THE NEEDS OF NUTRITION AND PHYSICAL ACTIVITY EDUCATION FOR CAREGIVERS OF MICHIGAN MIGRANT AND SEASONAL FARMWORKER CHILDREN

By

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ABSTRACT

THE NEEDS OF NUTRITION AND PHYSICAL ACTIVITY EDUCATION FOR CAREGIVERS OF MICHIGAN MIGRANT AND SEASONAL FARMWORKER HEAD START CENTERS

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Migrant and seasonal farmworker (MSFW) children have high rates of overweight and obesity, which can lead to health issues throughout their lives, resulting in increased healthcare costs. Caregivers of young children who can influence environment and role model behaviors related to nutrition and physical activity also have high prevalence of overweight and obesity. Migrant and Seasonal Head Start (MSHS) programs serve young MSFW children (0-5 years) and can be a venue for health promotion. This situation provides important educational opportunities to meet the needs of caregivers (parents and MSHS staff) of MSHS children themselves and for children in their care. This study aimed to identify the perceived needs for content, facilitators, and barriers to participating in such programs. Of 17 total MSHS centers in Michigan, five of the largest sites were selected for recruitment of MSHS program parents and staff. Twelve focus groups were conducted between July - September 2016 with staff (n=27), parents (n=33), and MSHS center directors (n=13). Using consensus coding among three researchers, key themes were identified. Quantitative surveys were conducted with parents (n=135) at nine centers and staff (n=280) at all 17 MSHS centers in Michigan between July - August 2016. We found that desired content for programs included basic nutrition knowledge, cooking and meal planning, physical activity, and budgeting. Facilitators and barriers to participation in a nutrition and physical activity program included program structure, financial support, education format, and motivation factors. Caregivers competent in nutrition and physical activity knowledge may be able to influence the environment and behaviors of their children and the MSHS community to promote healthy lifestyles. This information can be used to plan future interventions for caregivers of MSHS children.

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KEY FOR ABBREVIATIONS

CAMP: College Assistant Migrant Program

EFNEP: Expanded Food and Nutrition Education Program

FPL: Federal Poverty Line

MSFW: Migrant and Seasonal Farmworker

MSHS: Migrant and Seasonal Head Start

NHANES: National Health and Nutrition Examination Survey

OW/OB: Overweight and Obesity

PSE: Policy, Systems, and Environmental Change

SCT: Social Cognitive Theory

SNAP: Supplemental Nutrition Assistance Program

SNAP-ED: Supplemental Nutrition Assistance Program Education

CHAPTER 1: INTRODUCTION

Migrant and Seasonal Farmworkers (MSFW) are integral to the United States agricultural system. An estimated 2,785,784 MSFW work nationally with an estimated 80,549 in Michigan (Legal Services Corporation 2016). MSFW fill jobs that require extensive hand labor. These jobs, often unwanted by locals, pay low wages, foster undesirable and unsafe work conditions, are temporary in nature, and require relocation for consistent work. MSFW's absence would cause a substantial disruption to the agriculture industry.

Despite their essential contributions to society, MSFW are severely marginalized. MSFW are of low socioeconomic status, with the majority reporting individual incomes of $17,500 - $19,999 and an average 8th grade education level (Hernandez 2018). Many suffer disproportionately high rates of health issues, possibly exacerbated by challenging and unsafe work conditions. Poor working conditions such as exposure to heavy metals (Quandt, Jones et al. 2010), pesticides (Robinson, Nguyen et al. 2011), and occupational injury (Ramos, Carlo et al. 2016) have been reported. Occupational safety hazards increase health risks of MSFW but their access to healthcare is limited due to transient nature of their work life. Only 47% of MSFWs reported having health insurance and the majority reported not having sought recent healthcare (Hernandez 2018).

In the US, racial/ethnic minorities have higher health risks including those related to nutrition and physical activities than the general population (Centers for Disease Control and Prevention 2018). MSFWs marginalized status contributes even further to nutrition related health concerns in this population. MSFW have high rates of food insecurity, cited at up to 82% (Kiehne and Mendoza 2015). Overweight and obesity (OW/OB) prevalence is also high among MSFW parents (35.5% OW, 40.8% OB) and their children (10% OW, 31.4% OB) in Michigan (Song, Song et al. 2015). The high rates of OW/OB amongst MSFW children age 2-16 contrast with those of comparable age US children. The Healthy

People 2020 objectives note reducing obesity among youth especially among minority and underserved children, clearly including MSFW children. The majority of MSFWs and staff in MSHS programs are of Hispanic origin, a group which has high rates of OW/OB and diabetes (Centers for Disease Control and Prevention 2018). Early intervention with children, parents, and MSHS staff can reduce health care cost while improving the quality of life of MSFW.

Migrant and Seasonal Head Start (MSHS) was formed in 1969 to provide childcare services to MSFW families. The Migrant Head Start Collaboration Office has a mission of ensuring "access to high quality, culturally appropriate early childhood education opportunities for the children and families of migrant and seasonal farm workers" (US Department of Health and Human Services 2019). The MSHS program offers head start education and a variety of other health related services such as social, health, and disability services to migrant families, including nutritious foods for children (National Migrant and Seasonal Head Start Association 2017) (Telemon Corporation 2019). MSHS centers may be open extended 12-hour days and weekend days to meet the needs of MSFW families (National Migrant and Seasonal Head Start Association 2017). In Michigan, Telamon Corporation facilitates MSHS programs.

MSHS also assist MSFW family health concerns through direct interactions with parents and children. Studies suggest that children's weight status is influenced by their parents and caregivers at home. Studies have reported that parents (Vollmer and Mobley 2013, Melis Yavuz and Selcuk 2018) and childcare or school environments (Eliakim, Nemet et al. 2007) can also influence the weight status of children. MSHS where MSFW children spend long hours can potentially impact nutritional status and OW/OB issues among MSFW children. Nutritional status of MSFW pre-school age children (Quandt, Trejo et al. 2016) and adults (Borre, Ertle et al. 2010, Rosales, Ortega et al. 2012) are also poor.

Important caregivers for MSFW children are MSHS staff and parents who can influence the behaviors of children. Staff in MSHS who serve as role models for children have high rates of OW and OB (24.1% and 49.5%, respectively), and low nutrition knowledge (Song, Song et al. 2016). Because of their

important roles for MSFW children's risk for OW/OB, needs assessments for nutritional and physical activity education programs for the MSHS staff and parents became necessary to achieve the ultimate goal of reducing OW/OB in MSFW children.

There is a high prevalence of OW/OB in MSFW children and parents in addition to MSHS staff. MSHS directors are the channel for implementing new programs for staff and parents at the centers. From prior quantitative studies (Song, Song et al. 2015) (Song, Song et al. 2016), the need for a nutrition intervention was identified. In order to deliver a program successfully, this study aimed to assess the program needs of caregivers (parents and staff) of Michigan MSHS children through a survey and focus groups with parents of MSHS children, staff working in MSHS, and MSHS center directors. If a program meets the needs for caregivers of MSFW children, nutrition knowledge can be enhanced, and result in reduced OW/OB among caregivers and children alike.

Specific Aims:

Aim 1: Through a survey with parents of MSHS children and staff in MSHS centers, this study aimed to identify content and format needs for nutrition and physical activity education programs.

Aim 2: Through focus group interviews with parents of MSHS children and staff in MSHS centers, this study aimed to identify needs, barriers, and facilitators to participating in nutrition and physical activity education programs.

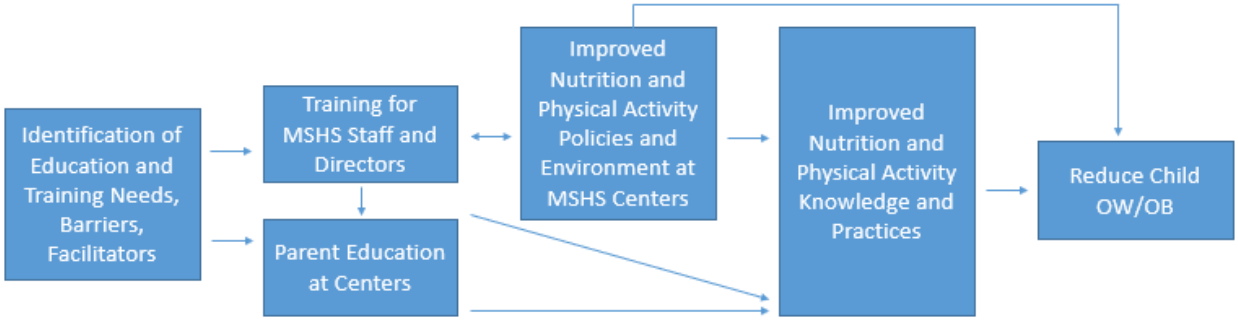

Figure 1: Conceptual Map for Study

CHAPTER 2: LITERATURE REVIEW

2.1 Migrant and Seasonal Farmworkers Overview

Definitions. United States Department of Labor (United States Department of Labor October 23, 2006) defines a seasonal farmworker as "an individual who is employed, or was employed in the past 12 months, in farmwork of a seasonal or other temporary nature and is not required to be absent overnight from his/her permanent place of residence"; migrant farmworker as "a seasonal farmworker who travels to the job site so that the farmworker is not reasonably able to return to his/her permanent residence within the same day". Migrant and seasonal farmworkers (MSFW) is the term used to encompass both of these definitions, and are transient while working jobs of a temporary nature.

Common migrant streams for travel in the United States for MSFW include the Western, Midwest, and Eastern streams shown below. Often MSFW will begin in the southern states in each stream, and progress north to follow crops seasonality.

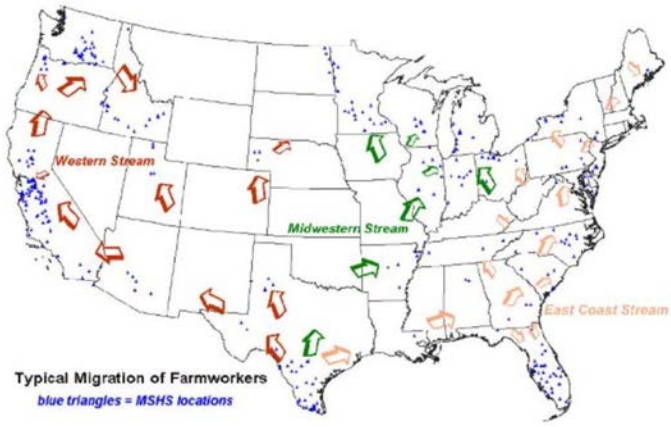

Figure 2: Map of MSFW Migrant Streams

Image Source: (Association of Farmworker Opportunity Programs 2019)

Demographics. The National Agricultural Workers Survey (NAWS) is conducted with nationally representative agriculture workers; this encompasses many MSFWs, and the information collected informs federal programs for MSFWs and dependents. Survey questions are related to a year timeframe

of the individual to show seasonality. The NAWS defines a migrant as "a person who reported jobs that were at least 75 miles apart or who reported moving more than 75 miles to obtain a farm job during a 12-month period." The most recent NAWS (2015-2016) reports 19% of those agricultural workers surveyed being migrants. Of those surveyed,51% are authorized to work which includes 29% being United States citizens, 21% legal permanent residents, and 1% through other programs. The majority of agricultural workers are Mexican born (69%) with 24% born in the United States, followed by 6% in Central America, 1% in Puerto Rico, and other regions. Eighty-three percent of agricultural workers identify as Hispanic (65% Mexican, 9% Mexican-American, and 9% of other groups). Seventy-eight percent of agricultural workers are living in the United States for at least 10 years. (Hernandez 2018)

The majority of NAWS agricultural workers (68%) are male and 32% are female. The average age is 38, with a range of ages including 14-19 years (7%), 20-24 years (11%), 25-34 years (26%), 35-44 years (23%), 45-54 years (19%), 55-64 (11%), and 65 or older (4%). Most are married (57%), and the majority are parents (55%). Forty percent did not live with nuclear family (20% of this percentage were parents). (Hernandez 2018)

Education/Literacy/Language. The average education level achieved by NAWS respondents is 8th grade, with 37% completing 6th grade or less, and 4% with no schooling. This includes 19% completing 7-9th grade, 30% completing 10-12th grade, and 10% attaining beyond high school. (Hernandez 2018)

The majority are fluent in Spanish with limited English skills, which can create additional challenges to seeking assistance. Most speak Spanish (77%) as a primary language followed by English (21%) and indigenous languages (1%). Out of those who state Spanish is their primary language, 81% have the ability to read Spanish well, followed by 10% somewhat, 7% a little, and 2% not at all. Most have limited ability to speak English, with 30% not speaking at all, 32% speaking a little, 9% somewhat,

and 29% speaking well. Ability to read English included 28% reading well, 7% somewhat, 24% a little, and 41% not at all. (Hernandez 2018)

Work Environment and Environmental Health. Fifty-eight percent of NAWS respondents reported working in US farms for over 10 years. The average annual time span for agricultural employment included 33 weeks with 192 days of work. On average respondents worked 45 hours over 5 days during the week prior to the survey of 2015-2016. (Hernandez 2018)

Unfavorable working conditions of agricultural workers are documented. Only 57% received training from their employer about safe pesticide use. Although 89% report receiving water and cups daily, 5% report receiving water only and 6% receiving none. As many as 3% of the NAWS respondents report having no access to a toilet and handwashing facilities. Benefits received from employers vary, with 43% reporting unemployment insurance and 62% reporting workman's compensation. (Hernandez 2018)

