or routines (e.g., how to prepare and cook squash), and "the ability, opportunity, and motivation to apply or use that [food] knowledge" (Block et al. 2011, p. 7). This third component, applying or using factual and procedural food knowledge, aligns with the utilization dimension of food insecurity. Utilization ensures that people have the appropriate knowledge, skills, and supporting resources needed to prepare healthy foods. Although policy makers and government entities measure access, it is vital to remember that without food literacy (i.e., knowledge of how to properly cook healthy foods), these foods may be wasted. Policy makers should consider adding measures of food literacy to their food insecurity assessments to craft a more robust picture of the challenges involved with advancing FWB for those struggling with hunger.

Those experiencing food poverty may face food literacy challenges when navigating their food environment and making choices. For example, even time-limited experiences with poverty may induce a scarcity mindset that constrains mental resources and impedes cognitive functioning, leading consumers to make short-term food trade-offs that meet their immediate needs but have negative, long-term consequences (Mani et al. 2013). Food is an essential energy source, and without it, an individual's decision making and self-control resources may be diminished, which undermines nutrition, financial well-being, and health more broadly (Gailliot and Baumeister 2007). Furthermore, Viswanathan, Hastak, and Gau (2009) found that people who experience hunger and are not proficient readers experience diminished ability to understand nutrition information on food packaging and may be better served by graphical packaging information. As policy makers continue to refine regulations to provide nutritional information to consumers, more research is needed to understand how people affected by hunger process and interpret nutritional information to make choices that have the potential to hinder or advance their FWB.

Again, schools may be a partner in helping to advance food literacy and FWB. Although school curriculum demands have decreased opportunities for students to take home economics classes, which were the typical path for children to acquire food literacy skills (Sparks 2014), other options for teaching food literacy are finding their way into classrooms. For example, school gardens increase food knowledge, trial of new foods, and fruit and vegetable consumption (Ratcliffe, Merrigan, Rogers, and Goldberg 2009), and also serve as a means to teach science and environmental studies (Blair 2009). School programs and summer camps (e.g., the University of Georgia K-12 Food Science Curriculum) make learning fun through cooking experiments that help children acquire nutritional knowledge and food preparation skills. Competitions, goal setting, and games can be used to encourage children to eat more fruits and vegetables (Cullen et al. 2007; Raju, Rajagopal, and Gilbride 2010). Although there is growing evidence that schools are becoming more creative at devising intentional opportunities to teach critical food literacy skills that have the power to advance FWB, what is less clear is how many of these unique and innovative programs are reaching the children who are most likely to experience hunger. And although deliberate food literacy education is important for all children (research shows that young adults who feel they possess cooking skills have higher quality diets than those who do not), it may be most critical for males and people of color, who generally report lower food preparation skills (Larson et al. 2006). More research is needed to help schools and other community partners find creative ways to teach food literacy skills to those who need it most.

Advancing FWB: food literacy. The nutrition education curriculum developed by HTF for children is customized to connect children with the earth as a source of food, nurturing their development of food literacy and FWB. This year-round program is

delivered in local Milwaukee Public elementary schools during the academic year and in summer program offerings at those same school sites. In a fun environment led by dietitian educators, farmers, and professional chefs, children learn nutritional skills such as how to use MyPlate guidelines to direct their eating. During the growing season, children are engaged in active learning on The Farm: getting their hands dirty while planting and harvesting produce; tasting fresh fruits and vegetables, many of which they may have never encountered; and cooking with the harvested produce. Children who participate in HTF educational efforts take these food literacy lessons home to their families, with more than 45% reporting increased consumption of fruits and vegetables on the HTF curriculum pre/posttest.

In addition, HTF is positively affecting food literacy through its MyPlate initiative. To transform HTF pantries to offer only MyPlate foods, a significant amount of time, energy, and marketing materials were devoted to (1) persuading pantry partners to participate in the MyPlate Pantry initiative, (2) educating donors on which commonly donated foods meet USDA nutritional guidelines and which foods do not, and (3) training HTF food sort volunteers to recognize the nutritional quality of donated food and understand why MyPlate foods are important for health and well-being. Once healthy foods were on the shelves of HTF's food pantries, HTF dedicated more time and materials to educating pantry volunteers on how to help shoppers choose MyPlate foods, as well as how to use taste tests and cooking demonstrations to motivate and teach shoppers to prepare and enjoy MyPlate foods. Collectively, HTF broadly uses these educational strategies to enhance the food literacy and FWB of those living with food poverty in the greater Milwaukee area. Future research should explore strategies designed to stimulate healthy choices in the food pantry environment. Understanding which strategies are most effective will ensure healthy foods do not go to waste. Policy makers should examine opportunities to educate those at risk of hunger about dietary recommendations such as the MyPlate guidelines. Developing synergistic food literacy efforts between policy makers and nonprofit practitioners to reach people at risk of hunger may increase the effectiveness of both policies and nonprofit programs while enhancing food literacy and FWB.