Housing and Transportation. Housing and transportation arrangements of agricultural workers vary widely with living in housing provided by employers (16%), renting elsewhere (54%), owning homes (28%), and housing from government/charity/other organization (1%). Many (33%) report living in housing classified as "crowded" as defined by "the number of persons per room was greater than one." Types of housing included single family homes (57%), mobile homes (20%), apartments (20%), and others (4%). (Hernandez 2018)

Eleven percent report living where they work and 70% living less than 25 miles from work. Transportation varies, with 58% driving a car to work, 15% paying a driver, 13% riding with other people, and 8% walking or taking public transit. (Hernandez 2018)

Income/Pay Rate/Public Assistance/Health Care. In year 2015-2016, NAWS respondents report earning an average hourly pay of $10.60 and yet 33% of families lived in poverty. Agricultural workers'

individual and family incomes ranged from $17,500 - $19,999/year, and $20,000-$24,999/year, respectively. (Hernandez 2018)

Within the two years prior to 2015-2016 survey, 54% of agricultural workers reported having at least one household member on public assistance such as SNAP (18%), WIC (17%), public health clinics (10%), and Medicaid (44%)(Hernandez 2018). Only 47% of MSFW reported having health insurance. The most recent health care visit was paid for completely by 34% agricultural workers, and 23% stated the most common difficulty for accessing health care was the cost. Only 63% reported obtaining health care with a US provider within 2 years. (Hernandez 2018)

Enumeration. It is challenging to identify the number of MSFW in the US due to their transient lifestyle. The Legal Services Corporation provides legal assistance to low-income audiences, including MSFW. Legal Services Corporation estimates MSFW in a recent report published in 2016, including dependents of workers, both authorized and living in poverty include 2,785,784 in the US and 80,549 in Michigan (Legal Services Corporation 2016). Similarly, MSFW workers alone and with dependents were 49,135 and 94,167, respectively in Michigan in 2013 (Larson 2013). Estimates for MSFW children and youths under age 20 in Michigan total 42,729 (27,965 migrant children/youth plus 14,764 seasonal children/youth) (Larson 2013), 27,988 children under 13 and 11,793 children under age 5 (Department of Health and Human Services 2013). This includes an estimated 4.6% under age 1, 23% ages 1-4, 37.9% ages 5-12, 10.4% ages 13-14, 18.6% ages 15-18, and 5.5% age 19 (Larson 2013).

Food Insecurity Rates. Food insecurity rates among MSFW have been documented in some smaller studies and are found to be higher than that among the general population ranging from 8.2%-82% (Kiehne and Mendoza 2015).

Many of these studies examining food insecurity among MSFW were carried out in North Carolina and showed that 32% of preschool children were food insecure in addition to 63.8% (Borre, Ertle et al. 2010) and 47.1% (Quandt, Arcury et al. 2004) households were food insecure. The highest

rate of food insecurity (82%) was reported in border towns in southwest Texas (Weigel, Armijos et al. 2007). Three studies on food insecurity in the Midwest reported prevalent low food security (33-44%) and very low food security (8-23%) (Kilanowski and Moore 2010); (Kilanowski and Lin 2012); (Kilanowski 2010).

When compared to national data in the US, MSFW's food insecurity rates are higher than both the general population and rates among Hispanics. The rates of food insecurity between 2015-2017 averaged 12.3% for the United States and 13.6% for Michigan. Among Hispanics, rates of food insecurity were 18.0% in 2017. Among households with children, 7.7% had food insecure children in 2017, showing MSFW rates to be higher across all categories. (Coleman-Jensen 2018)

In summary, these issues of low socioeconomic status, low educational achievement, poor access to healthcare, challenging work conditions, transient lifestyle, and high food insecurity, all contribute to MSFW adults and children being especially vulnerable to OW/OB and related health issues.

Importance to Agricultural Industry. In addition to the social perspective of bringing attention to issues facing MSFW families, it is important to note this workforce also provides a great economic benefit to the agricultural industry. The American Farm Bureau Federation estimates a short term loss of $1.5-5 billion dollars nationally if MSFW labor is lost, in addition to a $151-271.8 million production loss in Michigan short term (American Farm Bureau Federation Economic Analysis Team 2006). Michigan ranks 5th nationally for number of MSFW (Department of Health and Human Services 2013). A report from the Michigan State University Product Center for Agriculture and Natural Resources emphasized the importance of MSFW in Michigan. The temporary work season and transient nature of farm work makes it unappealing to permanent residents, in addition to Michigan growing many crops which rely on labor provided by MSFW (Knudson 2006).

2.2 Childhood Overweight and Obesity in the United States

Obesity Rates Among Youth in the United States. Youth obesity rates in the US are high. Healthy People 2020 Objectives state the need for eliminating health disparities, with a goal of declining the national youth obesity rate to 14.5% (Centers for Disease Control and Prevention 2010). However, recent reports from the National Health and Nutrition Examination Survey (NHANES) indicate higher rates from 2011-2014 (Table 1). Youth (age 2-19) obesity rates are 17%, with higher rates among Hispanics (21.9%). Notably, preschool age (2-5) youth rates are 8.9%. (Ogden 2015)

Lifestyle factors can contribute to obesity among youth. When examining obesity rates for youth by household income (Table 1), the highest income bracket (> 350% FPL) has the lowest rates of obesity (10.9%), followed by middle income (19.9%) (>130% to ≤350% FPL) and low income (18.9%) (≤130% FPL). Education level achieved by the head of the household also contributes to a disparity in youth obesity rates (Table 1); those with a high school graduate education had higher youth obesity (21.6%) than college graduates (9.6%). (Ogden 2018)

Table 1: Youth US Obesity Rates by Groups of Interest

		2011-2014 Obesity Rates for US Youth %
Ethnicity and Age (Ogden 2015)	Youth (2-19) US General	17.0
	Youth (2-19) US Hispanic	21.9
	Preschool age Youth (2-5) US General	8.9
Income (Ogden 2018)	≤130% FPL	18.9
	>130% to ≤350% FPL	19.9
	>350% FPL	10.9
Education Achieved by Head of Household (Ogden 2018)	High School Graduate or Less	21.6
	Some College	18.3
	College Graduate	9.6

Obesity Rates Among MSFW Youth. Studies conducted among MSFW youth generally confirm higher rates of obesity compared to the general population (Table 2). MSFW families encompass obesity risk categories including low income, low education attainment, and being of Hispanic origin. This combination of factors, furthered by additional struggles faced by the MSFW lifestyle, likely contribute

to the higher rates of obesity in this population. Studies with MSFW children in Michigan resulted in obesity rates of 15.1% (Lee and Song 2015) and 31% (Song, Song et al. 2015), respectively of OB among preschool aged children, which is higher than similar national data (8.9%) for preschool age children (Ogden 2015). A review of OW/OB among MSFW children of various ages yielded OB rates ranging 15-37% and OW/OB rates of 31-73% (Lim, Song et al. 2017). The strikingly high rates of OB in MSFW children indicate the urgent need for interventions in this vulnerable population.

Table 2: MSFW Child Obesity Rates from Prior Studies in the Midwest

Author	Study Year	Location	Sample Size	Child Age	OW %	OB %
Kilanowski 2010	2007-2008	Ohio and Michigan	60	2-13	22	26
Lee 2015	2012-2013	Michigan	1357	0-6	16.1	15.1
Song 2015	2013	Michigan	76	0-5	10	31

Rates of Overweight and Obesity Among MSFW Children Attending MSHS Programs. A nationally representative sample from MSHS centers measures characteristics for MSHS children in 2017 (U.S. Department of Health and Human Services: Office of Planning Research and Evaluation 2019). Rates for OB children (Table 3) in MSHS for 2 year olds (12.4%) and those 3 and older (17.4%) are higher than national averages for 2-5 year old children (8.9%). (U.S. Department of Health and Human Services: Office of Planning Research and Evaluation 2019) (Ogden 2015)

Table 3: MSHS Children's Height and Weight

Weight	% of Children (24 months and older)	% of Children (24-35 months)	% Children (36 months and older)
Underweight	2.3	3.0	2.1
Normal Weight	66.8	70.0	65.5
Overweight	14.9	14.6	15.0
Obese	16.0	12.4	17.4

Determinants of Childhood Overweight and Obesity Among MSFWs. A recent review identified a variety of determinants for OW/OB in MSFW children (Lim, Song et al. 2017). While research on this topic is limited, this provides some indicators for OW/OB. The MSHS students enrolled for three or more

years in MSHS programs (Table 4) had less OW compared with those enrolled for one year (Lee and Song 2015). Rosado found in Florida that elementary aged children were more likely to be OW/OB than the preschool MSFW children (Rosado, Johnson et al. 2013). A study with child household food insecurity found higher rates of OW/OB among children who were food secure (73%) compared with those food insecure (33%) (Borre, Ertle et al. 2010). Parents who have OW/OB children were incorrect about child's weight status compared with those with non-obese children (Song, Song et al. 2015). Parents with OW/OB are more likely to have children who are OW/OB (Rosado, Johnson et al. 2013) (Song, Song et al. 2015). When MSFW families participated in SNAP benefits, their children are found to have lower rates of OW/OB (Lee and Song 2015). All of these determinants of education for children, SNAP participation, household food security, parents' weight and weight perception should be considered as contributing factors to OW/OB for MSFW children.

Table 4: Determinants of OW/OB in MSFW Children

Paper	n	Study Year	Child Age (years)	Health Determinant	Study Location	Key Results
Lee 2015	1357	2012-2013	0-6	Child Education	Michigan	More time in MSHS significantly associated with less OW
Rosado 2013	472	2010-2011	3-16	Child Education	Florida	Higher grade levels associated with more OW/OB
Borre 2010	52	2005	2-7	Household Food Security	North Carolina	Food insecurity associated with lower OW/OB
Song 2015	76	2013	0-5	Parents' Perception of Children's Weight	Michigan	Parents with OW/OB children incorrectly predicted child's weight status
Rosado 2013	472	2010-2011	3-16	Parents' Weight Status	Florida	Parents with high BMI predict OW/OB in children
Song 2015	76	2013	0-5	Parents' Weight Status	Michigan	Parents with high BMI more likely to have OW/OB children
Lee 2015	1357	2012-2013	0-6	SNAP Participation	Michigan	SNAP participation yielded less likely for OW/OB children

Relevance of Addressing Obesity Among Youth. Youth who are obese are more likely to be obese as adults (Biro and Wien 2010). Obesity can lead to increased risk of disease including mortality, hypertension, dyslipidemia, cancers, stroke, type 2 diabetes, osteoarthritis, and coronary heart disease (Obesity Expert Panel 2013). Addressing obesity among youth is the opportune time to reduce risk of obesity and comorbidities throughout the lifecycle.

2.3 Efforts to Target Childhood OW/OB in Preschool Age Children

Efforts to Target Childhood Nutrition and OW/OB in Preschools. Because child obesity rates among MSFWs are high, and many MSFW children spend time in MSHS, this is an ideal venue to prevent obesity in this population. Review studies on efforts in preschools have emphasized the need for additional research in child care settings to prevent OW/OB among children. A review of policies and interventions in childcare identifies the opportunity for caregivers of children to promote health behaviors for children. (Larson, Ward et al. 2011)

Several interventions (Table 5) in preschools are highlighted, with the majority focusing on minority populations in Head Start. Several interventions were shown to improve diet quality in some capacity. One 14 week Head Start intervention involved two lessons each week, including education and physical activity time, in addition to a home education component for parents (Kong, Buscemi et al. 2016) resulted in improved diet quality. The Color Me Healthy program is offered in preschools for 6 weeks with 3 lessons and was shown to improve child fruit and vegetable consumption at snack time (Witt and Dunn 2012). One program adapted a pictorial bingo game played by many Mexican-Americans to promote healthy foods; the game was encouraged preschool teachers and parents, and resulted in improved diet quality. (Piziak 2012)

One intervention involving food service staff and meals served to children in Head Start resulted in a reduction in total and saturated fat of the meals served in addition to reduced serum cholesterol for children. Nutrition education in this program did not result in additional benefit to reduced cholesterol.

This emphasizes the importance of environmental choice offerings for children in this setting. (Williams, Strobino et al. 2004)

Many interventions exist for preschoolers, although few show a connection to weight outcomes post intervention. One such study showing a reduced BMI involved a 14-week program with nutrition education and exercise components, including reduced BMI and percent body fat and increased fitness for those in the program. Children were 5-6 years old, though this was still considered a preschool setting, and notably was in Israel. (Eliakim, Nemet et al. 2007)

Some barriers exist to implementing programs in Head Start settings. One such program, promoting physical activity and healthy foods, "I am Moving, I am Learning" underwent a feasibility study in Head Start Programs. After staff were trained, many reported trying to implement the program (96%), though many reported that there was not time to devote to the program (close to 60%). About half of the programs had a written implementation plan, the lack of such plans can cause issues with sustainability. These challenges should be noted for feasibility in additional preschool settings. (United States Administration for Children Families Office of Planning Research Evaluation 2007)

Several items should be considered for successful preschool interventions to improve nutrition and OW/OB status of youth. Kong et al. emphasizes the importance of engaging staff at schools for a successful intervention (Kong, Buscemi et al. 2016). Parent involvement should be considered as a way to encourage healthful behaviors while children are at home. Environmental changes in the preschool environment, such as food offerings can enhance health promotion for children. An emphasis on sustainable program plans should be considered, in addition to barriers faced by limited resources in Head Start and other preschool settings.

Table 5: Summary of Intervention Studies in Preschools to Promote Nutrition and Activity

Paper	n	Child age (yrs)	Population/Location	Intervention	Results
Eliakim 2007	101	5-6	Israel	14 weeks, nutrition education, exercise 45 min 6 days per week, promotion of less sedentary behavior and more physical activity outside of school	Reduced BMI and body fat, increased fitness
Kong 2016	618	3-5	Chicago, Primarily African American (94%) in Head Start	14 weeks, 2 times per week including 20 min healthy eating or activity lesson and 20 min physical activity movement, at home education component for parents. Hip Hop to Health Jr, education on diet and physical activity and less TV	Improved diet quality in intervention, no significant change in TV viewing or weight trajectory
Williams 2004	296	2-5	Minority Groups African American (67%) and Latino (33%) in New York Head Start	An intervention in Head Start food service to train cooks and offer foods with less total and saturated fat. Classroom nutrition education provided. Parent education and activities provided as well as parent meetings.	Reduced total and saturated fat in meals served. Children receiving improved meals had reduced serum cholesterol. Nutrition education did not lower cholesterol in children.
Piziak 2012	413	2-4	Head Start Latino Children in Texas	Evaluation of a nutrition education game that is Spanish/English bilingual involving pictures. Parents were trained in playing the game at meetings and teachers played game 2 times weekly with children. Parent home FFQ collected at beginning and end of school year.	Significant increase in vegetables offered to students at home.
Witt 2012	263	4-5	Idaho, Boise School District	Color Me Healthy program to promote fruit and vegetable consumption. 6 week program with 15-30 min lessons offered in 2 circle time and 1 imaginary trip weekly to children.	Improved diet quality for children in intervention, including increase of fruit for snacks by 20.8% and vegetables for snacks by 33.1% 3 months after program completion.

2.4 Social Cognitive Theory Approach for Obesity Prevention Programs

The social cognitive theory (SCT), developed by Albert Bandura (Bandura 2001), is one model explaining how human behaviors can be influenced. This theory describes how personal factors, environmental factors, and behaviors are related and interconnected (Zheng, Mancino et al. 2017). This model is applicable to nutrition education and obesity prevention programs (Zheng, Mancino et al. 2017). Prior interventions in preschools have been based on the SCT framework (Hendy 2002). Behaviors related to food choices and physical activity are impacted by environmental factors, including

access to food and food marketing. Changing the environment to encourage healthier behaviors may improve positive individual behaviors and thus health outcomes. Policy, Systems, and Environmental (PSE) change approaches relate to this idea by changing environments, aiming to influence healthier choices. Personal factors are also relevant for nutrition and physical activity behaviors. For example, low socioeconomic status may lead to a food deficit, less nutritious choices, and less investment in personal health.

Caregivers of children have the ability to influence environments and personal factors impacting children to lead to positive dietary choices of children. MSFW families have many personal factors that can contribute to negative health outcomes, such as being transient, low income, and of low education. This furthermore justifies the benefits of a PSE approach for MSFW children participating in MSHS. The SCT can influence interventions with parents and staff in addition to how they model behaviors to children in MSHS.

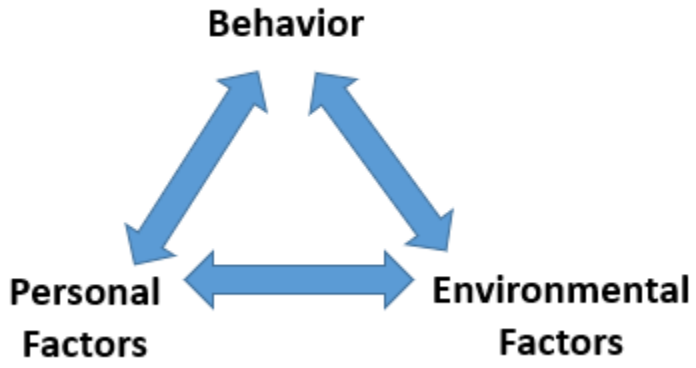

Figure 3: Social Cognitive Theory

2.5 Characteristics of Teachers in MSHS

MSHS collected a nationally representative, weighted sample with MSHS teachers and assistant teachers in 2017. Nearly all were female (teachers 99.1%, assistant teachers 98.8%) and most were Hispanic or Latino (teachers 76.5%, assistant teachers 78.8%) (Table 7). Many teachers and assistant

teachers had family members who were MSFW (52.8%, 61.2%, respectively) or were MSFWs themselves (36.6%, 31.4%, respectively) (Table 6). Education levels included highest education level of high school diploma/equivalent of 23.9% of teachers and 32.3% of assistant teachers, while 54.7% teachers and 26.8% of assistant teachers obtained an associates degree or higher (Table 7). The majority of both teachers and assistant teachers speak, read, write, and understand English and Spanish either "well" or "very well" (Table 8). However, some have limited to no understanding of each language, including 14.7% of teachers and 12.5% of assistant teachers reporting understanding English "not well" (Table 8). Additionally, 18.8% of assistant teachers report understanding Spanish "not at all" or "not well", while 14.4% of teachers report understanding Spanish "not well" (Table 8). (U.S. Department of Health and Human Services: Office of Planning Research and Evaluation 2019)

Household income is not included, though salaries earned at MSHS are provided. Most earn less than $25,000. The majority of teachers reported earning between $20,000 - $24,000 (28.4%) while most assistant teachers reported earning $10,000-$14,999 (36.6%) (U.S. Department of Health and Human Services: Office of Planning Research and Evaluation 2019). OW/OB rates among staff working in MSHS are high in Michigan, where MSHS staff had rates of 24.1% OW and 49.5% OB (Song, Song et al. 2016).

Table 6: MSHS Teacher and Assistant Teacher Experiences

	MSHS Teachers %	MSHS Teacher Assistants %
What experiences have you had with migrant and seasonal families and/or with the MSHS program before becoming an MSHS teacher? (Mark all that apply.)	n=118	n=99
Family members are/were migrant and seasonal farmworkers	52.8	61.2
You are/were a migrant or seasonal farmworker	36.6	31.4
Assistant Teacher	56.5	n/a
Teacher	n/a	50.6
Administrator (Assistant Center Director, Assistant Program Director, Center Director, Area Coordinator, Regional Director, Program Director)	2.4	0.8
Administrative Support (Secretary, Financial Officer, and Information Technology Director)	1.2	0.0

Table 6 (cont'd)

Education, Health, and Social Services (Educational Specialist, Education Manager, Component Coordinator, Outreach Staff/Recruiter, Family Service Worker, Counselor/Mental Health Professional, Social Worker, Health Care Worker, Community Organizer)	9.2	2.3
Support Staff (Kitchen Staff, Custodial Staff, Bus Driver, Bus Monitor, Transportation Supervisor)	30.6	17.2
Other	17.0	11.5
None of the above	10.8	20.5

(Adapted from U.S. Department of Health and Human Services: Office of Planning, Research and Evaluation, 2019)

Table 7: MSHS Teacher and Assistant Teacher Demographics

	MSHS Teachers %	MSHS Teacher Assistants %
What is the highest grade or year of school that you completed?	n=117	n=99
Less than high school diploma/equivalent	5.0	10.0
High school diploma/equivalent	23.9	32.3
Vocational/technical program with some college (including vocational/technical diploma after HS with or without diploma and some college without degree)	16.4	30.9
Associate's degree	32	14.3
Bachelor's degree	19.9	10.9
Higher than bachelor's degree (including some professional/graduate school without degree or master's, doctoral or professional degree)	2.8	1.6
What is your sex?	n=119	n=100
Male	0.9	1.2
Female	99.1	98.8
Other	0.0	0.0
What is your race/ethnicity?	n=118	n=99
Black or African American	4.9	4.9
Hispanic or Latino	76.5	78.8
White	24.2	17.7
American Indian or Alaska Native, Asian, or Native Hawaiian or Other Pacific Islander	0.4	0.8
Which Hispanic or Latino origin best describes you?	n=86	n=79
Mexican, Mexican-American, Chicano/a	87.8	88.9
Another Hispanic and/or Latino origin (including Puerto Rican and Cuban)	12.2	12.3

(Adapted from U.S. Department of Health and Human Services: Office of Planning, Research and Evaluation, 2019)

Table 8: Language Capability of MSHS Teachers and Assistant Teachers

	MSHS Teachers %	MSHS Teacher Assistants %
How well do you understand English?	n=114	n=97
Not at all	0.0	0.0
Not well	14.7	12.5
Well	35.4	38.5
Very well	50.0	49.0
How well do you speak English?	n=115	n=99
Not at all or Not well	22.8	n/a
Not at all	n/a	0.0
Not well	n/a	33.7
Well	33.6	20.1
Very well	43.6	46.2
How well do you read English?	n=115	n=99
Not at all or Not well	18.5	n/a
Not at all	n/a	0.0
Not well	n/a	21.1
Well	32.7	31.7
Very well	48.8	47.2
How well do you write English?	n=115	n=99
Not at all or Not well	27.5	31.3
Well	29.6	24.3
Very well	42.9	44.4
How well do you understand Spanish?	n=114	n=99
Not at all or Not well	n/a	18.8
Not at all	2.7	n/a
Not well	14.4	n/a
Well	26.9	17.3
Very well	56.0	63.0
How well do you speak Spanish?	n=114	n=99
Not at all or Not well	n/a	19.7
Not at all	2.5	n/a
Not well	16.3	n/a
Well	29.3	17.3
Very well	51.8	63.0
How well do you read Spanish?	n=114	n=99
Not at all	8.2	6.2
Not well	10.6	14.7
Well	28.5	17.2
Very well	52.6	61.9

Table 8 (cont'd)

How well do you write Spanish?	n=114	n=99
Not at all	12.1	7.9
Not well	11.1	16.2
Well	32.2	20.2
Very well	44.5	55.6

(Adapted from U.S. Department of Health and Human Services: Office of Planning, Research and Evaluation, 2019)

Table 9: Salary at MSHS for Teachers and Assistant Teachers

What is your total yearly salary (before taxes) as a teacher/assistant teacher?	Teachers % n=102	Assistant Teachers % n=84
Less than $5,000	0.0	n/a
$5,000 to $9,999	6.4	n/a
Less than $10,000	n/a	13.2
$10,000 to $14,999	25.5	36.6
$15,000 to $19,999	23.9	24.2
$20,000 to $24,999	28.4	14.6
$25,000 or more	n/a	11.5
$25,000 to $29,999	4.9	n/a
$30,000 or more	10.9	n/a

(Adapted from U.S. Department of Health and Human Services: Office of Planning, Research and Evaluation, 2019)

2.6 Characteristics of Parents in MSHS

A nationally representative survey in MSHS identified demographic information about parents with children in MSHS in 2017. Nearly all parents are Hispanic/Latino (97.7%) and most are of Mexican, Mexican-American, Chicano/a (94.8%), and born in Mexico (75.9%). Of parents surveyed, 21.3% achieved high school diploma/equivalent as their highest level of education, and 33.4% achieved an 8th grade education or less. Nearly all understand or speak Spanish (98.7%) and many understand or speak English (62.7%) to some degree. Most caregivers surveyed have been involved in US agricultural work for an average of 7.42 years, are currently working (72.8%), and of those working, 84.3% are currently

employed by agricultural work. (U.S. Department of Health and Human Services: Office of Planning Research and Evaluation 2019)

Many report a family income below $20,000 (36.2%), and 31.7% report having difficulty paying bills each month. Parents report concern of food running out before being able to purchase more (25%) and eating less than they should due to lack of finances (14.5%). Questions related to food insecurity from children are concerning, with 6.5% of parents reporting children eat less than they should due to finances. (U.S. Department of Health and Human Services: Office of Planning Research and Evaluation 2019)

Despite high rates of OW/OB among MSFW children, only 6.3% of parents surveyed report medical professionals informing them that their child's weight was high (U.S. Department of Health and Human Services: Office of Planning Research and Evaluation 2019). In a study in Michigan, MSHS parents had high rates of OW and OB (27% and 31%, respectively), and parents with high BMIs are associated with children with higher BMIs (Song, Song et al. 2015). Parents who did not believe their own weight and child's weight were high were more likely to have high BMIs (Song, Song et al. 2015).