Finally, HTF also provides meta-food literacy training to community members, donors, volunteers, media partners, and elected officials to educate them about hunger and public policy issues. These efforts include "Food for Today," a hunger simulation and group role-playing presentation that illustrates how emergency food services and federal nutrition programs work in concert to create a safety net for people facing hunger. HTF also provides information and services to educate community partners such as other nonprofits, schools, access partners, and elected officials on eligibility, poverty, and hunger statistics as well as the potential impact of proposed legislative changes regarding hunger-related issues. In 2017, HTF provided literacy training to 4,700 people through "Food for Today" simulations, educated 621 people through community trainings, and held 95 face-to-face trainings with elected

officials. By informing and educating supporters within the community, HTF has not only contributed to broader efforts to increase food literacy and FWB in their community but has also created a coalition of citizens ready to advocate for people who experience hunger.

Food Marketing

Food marketing influences demand for food (Huang and Yang 2013), affects people's food judgments and decisions (Andrews, Burton, and Kees 2011), shapes taste expectations (e.g., Elder and Krishna 2009), and contributes to the obesity epidemic (e.g., Andreyeva, Kelly, and Harris 2011). Food marketing also increases the desire for advertised foods among people who have adequate or abundant food and people living with food poverty, even though the latter group often does not have the same freedom to choose such foods. Research examining marketing effects on impoverished people demonstrates that as "impoverished children learn from the media what is available within the larger material world, they develop a great sense of need or desire for a wide variety of goods and services" (Hill and Gaines 2007, p. 88). However, most of our understanding of the motivations and drivers of consumer behavior has historically been based on consumers that have sufficient access to both food and financial resources. Researchers also find that living in conditions of scarcity may do more than restrict access and ability to consume; it may actually change the way consumers behave in the marketplace (Chakravarti 2006). More research is needed to understand food marketing's impact on people living with food poverty.

When consumers worry that the food they have available may not be enough to satisfy their needs, they evaluate their choices differently than if they feel they have sufficient food (Mani et al. 2013; Xianchi and Hsee 2013). For example, there is evidence to suggest that consumers experiencing financial hardship may place higher value on goods they perceive are scarce (Sharma and Alter 2012). This may make consumers living with food poverty more susceptible to predatory pricing strategies for food. We have already explored the more restricted supply and systematically higher prices for fresh foods in food deserts where people experiencing food poverty live. Being at a higher risk of overpaying for food compromises people's already tenuous financial state and, ultimately, their ability to access the fresh and healthy foods that provide the potential to advance their FWB.

Across the nation, more food pantries are moving away from the practice of offering clients prepacked bags or boxes of food and toward a choice-based pantry model. These choice-based pantries mimic a store environment by using shelves or tables to display food. Food pantries that switch to a choice model report that less food goes to waste, and perhaps more importantly, they also report that choice-based pantries preserve dignity for the clients they serve (e.g., Gleaners Community Food Bank Detroit [Food Bank of East Alabama 2011; Henne 2013] and St. John's Food Bank New York [Rosenberg 2015]). Food pantries using a choice model can also find creative ways to

encourage customers to choose more healthful options by offering incentives to clients for selecting the healthiest choices (Rosenberg 2015). There is growing evidence to show that choice pantries increase consumption of healthy foods, and they may also reduce hunger and food waste because people who can choose their foods make selections they and their family members want to eat (Martin et al. 2013; Remley et al. 2010). This evidence demonstrates that modeling food pantries on a supermarket environment may help advance FWB as well as reduce hunger. As the food supplied through nutrition programs and food pantries shifts toward healthier alternatives, more research and monitoring are necessary to ensure these changes have a positive impact on nutrition while not undermining food access or exacerbating hunger.