Table 10: Demographics for MSFW Parents with Children in MSHS

	% of Parents
Race/Ethnicity	n=640
Hispanic or Latino	97.7
White	1.8
American Indian or Alaska Native or Black or African American or Native Hawaiian or Other Pacific Islander	1.1
Which Hispanic or Latino origin best describes you?	n=625
Mexican, Mexican-American, Chicano/a	94.8
Cuban	0.0
Another Hispanic and/or Latino origin (includes Puerto Rican)	5.3
In what country were you born?	n=640
US	19.4
Mexico	75.9
Central America	4.6
South America	0.0
South America, Caribbean, Southeast Asia, Pacific Islands, Asia, or Africa	0.1
Other (includes Puerto Rico)	

Table 10 (cont'd)

In what year did you first enter the U.S. to either work or live?	n=502
Before 1990	5.2
1990 — 1994	9.2
1995 — 1999	13.6
2000 — 2004	25.1
2005 — 2009	31.7
2010 — 2014	9.6
2015 or later	5.7
What is the highest grade or year of school you completed?	n=639
No school	1.9
Preschool to 5th grade	9.4
6th to 8th grade	22.1
9th grade	13.8
10th grade	4.2
11th grade	3.0
12th grade without a diploma	8.7
High school diploma/equivalent	21.3
Vocational/technical program	1.4
Vocational/technical diploma	1.8
Some college, no degree	8.2
Associate's degree	1.1
Bachelor's degree or Some graduate school without a degree	3.0
Master's degree, Doctoral degree, or Professional degree	0.0

(Adapted from U.S. Department of Health and Human Services: Office of Planning, Research and Evaluation, 2019)

Table 11: Languages Spoken by MSFW Parents with Children in MSHS

	% of Parents
What are all the languages that you understand or speak, including indigenous languages?	n=640
English	62.7
Spanish	98.7
Mixtec	7.4
Zapotec	0.9
Other language	4.8
How well do you understand English?	n=633
Not at all	16.2
Not well	40.8
Well	16.7
Very well	26.3
How well do you speak English?	n=630
Not at all	25.8

Table 11 (cont'd)

Not well	36.0
Well	15.1
Very well	23.1
How well do you read English?	n=631
Not at all	31.4
Not well	29.8
Well	13.9
Very well	25.0
How well do you write English?	n=631
Not at all	37.4
Not well	27.2
Well	12.2
Very well	23.2

(Adapted from U.S. Department of Health and Human Services: Office of Planning, Research and Evaluation, 2019)

Table 12: MSFW Parent Questions for Parents with Children in MSHS

Child's Weight Addressed by Medical Professionals	n	Yes	No	Years
In the past year, has a doctor, nurse, or other medical professional told you that [MSHS CHILD]'s weight is too low?	639	3.5	96.5	
In the past year, has a doctor, nurse, or other medical professional told you that [MSHS CHILD]'s weight is too high?	638	6.3	93.7	
Parent and Caregiver Work				
How many years in agricultural work in US	631			7.42
Are you currently working	640	72.8	27.2	
Currently work in agricultural work	475	84.3	15.5	
How many years additional caregivers in agricultural work in US	515			9.98
Is other caregivers currently working	547	93.9	6.1	
Other caregiver currently work in agricultural work	515	88.1	11.3	
Income and Food Security				
Do you have enough money each month to make ends meet?	636	76.9	23.1	
Do you have difficulty paying your bills each month?	637	31.7	68.3	
Do you worry about your food running out before you have money to buy more?	638	25.0	75.0	
In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money to buy food?	638	14.5	85.5	
In the last 12 months, did [MSHS CHILD] ever eat less than you felt he/she should because there wasn't enough money to buy food?	639	6.5	93.5	
Is [MSHS CHILD] currently covered by health insurance?	639	96.5	3.5	
Since ([MSHS CHILD] was born, was there any time when (he/she) did not have any health insurance coverage?	640	25.6	74.4	

(Adapted from U.S. Department of Health and Human Services: Office of Planning, Research and Evaluation, 2019)

Table 13: Family Total Income for Parents

Family Income	% of Parents
Did not work at all in 2016 (n=547)	1.3
Less than $2,500	2.5
$2,500 to $4,999	2.1
$5,000 to $7,499	2.5
$7,500 to $9,999	2.5
$10,000 to $12,499	6.0
$12,500 to $14,999	5.0
$15,000 to $17,499	8.1
$17,500 to $19,999	6.2
$20,000 to $22,499	10.1
$22,500 to $24,999	8.4
$25,000 to $27,499	8.8
$27,500 to $29,999	6.1
$30,000 to $32,499	9.8
$32,500 to $34,999	6.3
$35,000 to $37,499	3.4
$37,500 to $39,999	1.9
$40,000 to $44,999	4.8
$45,000 to $54,999	3.3
$55,000 or more	0.8

(Adapted from U.S. Department of Health and Human Services: Office of Planning, Research and Evaluation, 2019)

2.7 Federal Programs for Low-Income Audiences

Head Start and MSHS Programs. The Head Start Program includes the regular Head Start (3-5 years) and early Head Start (0-2 years) programs. In 2017, 771,479 children in Head Start and 149,986 children in Early Head Start (National Head Start Association 2017) were funded federally. In 2016 the MSHS had funding for 31,081 Head Start children and 1,031 Early Head Start children nationally (National Head Start Association 2017). MSHS produced 12,695 jobs in 2016 (National Head Start Association 2017). Funding for 2016 was $369,244,615 among 60 Migrant and Seasonal Head Start Programs in the United States (National Head Start Association 2017). The program provided 28,033

children with health care access and 27,124 children with dental care access (National Head Start Association 2017).

MSHS programs cater to the needs of MSFW children in 38 states with approximately 32,500 children served each year. The programs are open during the growing seasons ranging from 2 to 10 months a year. MSHS program services are coordinated with clients' move to different areas. The length of operation is often longer than a standard head start program since farmworkers work such long days. Because of this, MSHS centers can be open for 12 hours a day and also on weekends. (National Migrant and Seasonal Head Start Association 2017) In addition to child education, the MSHS programs also include parent education, social services to connect them with resources, health and disability services, and nutrition services. (National Migrant and Seasonal Head Start Association 2017)

Telamon Corporation, a non-profit organization established in 1965, provides all MSHS programs in Michigan and 10 other states. Telamon's mission "is to provide educational services that lead to better jobs, better lives, and better communities." The MSHS program in Michigan began in 1992. In 2016 when this study was conducted, 17 MSHS centers were located primarily on the West Coast of Michigan. In 2015-2016, 1243 children and pregnant women and 854 families utilized MSFW services, and 89% of families had income below the poverty level. (Telamon Corporation Michigan 2016)

Federal Nutrition Education Programs. Federal nutrition education programs educate individuals of low-socioeconomic status about using limited financial resources to optimize nutrition and physical activity. Program operation is directed by the National Institute of Food and Agriculture (NIFA) and the United States Department of Agriculture (USDA) Food and Nutrition Service (FNS). Education content delivered through these programs aligns with USDA Dietary Guidelines for Americans. Two of those programs are Supplemental Nutrition Assistance Program Education (SNAP-ED) and Expanded Food and Nutrition Education Program (EFNEP).

SNAP-ED formed in 1988 in Wisconsin and expanded nation-wide by 2004 through land-grant institutions and subcontractors. SNAP-ED provides interventions though nutrition education, social marketing, and Policy, Systems, and Environmental (PSE) change. EFNEP formed in 1969 focuses on a paraprofessional model to offer peer educators to reach community members. EFNEP services approximately 200,000 adults and 450,000 youth in 50 states with education provided through both 1862 and 1890 land-grant institutions. EFNEP is also offered in the six US territories and District of Columbia. Traditionally, SNAP-ED and EFNEP have implemented direct education strategies through community class settings and home visits. More recently, SNAP-ED and EFNEP have begun implementing PSE change approaches. These efforts focus on site and community level changes to make healthy choices feasible for all.

MSFW caregivers and children are generally income eligible for federal nutrition education programs. This is one avenue to provide education to this subpopulation.

2.8 Caregivers Can Influence Health Behaviors of Youth

Parents can influence nutrition and physical activity of children in various ways. Parenting style has the potential to play a role in child OW/OB rates. One study with preschooler parents discovered that OW/OB was higher when parents have an authoritative parenting style (Melis Yavuz and Selcuk 2018), though a review discovered mixed results regarding weight and parenting styles (Vollmer and Mobley 2013).

Parent beliefs about food, health, and physical activity can play a role in how they model behaviors to their children. Several studies have examined health beliefs in Latino parents. One study interviewing Latino farmworker mothers with preschool children assessed their belief of the importance of activity on their child's health, with mothers agreeing activity plays a positive role in child's health and obesity prevention (Grzywacz, Arcury et al. 2016). In this study, mothers also expressed that limited accessible play areas and concerns about neighbors limited the ability for children to be active

(Grzywacz, Arcury et al. 2016). A study with Latino parents examined parent perceptions of activity and eating, showing that parents believed it was very challenging to live a healthy lifestyle and to make positive changes (Taverno Ross, Macia et al. 2018). A study also shows that Latino parents have accurate beliefs regarding how to help children lose weight, such as reducing portion sizes. Parents also identified parent behavior modeling as a way to help children (Flores, Maldonado et al. 2012). Parents were open to trying healthier versions of traditional Latino foods (Flores, Maldonado et al. 2012). A better quality diet for parents also is associated with children in preschool having lower nutrition risk (Lohse 2015).

MSHS centers are an ideal venue for educating caregivers, both parents and staff working in MSHS centers, and setting them up for success to influence the behavior of children and their health outcomes.

CHAPTER 3: METHODS

3.1 Methods Introduction

This study aims to assess the needs for nutrition and physical activity education among staff and parents of Michigan MSFW children. Data collection included surveys with parents and staff with a goal of identifying content and format needs for nutrition and physical activity education programs. Focus groups with parents, staff, and directors were conducted with the goal of identifying needs, barriers, and facilitators to program participation. Data collection methods by group are outlined below (Figure 4).

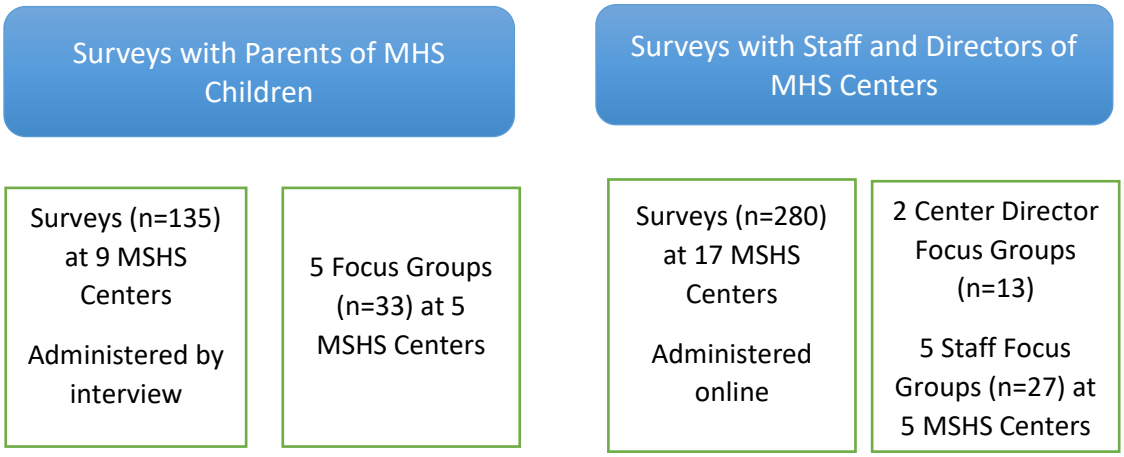

Figure 4: Approaches for Data Collection

3.2 Study Areas, Subjects, General Recruitment Strategies

The present study proposal was reviewed and exempted by the Michigan State University's Internal Review Board (Appendix A). Researchers collaborated with the Telamon Corporation (https://www.telamon.org/) which oversees all 17 MSHS Centers in Michigan. Most MSHS Centers were located on the western coast of Michigan's lower peninsula, specifically in Adrian, Bear Lake, Buen Pastor, Chase, Conklin, Decatur, Hart, Keeler, Kent City, Mears, New Era, South Haven, Pullman, Sodus, Sparta, Spinks Corner, and Suttons Bay (Figure 5).

Each MSHS center has a Director that manages the site and various support staff including coordinators, specialists, teachers, assistant teachers, center aids/assistants, food service staff, secretary, bus drivers, data entry clerks, custodians, special service assistants, health aides, or other roles. The research team held a meeting with all MSHS Center Directors at the Telamon central office in Lansing, MI to explain the study purpose with a request for cooperation to recruit parents and staff for participation.

Participants in the study included parents with children enrolled in MSHS, staff, and directors of MSHS. Our surveys and focus groups took place with staff and parents at MSHS centers plus the central Michigan office located in Lansing, MI between July 11 – September 30, 2016. All 17 MSHS centers were involved in staff surveys; 9 were involved in parent surveys, and 5 were involved in focus groups. Parent survey sites included Bear Lake, Conklin, Decatur, Hart, Keeler, Kent City, Sodus, Sparta, and Spinks Corner. Focus groups sites included Conklin, Hart, Keeler, Sodus, and Sparta. A map displaying data collection sites is presented below (Figure 5).

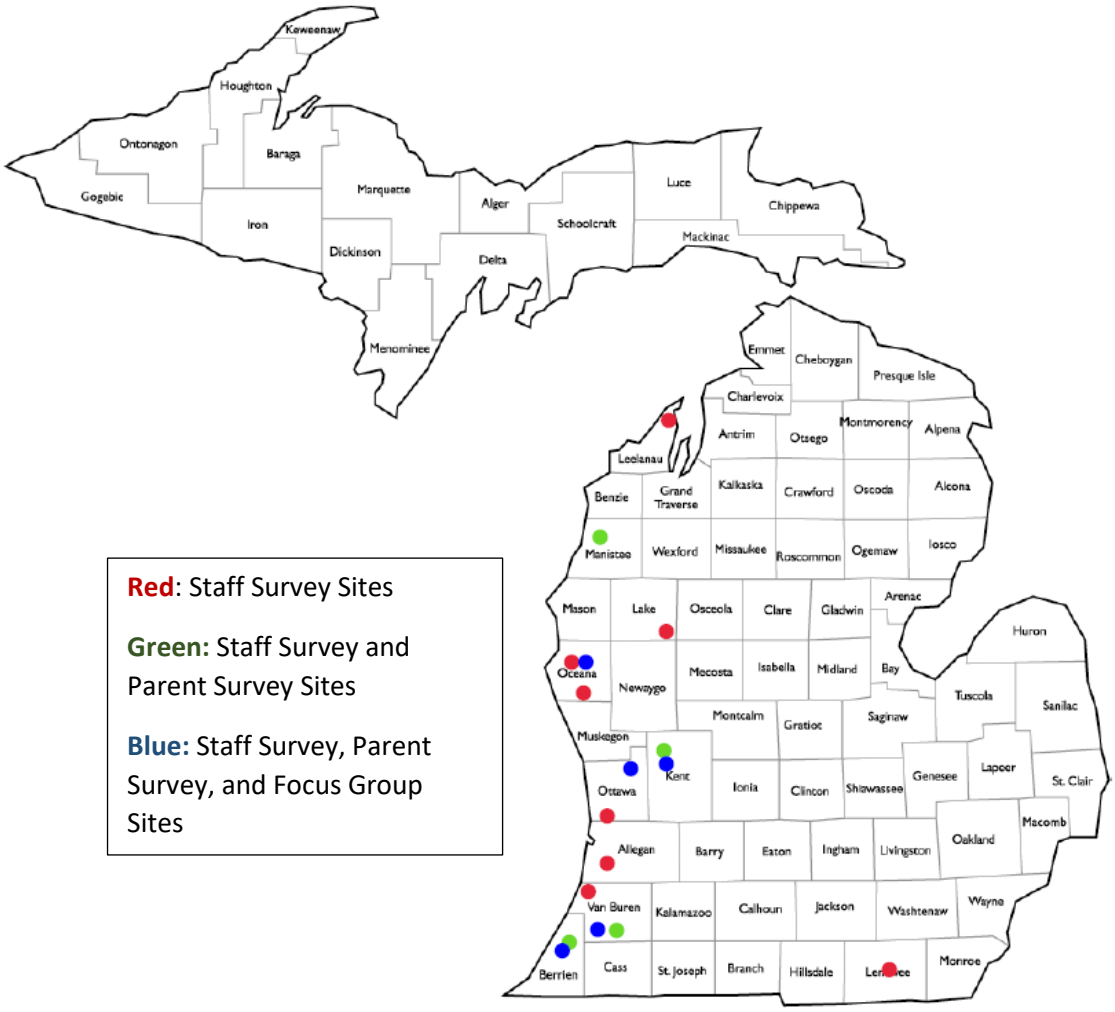

Figure 5: Map of MSHS Data Collection Sites by Type

3.2 Recruitment and Training of Bilingual Research Team

The research team consisted of graduate and undergraduate students, a post-doctoral student, and professor. The team focused on recruiting undergraduate students who were culturally knowledgeable and sensitive to the needs of the study population. The majority of the data collection team were recruited from MSU's College Assistant Migrant Program (CAMP). The federally funded CAMP program supports college students who are from a Migrant and Seasonal Farmworker family background by providing the first year of college financially and in a supportive community environment. All of the CAMP students were bilingual in Spanish and English. Four CAMP students were recruited, and one additional bilingual student was recruited.

The bilingual research assistants were trained by the research team on IRB training, focus group procedures, and practices through a mock focus group. One CAMP research assistant was trained in depth to lead focus groups in Spanish with the parents since the other research team members facilitating focus groups were not bilingual; training consisted of observing focus groups and discussing how to probe for questions in depth. Others were trained to take thorough notes during focus groups in addition to recording and transcribing. Research assistants were instructed to administer surveys orally and record responses.

3.3 Quantitative Survey Study, Parallel Study to Focus Groups

Survey questions were developed from a survey conducted as part of a pilot study from this lab in 2013. The survey included questions about demographics, knowledge of federal nutrition programs, nutrition knowledge, attitude, and behaviors. Surveys were developed for both parents and staff.

3.3.1 Parent Survey

Sites for parent surveys were selected based on convenience sampling related site proximity, dates of events hosted by the center, target population available, and willingness of the center to coordinate data collection times with the research team. Survey questionnaires were collected at parent events at each center and reviewed on site for their completeness.

Student interviewers bilingual in Spanish and English collected the parent surveys by reading questions to participants and recording on a hard copy to combat literacy issues. Students read the consent forms and, if the subject consented orally, they participated in the study. Each parent who participated received a $10 gift card to Walmart or Meijer. Students then entered the survey responses into Survey Monkey in the research lab and results were exported and analyzed.

Parents were surveyed at nine MSHS Centers including Bear Lake (n=2), Conklin (n=25), Decatur (n=27), Hart (n=15), Keeler (n=23), Kent City (n=9), Sodus (n=16), Sparta (n=11), and Spinks Corner (n=7). A total of 135 parent survey responses were received out of 672 possible parents at these nine sites

(1,158 parents were available across all sites). Surveys were obtained between July 14 – August 16, 2016.

3.3.2 Staff Survey

Staff surveys were administered online through Survey Monkey. Telamon recruited all staff in MSHS Centers and central office staff in Lansing to participate via email and through word of mouth at meetings. Staff who elected to participate read consent forms online and accepted before continuing with the survey. A catered lunch incentive was offered to the site with the highest response rate.

Staff survey responses were received from all 17 MSHS Centers in addition to the central office. Centers included Adrian (n=21), Bear Lake (n=23), Buen Pastor (n=6), Chase (n=17), Conklin (n=28), Decatur (n=12), Hart (n=29), Keeler (n=11), Kent City (n=19), Lansing (n=6), Mears (n=17), New Era (n=10), South Haven (n=2), Pullman (n=38), Sodus (n=23), Sparta (n=10), Spinks Corner (n=4), and Suttons Bay (n=4). Staff surveys yielded 280 responses out of 591 total staff. Staff surveys were obtained from July 11 to July 29, 2016.

3.3.3 Analysis of Surveys

For surveys, descriptive statistics were analyzed in SAS to present results related to content and delivery format for education.

3.4 Qualitative Focus Groups Study: Focus of this Thesis

Focus group questions were developed with the aim to discover content needs, barriers, and facilitators to participation in nutrition and physical activity education. Barriers and facilitators for child health and personal health were also included. Scripts were created for focus groups consisting of parents, staff, or directors.

3.4.1 Parent Focus Groups

A total of 33 parents participated in five focus groups, one at each of the five selected MSHS centers including Conklin (n=8), Hart (n=6), Keeler (n=5), Sodus (n=8), and Sparta (n=6) between July 26

to September 30, 2016. These five MSHS Sites were selected based on location and ability to schedule a focus group at the site. Parent participants were recruited by staff at the MSHS Centers. Childcare was provided by the MSHS Centers to allow for parent to participate. All parents were given a $15 gift card to Walmart or Meijer for their participation in addition to refreshments that were served during the focus group.

3.4.2 Staff Focus Groups

A total of 27 staff participated in five focus groups, at MSHS centers including Conklin (n=6), Hart (n=6), Keeler (n=5), Sodus (n=6), and Sparta (n=5) between July 26 to September 30, 2016. Locations for staff focus groups were selected in conjunction with parent focus groups. Staff were recruited by the centers. Incentives for staff included a free meal and refreshments during the focus group.

3.4.3 Director Focus Groups

Director focus groups were conducted at a statewide director meeting when MSHS Center directors were present on August 24, 2016. A total of 13 directors participated in two simultaneous focus groups (n=13). Directors were recruited by staff organizing the meeting and were invited to participate. Directors received a free luncheon incentive for focus group participation.

3.4.4 Focus Group Data Transcription and Analysis

The focus group leader read consent forms at the beginning of each focus group to ensure everyone was willing to participate; if willing, participants signed consent forms. One researcher led each focus group while two assistants took notes. Focus groups were audio recorded and transcribed. For parent groups, scripts were transcribed in Spanish, then translated to English. At least one additional bilingual student validated these translations for each focus group.

To analyze focus group transcripts, the first five transcripts were coded in detail, using line by line coding by two trained researchers. The two researchers then developed a codebook based on the most relevant themes that emerged. Additional codes were added as necessary when new themes were

discovered in additional transcripts. Three trained researchers applied the codebook to all transcripts, by first coding individually. Using a consensus coding approach, the three trained researchers discussed and agreed on the final codes used for analysis. Final codes were entered using NVivo 11 software (https://www.qsrinternational.com/nvivo/nvivo-products). Data was extracted for each code and placed into table matrices and summary statements were written in tables to compare data across groups (Miles, Huberman et al. 2014). The number of focus groups where themes emerged was noted in the results. However, the number of individual participants mentioning a theme was not identified because multiple others may have agreed with this theme even if they did not specifically discuss it in a focus group setting. All themes carry relevance regardless of how many groups identified them.

CHAPTER 4: RESULTS

4.1 Overview of Focus Group and Survey Participants

Surveys included a total of 280 staff and 135 parent participants. Parents were primarily Hispanic/Latino (97%), female (82.2%), of low education status (17.8% completing Highschool/GED), and low income (34.8% reporting less than $10,000 yearly family income). Staff were Hispanic/Latino (51.8%), female (90.7%), of higher education attainment (30.7% completing high school/GED and 67.5% receiving advanced education beyond high school), and report varying levels of income. (Appendix H)

Focus groups comprised a total of 73 participants including parents (n=33), staff (n=27), and directors (n=13). Most parents were Hispanic/Latino (84.4%), female (72.7%), of low education (21.2% obtaining high school/GED equivalency), low income (100% reporting family income below $29,999), and 56.3% reported lack of health insurance. Staff were primarily Hispanic/Latino (70%), female (93%). Income and education for staff varied with most reporting an income of $15,000-$19,999 (39.3%) and associates degree level education (32%). Most directors were female (92%), not Hispanic/Latino (69%), and reported higher income and education levels than staff and parents. Nearly all directors had completed an associates or bachelor's degree (46.2% and 46.2%, respectively) and most report a family income between $80,000-$99,999 (46.2%). (Appendix I)

4.2. Content Needs for Programs from Focus Groups

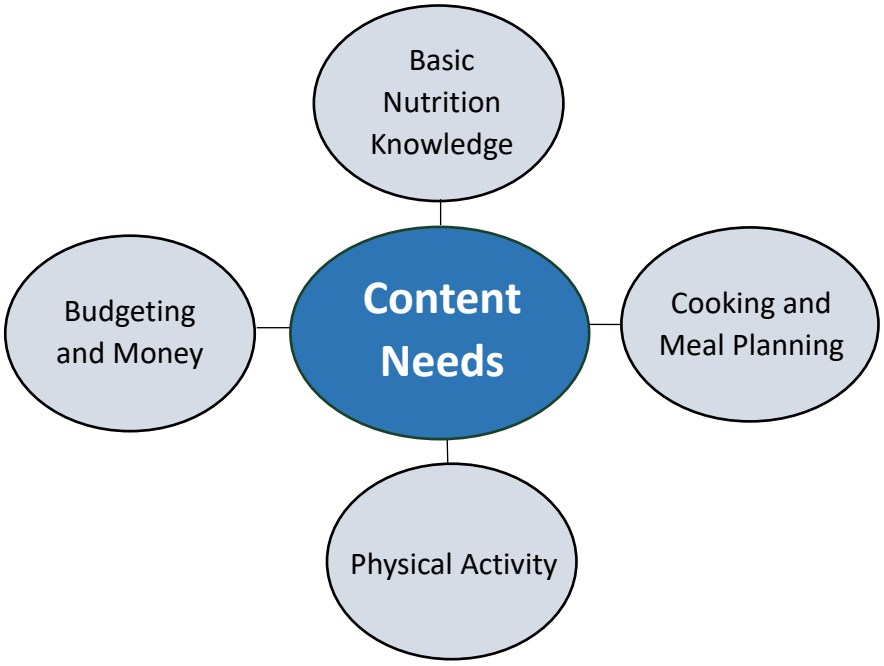

Figure 6: Content Needs for Caregivers from Focus Groups

Table 14: Overall Needs of Nutrition and Physical Activity Programs Expressed by Parents, Staff, and Directors from Focus Groups

Content Needs for Program	Parents	Staff	Director
Basic Nutrition Knowledge			
Food Composition	X	X	
Healthy Eating		X	
Food Labels and Portions	X	X	
Healthy Foods	X		
Eating Healthy Versions of Foods You Enjoy		X	
Food Preservation and Gardening		X	
Lifestyle Incorporation		X	X
Children Trying More Nutritious Foods		X	

Table 14 (cont'd)

Nutrition to Benefit Children and Family	X		
Health Education		X	X
Cooking and Meal Planning			
Convenient Cooking	X	X	X
Cooking to Benefit Child and Family	X		
Other Cooking Suggestions	X	X	X
Physical Activity			
Activity Related to Healthy Weight		X	
Activity with Children		X	X
Simple and Easy Physical Activity		X	X
Other Physical Activity	X	X	X
Budgeting/Money			
Healthy Foods with Limited Budget		X	
Activity with Limited Budget		X	