The FWB paradigm promotes the idea of leveraging successful marketing strategies (i.e., the four Ps) to advance food well-being (Block et al. 2011). Recent research has investigated opportunities to leverage marketing practices often used to promote unhealthy foods to instead promote healthy alternatives (e.g., Bublitz and Peracchio 2015). These marketing approaches can be used to generate demand for fresh and nutritious foods that are available for consumption through programs that tackle hunger. It should be noted that such programs need sophisticated distribution strategies to coordinate food pickup and recovery from food suppliers willing to donate fresh foods. This could require, for example, having temperature-controlled transportation and storage to preserve foods and arranging delivery of the foods in the right amounts at the right time to ensure efficient distribution. The last stop before fresh foods reach the consumer can be particularly challenging because many distribution or food access points that serve those in need may not be set up to receive or store large quantities of fresh foods, may operate out of temporary store-like access points, and are often run primarily by volunteers.

Once the healthy, fresh, and nutritious foods reach a food pantry, it is important that customers choose them. Food distribution centers can utilize tried and tested retail strategies to help encourage customers to choose fresh foods. For example, endcap displays that showcase the food, opportunities to taste foods that may be new to customers, and simple recipes that utilize foods available in the pantry, as well as bundling and suggestive selling by volunteers, can all provide helpful nudges to encourage consumers to choose fresh and healthy foods, advancing FWB.

Advancing FWB: food marketing. HTF marketing strategies leverage the agency's "Free and Local" brand identity and brand associations to secure donations and attract clients, but also to promote new programs designed to tackle hunger and advance FWB. The HTF brand and core values are delivered consistently through strategic marketing that is targeted to community donors, volunteers, the media, and elected officials, as well as to pantry coordinators and the individuals and families that HTF serves in their network. For example, using federal grant funds earmarked for the Fresh Picks Mobile Market marketing efforts, HTF placed billboards in neighborhoods where the

Mobile Market makes stops to create awareness and encourage food trial. These billboards had a cumulative reach of 10,683,824 impressions over a two-month period. HTF also created radio spots featuring the voices of the Mobile Market manager and driver who greet and welcome neighborhood residents at every stop. Over a two-month run of radio spots, Mobile Market messaging was heard 734,630 times. The Mobile Market trailer is wrapped in brightly colored images of fresh fruits and vegetables. Strong brand identity, word-of-mouth recommendations, and strategic marketing helped grow the Mobile Market's average per-stop sales, a key metric of success, from \$70 at inception to more than \$700 over the first year of operation, advancing FWB for people in Milwaukee.

In early 2017, HTF initiated a marketing and community education effort, the "Well Fed Means Less Lead" campaign, in response to the lead found in Milwaukee's drinking water and the 2,851 Milwaukee children testing at high levels for lead exposure (Milwaukee Health Department 2018). The goal of this community-based, nutrition education campaign is to inform the public about risks associated with lead exposure and to recommend self-help steps that people can take to protect themselves. HTF distributed educational material to 17,020 people through canvassing and their food pantry network. They reached a total of 12,022 people through digital platforms, and they had 802 in-person conversations about "Well Fed Means Less Lead" and best practices for protecting the body from lead. The campaign emphasizes that a healthy, balanced diet containing iron, vitamin C, and calcium can mitigate lead absorption. HTF uses street-level billboards, radio commercials, and fact sheets in multiple languages to inform the public of the risks associated with lead, and HTF volunteers canvass neighborhoods, distributing the fact sheets and targeting those living in older homes. The "Well Fed Means Less Lead" campaign relies on food marketing to communicate the danger of lead, advancing FWB for vulnerable people in Milwaukee.

Food Policy

Food policy has the potential to advance FWB for people experiencing hunger. For example, a shift in U.S. food policy, as advocated by Chilton and Rose (2009), would encourage people and organizations to view food access as a basic human right. Adopting a rights perspective to the problem of food insecurity "acknowledge[s] and actively address[es] [hunger's] social and economic determinant[s]" through "government accountability, public participation, an analytic framework that accounts for vulnerability and discrimination, and stronger connections between policies and health outcomes" (Chilton and Rose 2009, pp. 1203–1204). Acknowledging food as a basic human right shifts the burden of responsibility for food insecurity from the individual to society and provides a mechanism to hold governments accountable to ensure all people have affordable access to healthy and safe food.