4.2.1 Basic Nutrition Knowledge

Needs of basic nutrition knowledge were expressed by staff (four out of five), director (two of two), parent (four out of five) focus groups. (Table 14)

Food Composition. The themes of basic nutrition knowledge included food composition of such as calories and protein among staff groups and vitamins among staff and parents. One staff member said they wanted to learn about what is "good" and "healthy". One staff member commented on needs to learn about foods that are "loaded with calories" and considered a healthy food. The comment indicates that he/she does not have a thorough understanding of calories and their health effects. (Table 14)

Healthy Eating. Another staff member expressed needs to learn how the body uses food one eats and choice of foods that prevent disease. One staff member (Staff 1, Keeler) shared,

> *"I think if it was a class for families and kids, a good thing for the kids to know would be 'You can eat food and get full'. You can eat a lot of food but it just depends on what kinds of food you're eating to get full. You don't have to feel like you have to eat just the minimum. You're able to eat a good quantity of food and be full. You don't have to be hungry."*

The statement indicates that some adults or children may think staying healthy means starving oneself, and children in particular should be educated on healthy eating to one's satisfaction. (Table 14)

Food Labels and Portions. A staff member (Staff 3, Sparta) expressed the need to learn about food labels,

> *"I always wanted to learn more about them because it feels like everything is a foreign language. So you don't really know what you're reading."*

Healthy portion sizes for youth and adults were mentioned in parent and staff groups. The need to learn about portion sizes and moderation was discussed in staff groups. (Table 14)

Healthy Foods. Parent groups mentioned the need to learn about the healthiest forms of food to eat. Benefits of eating certain foods was shared by parents. Ways to eat less fat was mentioned by parents; they may believe that eating less fat is healthy, and may not be aware that some fat is needed for a healthy diet. Additional information about healthy fats could be beneficial. (Table 14)

Eating Healthy Versions of Foods You Enjoy. Staff discussed the need to learn about eating healthy versions of foods they enjoy. One participant (Staff 1, Keeler) shared,

> *"I think the biggest thing is learning how to put certain foods together to make them more nutritious. Different ways you can substitute different stuff to put in to make it more nutritious and still have a good quality and taste."*

This indicates that participants are interested in learning about ways to make foods that are healthy but still desirable to eat. It was also suggested to learn how to eat healthy while including foods they enjoy (pizza was an example). A need to learn about healthier foods that children desire to eat was mentioned. (Table 14)

Food Preservation and Gardening. Staff discussed the need to learn about gardening and food preservation. This included growing foods without chemicals. Food preservation was mentioned by one participant (Staff 5, Sparta),

> *"Preserving is a good one because my food it seems like it goes bad before I can really use it. Especially potatoes, they start growing other potatoes before I can use it."*

Teaching information about how to store produce can prevent food waste and extend food resources for low income families. (Table 14)

Lifestyle Incorporation. One staff and one director group discussed a need to learn ways to incorporate nutrition practices and physical activities into their lifestyle. This could imply they have a difficult time spending a lot of energy and time thinking about health. Directors mentioned how it can be helpful to provide real practical examples in education programs. (Table 14)

Children Trying More Nutritious Foods. Staff groups discussed the need for addressing children who do not want to eat healthy foods. One participant (Staff 6, Conklin) shared,

> *"Some of the barriers I have is my kids are very picky eaters. So it's hard for me to get them to eat nutritional foods. It would be nice to have some tips on how to get them to eat the good foods. Even like some of our kids here, they are supposed to eat the vegetables. We try to get them, to encourage them by eating them and telling them, 'These are really, really good, you know. Why don't you try your carrots? You can be like a rabbit.' You can try those creative things but they just, they don't seem to want to eat those vegetables."*

Providing methods to encourage children to make healthy choices could be included in staff training and in parent education programs. A parent also expressed that some associate healthy eating behaviors with feeling hungry. Educating to promote the understanding that food is essential for energy and for health is a point to consider. A need for healthy foods that appeal to children was discussed. (Table 14)

Nutrition to Benefit Children and Family. The desire to learn about healthy foods so their child can eat these foods and grow was mentioned, indicating parents are interested their child's health. Parents discussed the need to teach children about the differences between healthy and unhealthy foods in addition to learning about individual needs for children. One parent shared (Parent 2, Keeler),

"Yes, because there are parents that give too much as well. And there are some that don't know. Sometimes we want them to be fat when they are skinny. They can say we will give them more junk food because with that they will not gain weight. It depends on every kid as well. Every kid has a different body."

Learning about healthy habit and changes in the body while growing can help parents understand how to feed their children in a healthy way. (Table 14)

A parent (Parent 3, Hart) shared,

"….Before my son came here we didn't know what nutrition was what was healthy to give to our children. Being here has given us a lot of benefits, now we know what's good for our children and what they lack. A lot of the times education helps a lot."

Health Education. A need for education regarding additional health education topics (beyond nutrition and physical activity) was discussed in one director and one staff focus group. Examples given by directors and staff included education about chronic disease including diabetes, with specific mention of a need to learn about medication and carbohydrate counting. A need to learn about high blood pressure was mentioned by directors. Educating children about oral health was also discussed by directors. (Table 14)

4.2.2 Cooking and Meal Planning

A desire needing to learn about cooking and meal planning were expressed in staff (four out of five), director (two out of two), and parent (five out of five) focus groups. (Table 14)

Convenient Cooking. A need for cooking convenient foods was mentioned in staff, director, and parent groups. Directors shared additional needs for convenience including cooking and meal planning ahead of time to prevent purchasing fast foods. Directors suggested that cookbooks with five ingredients or less, or cookbooks using slow cookers be promoted to make cooking easier.

Staff shared about the need to manage time while cooking in addition to cooking convenient foods since they are busy with work; this could be a benefit to encourage caregivers to prepare meals since many work long hours. One staff participant was discouraged from trying recipes that have too many steps. Staff also discussed the need to learn about time management while preparing foods, and cooking foods that are convenient (Staff 6, Sodus),

"…and convenient. Sometimes, the time, we work, so we get home, we want to cook something that is easy because we don't have the time. sometimes I'll look up recipes but then I see all those steps and I am like, 'oh no never mind'."

Teaching how to cook easy meals can increase the likelihood meals are prepared since MSFW work long hours. There was a need expressed to prepare foods in a way that is easy for people in a household working opposite schedules.

Parents discussed a need for recipes that are convenient and can be reheated. A parent (Parent 3, Hart) discussed how food choices are determined based on their jobs,

"The thing about field work is that it's a hard job, a lot of the times we say, 'oh, we'll just eat cereal or [a] sandwich.'"

Because MSFW parents work long hours, this can limit their time to prepare meals. (Table 14)

Cooking to Benefit Children and Family. Parents discussed a need to learn about information that benefits their children and their family. A need to learn methods for cooking healthy foods that children will eat was discussed.

"So what I think I need is someone who can teach me to cook healthy to cook delicious for the children." (Parent 6 Conklin)
"And that it's delicious." (Parent 3 Conklin)
"If it doesn't taste delicious they're not going to want to eat it." (Parent 5 Conklin)
"Like if there were a menu or something we'll know how to make it." (Parent 4 Conklin)
"Yes, like you said a menu this is how it's made and that and I would follow it." (Parent 6 Conklin)
"Or also substituting one thing for another and the flavor is similar and good and it's Mexican but a flour tortilla, no." (Parent 7 Conklin)

In this conversation, parents express the need for learning to cook foods that are healthy for children, but are also appealing to children. Menus and recipes to assist with child friendly foods are desired by parents. Parents expressed the need to cook with healthy substitutions while still creating a desirable food. Preparing foods that children can make themselves was mentioned. Learning to prepare fast and easy foods to prevent the need for convenient foods (such as instant Ramen Noodles) was mentioned. (Table 14)

Other Cooking Suggestions. Staff groups discussed the need to learn about cooking foods that are not expensive. Cooking demonstrations during programs was suggested; this could be a hands-on approach to education. Staff (Staff 2, Keeler) offered suggestions for programs including,

> *"…having them participate and create the meal because then they are self-aware as to what they are putting inside their body."*

Another staff member (Staff 3, Sodus) shared about the need to learn to cook foods that are not boring,

> *"I think different ways to cook. because sometimes when you eat healthy, you get bored because you only know how to cook things a certain way. Or a lot of people when they think nutrition, they think like salads, and people get bored eating salads. So I think if there was something that people can learn how to cook healthy meals better and more fulfilling, people would be happy."*

Cooking without animal based foods was mentioned by staff; this could also facilitate more economical cooking since animal based foods are often more expensive than plant based foods.

Director focus groups mentioned a need to learn about healthy cooking; they discussed Mexican cultural norms of cooking with high amounts of lard and oil. The need for culturally appropriate foods was stated.

Parent groups discussed a need to cook healthy foods. Learning to cook foods that appeal to children was stated, including easy meals that children can reheat, and foods that hold the interest of children. The desire for cooking demonstrations and unique recipes were mentioned, specifically cooking vegetables and other foods with less fat. (Table 14)

4.2.3 Physical Activity

Physical activity was a content need expressed in staff (four out of five), director (two out of two), and parent (three out of five) focus groups. (Table 14)

Activity Related to Healthy Weight. A desire to learn about weight loss was discussed by staff. This included healthy ways to lose weight and tips for maintaining a healthy weight without strenuous exercise. This implies that some people may believe that being a healthy weight or losing weight requires a lot of exercise that is not manageable for them. This misconception should be corrected so

they learn how to improve health with simple lifestyle modifications. Making participants aware of healthy weight levels and risks for health is important. (Table 14)

Activity with Children. Staff and directors mentioned the need to learn about physical activities with children. When considering programs for staff or parents, incorporating classes with a family centered approach could encourage participants to engage in activity with children. Staff can also be trained to incorporate activity while children are in the MSHS Centers. (Table 14)

Simple and Easy Physical Activity. Directors and staff also discussed the need to learn about physical activity that is easy to implement. Staff discussed the idea of minimal exercise to support healthy but that is not too strenuous; directors discussed the need for simple exercise that will not be discouraging. This could imply they have the perception that exercise is associated with being difficult, tedious, or negative. The desire to learn ways to exercise without a gym was also mentioned by staff and directors. Directors shared that physical activity, including Zumba classes were popular for at their MSHS Centers in prior years. In regard to staff training about physical activity, a director (Director 5, Group 1) shared,

> *"Maybe just kind of taking it to the education side of it…maybe understand why it's so important to have your large motor activities and be impactful. You're not just putting the same ones on the lesson plan all the time, but realizing this goes on here for a reason and getting more information about what different things you could do to make it more interesting."*

Other Physical Activity. Staff discussed the need to learn about the best exercises for individuals and their personalized health. Learning the appropriate amount of exercise in a day was mentioned; this connects with the need for personalized health as this is dependent on many health factors. The desire to learn yoga was mentioned.

Directors discussed a need to educate about physical activity in a way that benefits the MSFW lifestyle. This included activities that can be conducted in the camps where families work and stretching for work. Health benefits of exercise and the harmful effect of not exercising enough were mentioned as a need.

Parents mentioned the desire to learn about physical activity but did not provide details about this. Since they are expressing the desire to learn about physical activity, this topic should be considered in future programs. (Table 14)

4.2.4 Budgeting/Money

The need to learn about information related to the relationship between a low income and nutrition and physical activity was mentioned in staff groups (three of five). (Table 14)

Healthy Foods with Limited Budget. One participant (Staff 5, Sparta) shared the need to learn about eating healthy foods with a limited budget, saying,

> *"Maybe ways to eat healthy when we have a hard time or hard budget like we have. Or like I live with my fiancé and it's just the two of us and he works 3rd shift and I work 1st so it's hard to do meals because we don't really eat together. So maybe a class that would help how to figure out how to do those kinds of meals so we could eat healthy."*

One participant (Staff 6, Hart) shared,

> *"It'd be kind of nice to almost have like somebody to help you figure out how to budget in those more expensive things too. Knowing your income is so limited, what can we do to help budget that in."*

Having healthy, convenient, budget friendly meals could increase the likelihood participants can adhere to a nutritious diet successfully.

Others discussed the need to learn ways to cook creatively with limited budget. Budgeting in some expensive foods was mentioned as well as learning more about foods that are not expensive. There was a concern that both healthy foods and supplies to cook could be cost prohibitive. (Table 14)

Activity with Limited Budget. Related to physical activity, gym memberships were mentioned as cost prohibitive and a need was expressed to learn ways to exercise without a gym. (Table 14)

4.2.5 Summary of Content Needs

Content needs included basic nutrition knowledge, cooking and meal planning, physical activity, and budgeting/money. These topics can be included in nutrition and physical activity education programs to increase interest for participants and best meet their needs. (Table 14)

4.3 Facilitators to Participation from Focus Groups

Figure 7: Facilitators for Caregiver Education from Focus Groups

Table 15: Facilitators for Nutrition and Physical Activity Program Participation for Staff, Directors, and Parents from Focus Groups

Facilitators to Participation	Parents	Staff	Director
Program Structure			
Convenient Time for Participation	X	X	X
Class Location	X		X
Financial Support			
Program Fees		X	
Incentives	X	X	
Teaching/Learning Format			
Formats for Learning Style		X	
Education Delivery	X		X
Delivery for Specific Health Concerns		X	
Learning with Children and Family		X	

Table 15 (cont'd)

Organizational Support			
Child Care and Children Responsibilities	X	X	
Health Care Referrals			X
Lack of Eligibility or Interest			X
Lack of Knowledge of Programs			X
Transient/Caseworker Issues			X
Marketing Programs to Parents			X
Factors Influencing Motivation			
Benefits to Children and Families	X	X	
Group Support		X	
Work		X	X
Desire to be Healthy		X	

4.3.1 Program Structure

Convenient Time for Participation. Convenient times for participation were mentioned as a facilitator to participation in one staff, one director, and one parent group. For staff, this was mentioned in the context of WIC offering appointments that promote participation and meet the needs of the individual. Directors mentioned including more physical activity in parent meetings and banquets at Telamon to reach parents with additional education at times they may already be present. Staff shared that classes should be offered during the work day. Staff shared if classes occur in the evening, a participant could be too tired from work to participate. One parent shared that meeting in the afternoon would be best for them. (Table 15)

Class Location. Class location was mentioned as a facilitator in one director group. It was suggested to offer programs in the migrant camps to expand reach to parents and reduce the need for travel. One

parent group discussed location of nutrition programs as a barrier, sharing the programs can be far away. (Table 15)

4.3.2 Financial Support

Program Fees. One staff group discussed that free programs can facilitate participation due to eliminating the barrier of paying for this. (Table 15)

Incentives. Incentives were mentioned as a way to facilitate program participation in two staff and two parent groups. Staff recalled benefits from WIC including health care and food vouchers. Parents mentioned the use of food vouchers including WIC and SNAP. Parents also mentioned receiving recipes at nutrition banquets through Telamon. (Table 15)

4.3.3 Teaching/Learning Format

Formats for Learning Style. Appropriate learning styles were discussed as a facilitator in one staff group. Programs should be offered in a way that meets the needs of the audience. One person (Staff 1, Keeler) shared:

> *"With any form of education you really need to make sure it's at that person's education level because you don't want to give too much information and have them not understand it. I think a little bit of information is better for them to retain instead of just overwhelming somebody with too much."*

Including hands-on teaching methods to practice the topics learned was mentioned and preferred to online learning. One person (Staff 2, Keeler) shared,

> *"I think hands on activities. Because if we do exactly what they are telling us, half the time we are not retaining the knowledge from it. Versus actually doing it yourself and you know if you are doing too much or too little."*

Education Delivery. Directors (two of two) and staff (five of five) discussed education delivery methods. Delivery is outlined for both staff and parents.

For staff, Directors suggested offering in person trainings for staff monthly or annually. Additional online trainings would allow staff to participate remotely while working at their MSHS centers to reduce travel. To benefit the staff's personal nutrition and physical activity, methods to track their

own foods and activity, such as a website was suggested. Providing education during teacher meetings and was suggested in addition to education at health fairs. Directors discussed how modeling to children can be important in promoting physical activity and nutrition. One director (Director 3, Group 2) shared,

> *"Well I see a lot stuff going on at the playground you know it's all about the adult interaction, and the level of education that our caregivers have as well. I mean I see a lot of good stuff going on a lot of physical activity, sometimes we just need to get out there and encourage the staff as well to get involved. They see the center director out there, they're going to want to get involved. They will start to move when they see me so I have to lose something as well. And I have to play with the children and model that's what it is about modeling."*

Directors believe that there should be more training for staff at Telamon about nutrition and physical activity. They are under the impression that topics covered in recent years are more minimal, and that monthly wellness emails do go out to staff. Staff are trained on I am Moving I am Learning (IMIL) and they suggested enhancing training with portion sizes for children, since they serve family style at the centers. More general nutrition content was suggested for them.

For parents, delivery methods to facilitate participation were discussed. This included nutrition educators at Telamon through nutrition banquet events for parents. Education at WIC was mentioned. Directors also mentioned that the dedicated parents come to meetings, and many other parents can be difficult to reach.

Times and frequency desired for programs varied. Frequency of education was suggested to be weekly after 5:00 pm, during afternoons, or on weekends. Class length was suggested from one half hour to 2 hours. It was mentioned that many people cannot attend when they are working on farms since this takes so much of the day. Offering classes that involve activities for children were mentioned. Receiving education through videos for those who cannot attend parent meetings was included as one way to reach additional parents. (Table 15)

Delivery for Specific Health Concerns. Health conditions were a barrier to participation in one staff group. Specific conditions mentioned included scoliosis, asthma, and heart conditions. Some believed these may prevent them from participating in physical activity during a program. (Table 15)

Learning with Children and Family. Staff (three of five groups) discussed the need to learn about nutrition and physical activity with children and their families. One staff member (Staff 3, Conklin) shared,

> *"I guess with physical activity. It would be nice to learn more like with children cause it's different. Like I would used to go play soccer. It's different when you have kids because you can't do the same activities you used to do. It would be kind of more based on them than yourself."*

After having children, it may be difficult to continue with the former physical activities adults were used to participating in. Incorporating education with adults and their children may be one way to encourage physical activity program participation to benefit the entire family. Staff expressed interest in programs focused on teaching children to eat healthy foods. Staff suggested educating with children and parents together, including cooking and exercise with children. (Table 15)

4.3.4 Organizational Support

Child Care and Children Responsibilities. Child care was discussed as a facilitator for participation in one parent group. Parents are more likely to participate if they are provided with child care, as this can relieve the logistical and financial burden of needing to find someone to care for their children.

Responsibilities for children were discussed as a barrier in three staff and three parent groups. Parents and staff both expressed a need for child care, with staff mentioning a lack of child care due to both access and the expense associated with child care. Parents and staff mentioned responsibilities of taking care of children; staff discussed needs for children associated with after school activities, transportation for them, and cooking for them. (Table 15)

Health Care Referrals. Health care referrals were with directors (one of two). At Telamon, referral systems are in place to assist children; when children have a high BMI they are referred to a doctor who can provide health education. Parents can receive education about the health of their children with the doctor. A

suggestion was made to add parents to this referral system to enhance health resources for parents; education received here has the potential to benefit the entire family in the future. (Table 15)

Lack of Eligibility or Interest. Lack of eligibility was a barrier in one director group (one of two). Some directors shared that some may not be eligible for federal programs like WIC, SNAP, or EFNEP. One director (Director 5, Group 2) shared:

> *"And some of them choose not to because they have to work and don't want the hassle with going to get the WIC and stuff like that because of the time. So I know they make it a priority because they need the formula but afterwards for the regular milk sometimes they don't go. They don't get them."*

The incentive of providing formula in WIC is enough to encourage some to participate, though they may become less involved once they lose this incentive that is a priority for them. (Table 15)

Lack of Knowledge of Programs. Parents and staff discussed the barrier of not being aware of programs.

Parent groups (three of five) discussed a lack of knowledge of existing nutrition education programs. Some were not aware of free federal nutrition programs like SNAP-ED, EFNEP, or WIC. One parent shared that they did not feel they received a lot of information about nutrition from federal programs. One parent shared they were not aware of programs outside of the school (Telamon).

Lack of knowledge was discussed in staff groups (three of five). One staff was not aware of physical activity programs. Others mentioned not knowing about nutrition programs and that they do not see this advertised. Some believe that programs either have a fee or that it takes great effort to find a free program. (Table 15)

Transient/Caseworker Issues. One director group (one of two) discussed difficulties with MSFW being transient and also with caseworker issues for receiving benefits. Due to the nature of MSFW work being transient, they may not be able to invest in new caseworkers. One director thought that Department of Health and Human Services (DHHS) staff could improve their ability to reach out to parents. One shared (Director 1, Director Group 2),

"But for us they don't really follow through for case workers. Like the DHHS office, they're out but they're not really at the camps. They're not really with the families."

This implies that directors think they are not engaged enough with the community. (Table 15)

Marketing Programs to Parents. Two director groups discussed how to market information to parents to facilitate sharing health related information. This included sharing information through Telamon. Health and nutrition programs and WIC were mentioned as ways to share information. Case workers at DHHS can refer parents to programs, but it was noted that there can be issues with quality service. (Table 15)

4.3.5 Factors Influencing Motivation

Benefits to Children and Families. This was discussed as a facilitator for program participation in two staff and two parent groups. Staff shared how a benefit to children can be a motivator for participating, such as a desire to learn information that supports their children. One shared (Staff 6, Conklin),

"I always wanted to take nutritional classes just so I can teach my kids how to eat."

Information pertaining to children is of higher importance than information about their own health. Related to this, another staff (Staff 1, Keeler) shared,

"With me, I retain the information because I worry about my children's health. So, I would probably pay more attention to something that had to do with my children than I would for myself because I know I'm responsible for making sure that they are healthy."

Parents expressed concern about their children's weight and risk for becoming obese. A need to learn about health care for children and how nutrition impacts health was mentioned. A parent also referenced incentives children received to help them including education materials (including a MyPlate), and Telamon assisting children with outdoor play and eating well. One shared (Parent 3, Hart) about not being aware of nutrition needs for their children until learning more about this from Telamon.

"…before my son came here we didn't know what nutrition was, what was healthy to give to our children. Being here has given us a lot of benefits, now we know what's good for our children and what they lack. A lot of the times education helps a lot."

Group Support. Four staff focus groups discussed group support as a facilitator. One type of support mentioned was group activities through work. Participating in exercise as a group can motivate participation. One participant (Staff 5, Sodus) shared,

> *"Because sometimes it's really boring when I try to do exercises at home. I put the video on and after 10 minutes I am tired. But when I go to the class, I stay one hour because I see old ladies, 'oh my god the old ladies do it good. No! I can do it. I can do it.' Maybe a good group support help."*

Staff also explained how the people surrounding an individual can influence food choices. One participant (Staff 1, Sparta) shared,

> *"My father started having diabetes and he started pushing me all the time to be better. He started having three days for healthy food in the house, for example. Everybody ate the same thing he ate and it was a very good idea to push everybody."*

Work. Work was discussed as both a facilitator and barrier related to program participation in one staff (Staff 4, Hart) and two director groups.

Staff (one of five focus groups) recalled supervisors requiring participation in programs as a way to facilitate participation. Work was mentioned as a barrier in one staff group, this could be related to being tired from work or the time that it takes to commit to work in a day.

Directors in one focus group mentioned staff conducting physical activity related to USDA and CAC guidelines that are in Head Start Centers. Two director groups discussed the difficulties MSFW parents face from their jobs, working very long hours. One shared (Director 4, Director Group 2) about their spouse who works as a MSFW,

> *"I hear this from my husband because he walks a lot during the day. He's like I already walked all day, I already picked all day, and I already squatted all day. They don't want to go home and do that again with the kids."*

Being forced to do things at work for staff at Telamon was also discussed in a director group. I am Moving, I am Learning (IMIL) activities are used to promote physical activity breaks with children at Telamon, and these activities are also conducted with staff at meetings. It was mentioned that some staff do not enjoy being forced to do this activity in meetings. (Table 15)

Desire to be Healthy. Three staff groups discussed a desire to be healthy as a facilitator. This included discussion of health issues staff wanted to learn about which included high blood pressure, high cholesterol, weight, general health, pregnancy, and being motivated by a successful diet from a doctor. (Table 15)

4.3.6 Summary of Facilitators

Facilitators included program structure, financial support, teaching/learning format, organizational support, and factors influencing motivation. Many of these facilitators can be viewed as a barrier if not implemented to promote program participation. This information can inform future program content and structure to increase participation. (Table 15)

4.4 Barriers to Nutrition and Physical Activity Program Participation from Focus Groups

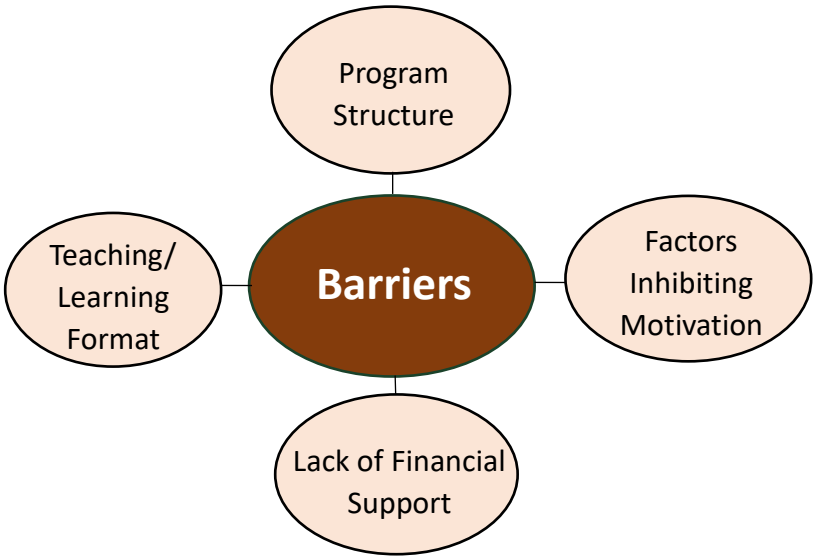

Figure 8: Barriers to Education for Caregivers from Focus Groups

Table 16: Barriers to Nutrition Education Program Participation for Staff, Directors, and Parents from Focus Groups

Barriers to Nutrition and Physical Activity Program Participation	Parents	Staff	Director
Program Structure			
Lack of Time	X	X	X
Transportation	X	X	
Lack of Financial Support			
Lack of Money	X	X	X
Teaching/Learning Format			
More Tangible Materials			X
Language and Culture	X		
Factors Inhibiting Motivation			
Lack of Energy	X	X	
Lack of Self-Motivation		X	
Low Self-Esteem		X	
General Life		X	X

4.4.1 Program Structure

Lack of Time. Time was a barrier to participation discussed in staff, director, and parent groups. Five staff groups mentioned time.