Although nonprofits and other entities work to make food accessible, they must also collaborate with policy makers to provide more stable and permanent solutions for those living

with food poverty. For example, events such as disasters and economic downturns can create short-term food hardships that, if not addressed, may lead to longer-term food access challenges within a community or region. Collecting, aggregating, and analyzing data from multiple communities experiencing a disaster may help policy makers better predict how uncontrollable events will affect a community and how to respond in ways that effectively reduce hunger and immediate suffering as well as minimize the likelihood of chronic hunger and other long-term, negative consequences (Barrett 2010).

Beyond using data to better understand the drivers of food insecurity in a way that reduces the number of people who experience food poverty, research is also needed to examine the downstream effects of policies and programs designed to provide food assistance to those in need. For example, although the Center on Policy and Budget Priorities reported that, “In 2015, SNAP helped 45 million low-income Americans to afford a nutritionally adequate diet” (CBPP 2016), a review of years of research on the relationship between food insecurity and weight status supports the conclusion that long-term reliance on food assistance programs such as SNAP increases an individual’s risk of obesity, particularly for women (Condon et al. 2015; Dinour, Bergen, and Yeh 2007; Larson and Story 2011). In turn, obesity, as well as vitamin deficiencies and undernourishment, drives up health care costs and results in lost productivity that collectively becomes a “multibillion-dollar drag on our economy” (Bush and Welsh 2015). Furthermore, there is evidence to suggest that people are likely to judge those receiving nutritional support not only for using limited resources to buy unhealthy food but also for using resources in a way some may deem extravagant: purchasing healthy foods. For example, when an individual who receives public food support (e.g., SNAP benefits) uses it to buy more expensive, healthy foods (e.g., organic food), other people express moral judgment that implies the recipients are being wasteful with their resources (Olson et al. 2016). In addition, people living with food poverty may make similar judgments about their own purchasing decisions. Feeling defined by their social class and powerless to escape food poverty (Henry 2005), these people may cut back on high-quality foods, opting instead to stretch their limited resources by purchasing lower-cost alternatives to get through the month (Wiig and Smith 2009). Policies crafted to better ensure stable access to healthy food need more robust longitudinal research to measure their long-term benefits on educational outcomes, health, and worker productivity. More research is needed to explore the physical, emotional, and societal impact of policies and programs designed to increase affordable access to food.

We also know that consumers spend differently depending on their perception of how much they have available to spend (Morewedge, Holtzman, and Epley 2007). Thus, people who receive benefits distributed monthly likely spend differently at the start of the payment cycle than at the end, which may result in inconsistent access to the nutrition they need. However, as nutrition benefits are now distributed electronically, spreading out the allocation may prove more tenable than in the past.

Additional research is needed to understand how to design program structures that creatively help people meet food access and benefit allocation challenges.

Although food banks and other programs try to bridge the accessibility gap for those struggling with food poverty, hunger persists. One key reason for this is the array of existing food access programs—including those run by local organizations as well as national programs such as SNAP and school lunch and breakfast programs—may give the illusion to citizens, donors, policy makers, and political leaders that hunger and food accessibility problems are being effectively addressed (Riches 2011), when in fact the number of people struggling with food poverty continues to grow (Barrett 2010). Furthermore, those who are aware that people are experiencing hunger despite a plethora of programs addressing food poverty may place some degree of blame on those in need. When donors conclude that those in need bear some responsibility for their situation, even if this attribution is false, they are less motivated to give or support a cause (Lee, Winterich, and Ross 2014). Policy makers may be similarly influenced.

The Union of Concerned Scientists (2017) highlights another issue: the hypocrisy of policies and legislative subsidies for “commodity crops, such as corn and soybeans, [that] help keep processed foods made from these crops cheap and plentiful” and allow multinational food conglomerates to profit while consumers struggle with negative health outcomes from a steady diet of such foods. As Dimitri and Rogus (2014, p. 26) point out, although current policies focus on food access, “access to healthy nourishing food and not merely access to calories” should be the goal of nutritional support programs. Future research should explore the impact that shifting subsidies from commodity crops to whole fruits and vegetables has on dietary quality and FWB. Furthermore, this type of policy shift may also have the potential to positively affect FWB more broadly within our society. More research is needed to assess how to scale up programs that subsidize access to healthy foods and thereby lower costs for people experiencing hunger.

Advancing FWB: public policy. HTF works to advance FWB through legislation and public policy. Specifically, the organization focuses on advocating for strong federal nutrition programs, including SNAP; school meals; summer meals; the WIC program; and senior nutrition programs. Each year, HTF analyzes and publishes data about how Wisconsin residents utilize federal school nutrition programs and the USDA’s Community Eligibility Provision, producing a “School Breakfast Report Card” for every county in the state. Because Wisconsin ranks last nationally in terms of the number of schools offering both breakfast and lunch, this information is vital for school administrators, nonprofit entities, and policy makers as they identify ways to improve food access and advance FWB for school children. Due to HTF efforts to expand school breakfasts, Milwaukee and southeastern Wisconsin schools added 5,270 students to their breakfast programs from 2015 to 2017.

HTF’s public policy work focuses on four pillars: research, education, organizing, and lobbying. However, it is HTF’s food

bank, a window into the lived experience of hunger, that most significantly informs its policy work, making HTF a powerful voice for the hungry on policy issues. Furthermore, HTF relies on its connections to food access partners and thousands of volunteers to inform citizens about hunger-related issues and spur them into action when important legislation is up for debate at the county, state, or national level. HTF maintains a citizen advocacy arm, Voices Against Hunger, which mobilizes members to advocate on hunger-related issues by calling elected officials, participating in lobbying days at the state capitol, and testifying at public hearings. For example, when HTF experienced difficulty obtaining a building permit on The Farm, Voices Against Hunger members who lived nearby and volunteered for HTF attended zoning meetings and lobbied politicians to move the approval forward.

HTF's dual role as both an emergency food provider and a public policy advocate also provides an opportunity to measure and report on outcomes and metrics related to its work. HTF monitors local poverty data, service statistics from its food bank network, federal nutrition program enrollment and participation data, and nutrition program policy changes. Such data, along with pertinent research findings, inform strategies used to create HTF's innovative programs for advancing FWB, allocate resources within its food bank network, and develop persuasive position papers and lobbying strategies. Finally, considering its direct service experience as well as its expertise navigating federal nutrition programs, HTF is well situated to help its community partners in Milwaukee and across the state of Wisconsin identify opportunities to fund and advocate for programs designed to advance FWB for people experiencing hunger.

Conclusion

Hunger is a devastating and acute hardship for individuals and families. By sharing the challenges of those living with food poverty, this research extends the Block et al. (2011, p. 6) FWB paradigm, "a positive psychological, physical, emotional, and social relationship with food," to include people experiencing hunger, explores the impact of hunger on people's relationship with FWB, and applies the extended FWB paradigm to highlight ways to advance FWB for people who experience hunger. Our review integrates research on hunger and FWB across a breadth of disciplines and combines these research insights with the work of the nonprofit Hunger Task Force, a food bank and advocacy organization working to alleviate hunger and advance FWB. This article illuminates paths, informed both by scholarly research and practical HTF programs, that not only ameliorate hunger but also advance FWB.

Hunger is only one of a group of overlapping challenges—substandard educational opportunities, lack of affordable housing, and joblessness—associated with poverty (Corus et al. 2016), and it is critical that we find more ways for policy and social change programs to focus coordinated efforts on tackling them all. Someone who needs to access a food pantry may also be confronting other challenges that pose barriers to escaping

poverty, and policy and social change programs need to simultaneously address these challenges. Programs that address hunger may provide an avenue for people to receive other services needed to improve their well-being, such as job training, health care, and affordable housing. Therefore, in addition to doing a better job advocating for policies and programs that advance FWB, we also need to continue to examine creative collaborations designed to address the multiple barriers that contribute to both hunger and poverty in general.

In the spirit of Stewart's (2013) call for more research focused on societal interests and public benefit, this review unites insights from research on hunger and FWB with HTF's work to combat hunger and promote FWB. One goal of this academic and nonprofit collaborative effort is to model how other researchers might partner with a nonprofit to address a vital societal issue and to encourage more such partnerships and collaborations. Martin and Hill (2012, p. 1164) advised that researchers must interact with nonprofits, policy makers, and advocacy groups such that these collaborations and their resultant efforts "can have [a positive] impact on people's lives." Our research and nonprofit partnership seeks pathways for understanding and addressing hunger, as well as advancing FWB, in ways that have a positive impact while also encouraging more researchers to collaborate with nonprofits and public policy entities.

Directions for Future Research

This conceptual framework is only a starting point for understanding hunger and FWB. Throughout this article, particularly in the sections devoted to each of the five domains of FWB, we highlight many areas that require more research. For each domain of FWB, we present extant research and future research questions that marketing researchers, policy makers, and practitioners may strategically propose to reduce hunger and its negative impact in our communities. However, there are many more directions for future research. For marketing researchers, more work is needed to understand how today's dynamic food retail and distribution systems can be leveraged to solve hunger and match excess food to those who need access to healthy foods to thrive. There is a plethora of research on persuasion that marketing researchers can share with practitioners active in food distribution efforts. For example, how can nonprofit practitioners build on existing choice research in marketing to encourage both the donation of healthy foods and the choice and utilization of healthy options offered within community pantries? Schools, after-school programs, and summer program providers have an opportunity to introduce healthy food choices to children who lack access to healthy foods at home. However, it is important for schools, as well as policy makers who create programs to provide free and reduced meal programs, to understand the social role of school meals so they do not create programs that stigmatize students or undermine efforts to provide food to students at risk of hunger. Furthermore, policy makers in particular need to consider the direction and broader impact of policies involving subsidies or

alternative retail access points to increase affordable access to healthy foods and advance FWB for those living with food poverty.

Although each group—marketing researchers, nonprofit practitioners, and policy makers—may have different ideas about how to advance the FWB of those experiencing food poverty, it is important to recognize the value of collaboration between these entities. This research, for example, reflects a partnership between academic researchers and the nonprofit Hunger Task Force. As Peracchio, Luce, and McGill (2014, p. 7) noted, “As scholars and members of society, we contribute more effectively if we all work together to solve the problems in our field of consumer research, rather than working in silos to develop applications.” By engaging directly with each other—community leaders, businesses, nonprofit organizations, academics, policy makers and beyond—we have an opportunity to maximize societal impact (Ozanne et al. 2017). We echo scholars instrumental in the Transformative Consumer Research movement from which the FWB paradigm was born: “[T]hese social problems are intractable and need diverse people to come together in dialogue and action” (Davis, Ozanne, and Hill 2016, p. 167). By bringing together the unique skills and knowledge of researchers, practitioners, and policy makers to tackle hunger, we may be more effective at making real progress to advance FWB for people experiencing hunger.

There are still even more important directions that future research can take. As an example, whereas most research on the topic of food insecurity measures and reports on three pillars—availability, accessibility, and utilization—some researchers break down the definition further and add a fourth dimension: stability (Coates 2013). Stability appears to be a critical component of food security, as families that rely on governmental programs may receive income and food support only once a month and have trouble stretching their limited food or funds. Other sources of food access, such as pantries and food banks, may also limit the number of times over the course of a month that people in need can access their services. Many who struggle with poverty rely on temporary work, multiple part-time jobs, or other sporadic opportunities to earn income that are not stable. For some, mobility and transportation challenges make their ability to access and utilize food inconsistent. People in poverty are often forced to make difficult trade-off decisions. For example, someone who chooses to buy food instead of paying their electric bill may then be unable to cook that food. Lastly, even as the concept of food *insecurity* was developed to help assess the level of need, forecast future needs, and assess the impact of programs, *instability* of food access—due, for example, to the inability to find stable employment, lack of reliable and cost-effective transportation, and seasonal shortfalls in the supply of essential foods—may be disguising persistent root causes of food insecurity in ways that prevent the advancement of FWB for those who are food insecure.

Although our research focuses on hunger and FWB in the United States, and specifically in Milwaukee, hunger is an acute global problem. The United Nations estimates that 795 million people, 10.8% of the world population, goes hungry

each day (FAO 2015), and many more people are at risk of hunger. Moreover, although the vast majority of the world’s population lives in environments where sufficient food is available, too many people do not have affordable access to healthy, nutritious food. It is important to understand the similarities and differences between tackling hunger in developed and developing economies. More research is needed that examines global hunger and the advancement of FWB worldwide.

In summary, our collaboration with HTF seeks to highlight the immense possibility for positive social impact that academic research in collaboration with nonprofits such as HTF can have on advancing FWB. The lack of media attention given to the prevalence of hunger (Briley, Shrum, and Wyer 2013), combined with forces that hide hunger in our society, may lead the general public as well as policy makers to underestimate the scope of hunger. Food poverty is prevalent throughout our communities and is a hardship impacting 15% of people in the United States. As Ozanne et al. (2017) have urged, researchers should engage with nonprofits and other stakeholders to serve the interests of those without resources. Research focused on people who are experiencing hunger has the potential to benefit these individuals and society as a whole, advancing FWB for all.

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