Two director groups discussed time as a barrier including the time parents spend working, which makes it difficult for them to participate in programs. It was suggested to offer physical activity programs at meetings parents may already attend at Telamon. Parents may have a higher priority than being concerned about their own health education.

Three parent groups mentioned time as a barrier. One parent (Parent 4, Keeler) shared,

"Sometimes time. Because when we get off work we are more with our kids."

This could indicate that the necessity or desire to be with children is higher priority than participating in an education program. (Table 16)

Transportation. Transportation was a barrier mentioned in one staff and in three parent groups. It was commented that location for classes can be far away. (Table 16)

4.4.2 Lack of Financial Support

Lack of Money. Lack of finances was a barrier discussed in staff, director, and parent groups. Directors and staff both mentioned the barrier of participating when programs have a fee.

This theme arose in three staff focus groups. Money was discussed as a barrier to pay for classes and other costs associated with promoting nutrition and physical activities, such as cost of child care. Some said they are unwilling to pay for child care to be in a program. Money needed for transportation was also mentioned.

Directors also mentioned Telamon education specialists not being able to pay for some program activities in their budget. Parents mentioned money as a barrier in two groups. (Table 16)

4.4.3 Teaching/Learning Format

More Tangible Materials. One director group discussed the need for using tangible materials for education delivery.

> *"And I know our families like anything like that versus like a pamphlet. And brochures are nice, but they see so many of those everywhere that they go."* (Director 2, Group 2)
> *"They get lost and thrown away."* (Director 5, Group 2)

It was suggested instead of items like pamphlets, to use educational materials like a plate with serving sizes for different foods. These materials could be given to participants to reinforce messages at home, and may be more successful than printed materials. (Table 16)

Language and Culture. Two parent groups discussed language as a barrier. A lack of offering nutrition education programs in Spanish was mentioned. One also shared about difficulty enrolling for SNAP food

assistance benefits without speaking English. They said they were connected with translators by phone, however, they were required to wait for translation services.

Both director groups mentioned cultural barriers. One director (Director 3, Director Group 1) shared,

> *"Their life is based on surviving. They don't have the luxury of, 'I think I'll go to the gym tonight'…it's not like that and I don't know that we could ever change the migrant lifestyle."*

Directors share about the challenges faced by MSFW lifestyles which in some regard, are not possible to overcome. Some commented that they thought staff lifestyles could be changed.

Directors discussed cultural norms related to food choices MSFW make. A director (Director Group 1, Participant 3) shared,

> *"I think they cook the way their parents or grandmothers taught them how to cook. So when I make rice, I'm going to pour more oil in the pan than I need to, or when I fry meat. you know, there's a lot of oil-based things and fattening stuff and that is just because that is the way that they were taught. Again, we go back to education and lack of resources. And they are not people that are going to sit and …they are going to worry about feeding their family…"*

Many people learn to cook from their families, so if the "healthy" method taught goes against their cultural norm, this may not be acceptable to them. Also shared was,

> *"Beans are great until you put half a cup of lard in them"* (Director Group 1, Participant 3)
> *"That is a cultural thing also."* (Director Group 1, Participant 7)

It is common to cook with a lot of fat in Hispanic culture, so teaching about low-fat cooking may not be accepted well among participants. Also shared (Director Group 1, Participant 8) was the view that men have influence on foods served,

> *"Going back to cultural, I think that the men have a lot to say about what gets put on the table to eat."*

Family dynamics of how foods are served should be included in education materials for instructors. Directors also mentioned that parents give children candies. (Table 16)

4.4.4 Factors Inhibiting Motivation

Lack of Energy. Having a lack of energy was described in (two of five) staff and (two of five) parent groups. Staff and parents shared about experience feeling tired from work. Staff indicated that other things in life would take priority over participating in a program. Staff expressed they did not have energy for "extra things". This indicates that focusing on self-health may not be a priority in their life. Parents also shared about generally having a lack of energy. (Table 16)

Lack of Self-Motivation. All five staff groups discussed self-motivation as a barrier to program participation. Some mentioned laziness or motivation as a barrier. Staff shared that it is important to find something that is not boring and is enjoyable for them to participate in nutrition and physical activity. Some shared that physical activity at home on their own is boring; group support may help make this more exciting. One shared that since children are grown and not living with them, they do not need a program like this anymore. This indicates that the individual is more interested in learning for their children than for themselves. (Table 16)

Low Self-Esteem. One staff group discussed low self-esteem as a barrier to participation. Personal shame regarding weight or other health barriers may prevent participants from being motivated. If participants do not feel empowered from programs, they may want to avoid them. (Table 16)

General Life Other life priorities were mentioned as a barrier in staff (one of five) group and director (one of five) group. This implies that being busy with other things can make it difficult to have the energy for self-care or to make self-health a priority by participating in programs. (Table 16)

4.4.5 Summary of Barriers

Barriers included program structure, lack of financial support, teaching/learning format, and factors inhibiting motivation. All of these barriers can influence the content and ways to deliver programs to best meet the needs of the audience. This information can influence program design by making programs as easy as possible for participation. (Table 16)

4.5 Survey Results

Content discussed in focus groups demonstrates a need and desire to participate in nutrition and physical activity education programs in this population. Supplemental survey questions related to this also demonstrate this need (Appendix C). Based on the survey results, the majority of parents (91.1%) and staff (68.9%) are interested in nutrition or physical activity education. The most popular ways for staff to receive education were on a weekly (33.2%) or monthly (33.2%) basis, with parents desiring weekly (54.5%) and monthly (38.2%) as well. This further justifies the desire for a longer-term education series. The content discussed in focus groups also included similar content desired in the survey. Staff were interested in foods on a budget (53.9%), meal preparation (48.2%), physical activity (60%), and breastfeeding/infant health (13.9%). Parents were interested in foods on a budget (37.4%), meal preparation (72.4%), physical activity (56.1%), and breastfeeding/infant health (30.9%). Parents were most interested in receiving education in person with a class or cooking demonstration (52%). Staff were more interested in receiving information with newsletters (58.6%) or online (39.6%), which may be conducive to staff training at remote locations.

CHAPTER 5: DISCUSSION

5.1 Content Needs

Basic Nutrition Knowledge. Needs regarding basic nutrition knowledge should be incorporated into programs. Food composition including calories, macronutrients, vitamins and minerals could be beneficial, with special focus on why these nutrients are needed for the body, and how to eat healthy foods to not feel hungry. All these topics can be packaged in a lesson on food label reading and serving sizes, tying in how healthy eating can prevent disease and impact quality of life. Future programs can include topics about incorporating activities into daily life to make education more relevant for participants.

Future programs should include information about including healthy foods that participants enjoy. The theme of discussing healthy alternatives with recipes can encourage participants to cook healthy foods they will want to eat. Nutrition education programs should incorporate ways to eat foods people enjoy in moderation without eliminating them. Healthy meals geared toward children should also be included. Teaching children that food is needed to fuel the body for health should be included. Policy, systems, and environmental interventions can promote healthy choices when serving foods to children at Telamon.

Future programs should include methods to grow and preserve food is one way to promote cost savings. Simple food preservation ideas such as freezing portions of prepared or fresh foods should be incorporated into food resource management education. Methods for storing foods for maximum shelf life should also be included.

Cooking and Meal Planning. Future nutrition programs should encompass cooking and meal planning. Since the target population is low income, a focus should be included for nutritious inexpensive foods. Cooking demonstrations should be integrated in programs, with a focus on cooking

convenient foods that are fast and easy. Consideration of culturally appropriate foods is essential to create a meaningful program. Special consideration to the MSFW lifestyle should be considered for program development related to cooking since this lifestyle makes it difficult to have time to eat and cook.

Future programs should include recipes that appeal to children, and recipes that are convenient. Presenting information in the context of benefits to children and families may motivate parents to create change more so than focusing on health for themselves.

Physical Activity. Future programs should include physical activity. Including education as a family centered approach can reinforce a familial culture for promoting activity in daily life. A family approach to teaching lessons can also encourage program participation and potentially eliminate the need for child care. Education about exercise that can be conducted at home rather than a gym could prevent exercise from being cost prohibitive. For parents, including activities and education that could benefit a lifestyle with physical labor could be beneficial; this could include activities to be done at work. The presentation of physical activity should include ways to be active that are manageable for participants with a busy lifestyle. An emphasis on ways exercise benefits health and tips for individualized exercise should be included.

Future programs should include weight management including maintaining a healthy weight long term, with a focus on exercise that is manageable for participants. Limitations of weight as a measure for overall health should be included.

Budgeting/Money. Future programs should be low cost or cost free when possible, and financial incentives may increase participation. Low cost solutions should be included whenever possible. Education on healthy, nutritious, and creative meals should be included to increase understanding that healthy eating does not have to be expensive. Content about physical activity that can be conducted in the home or other low-cost methods should be incorporated.

5.2 Facilitators to Participation

Convenient Time for Participation. Future programs should survey participants to see what program times work best for them to ensure they can participate. Incorporating additional education programs into existing events at Telamon may be successful to reach parents in additional ways.

Free Programs. Future programs should be free for participants or low cost whenever possible. Providing financial incentives to participants, or other incentives may help increase participation as well.

Child Care and Children Responsibilities. Future programs can offer child care to increase participation, or educate parents and families simultaneously. Providing child care can help increase program participation for parents, as parents are low income and may have difficulty paying for this. Some Telamon activities provide child care.

Incentives. Individuals developing future programs should consider how incentives can encourage participation. Additional information related to cooking and items to help with nutrition reinforcement with cooking may help parents use these food resources effectively. Referrals should be in place to help those participating in education programs connect with food resources such as SNAP and WIC.

Group Support. Future programs and efforts to support health should include group support to enhance programming. Telamon can include group support efforts for their own staff during work and outside of work. Group support components could be included for parents as well.

Appropriate Learning Style. Future programs should be designed to include interactive ways to practice the material in class. Information should be presented in a way that is appropriate for the learner to retain.

Education Delivery Methods. Future training for staff can include education that is remote and in person to reach staff throughout the MSHS season. Telamon can change at the policy level to incorporate these suggestions into staff training. For staff, continuing additional trainings more

frequently, including more basic nutrition content could improve their knowledge base. Policies can be implemented to create a healthier environment for staff. Identifying ways to reach parents that are not as involved with additional education should be explored.

Times programs are offered should be individualized to the group of parents as this can change with the growing season. Parents should be surveyed to find the best way maximize participation. Education methods to reach those who cannot come to a program should be considered. Topics focused on cooking healthy foods with demonstrations should be included. Referrals should continue to external agencies that can offer additional support. Providing education in other formats including in person and also in other means such as by video could reach additional parents. Including activity modifications for people with certain health conditions may increase likelihood that others can be involved with activities in a class.

Class Location. Future programs can investigate if education at camps is feasible, or other ways to reach parents conveniently to increase parent participation. Surveying parents before a program to determine a suitable location could increase participation. Investigating locations which are more convenient to parents, such as closer to home or work may help them join a program. Providing transportation may also increase attendance.

Learning with Children and Family. Future programs can offer physical activities or nutrition education that can be conducted with children and families as one method to overcome some barriers to education. Classes could be structured to educate parents and children together, and ideas for integrating this content into promoting a healthier lifestyle for families overall can be included.

Future programs should structure should consider including education for the entire family. This can increase family support systems surrounding nutrition and physical activity and can also prevent the need for child care which can facilitate participation.

Referrals and Resources for Parents and Families. Creating a referral system for parents can help provide additional health education to benefit families, and potentially help reduce rates of overweight and obesity among MSFW families. Creating materials for doctor's offices to provide additional nutrition and physical activity education efforts may also aid these efforts.

Promoting the awareness of federal nutrition programs for parents and staff, through Telamon especially, could benefit parents. Offering additional programs and resources at Telamon could provide supplemental education. If funding is available, quality incentives may make it more likely that parents participate. Helping to refer parents to programs they are eligible for is important and making them aware of what benefits they can receive if desired. Telamon may be able to help fill a gap and help families with referrals for federal nutrition programs or encourage them to apply for new cases.

Marketing Programs to Parents. Including referrals as part of a program can help share information to parents. Marketing at Telamon can also share information about additional programs and resources as well as general nutrition and physical activity information for parents.

Benefit to Family or Child. Future programs should include education through the lens of how this benefits the child since this is important to parents and staff. Education centered around the health of the family may increase participation and their interest in learning the material. Providing incentives that benefit the child or family can help motivate them.

Work. Future programs should note that the workplace can be encouraging for nutrition and physical activity promotion, although forcing participation may not be the best way to promote health among staff. If policies exist at Telamon to promote activities with staff, surveying staff about what kinds of activities that interest them may make them feel more desire to participate. Education delivery style and times offered should make programs appealing for those working long hours. Including training and programs as part of the work day, or policies to promote a healthier environment may make this easier for staff to live a healthy lifestyle.

Desire to be Healthy. Focusing future education initiatives on ways that connect health issues with staff can increase interest, make this more relevant to their needs, and increase participation.

5.3 Barriers to Participation

Lack of Money. Being able to offer free programs, such as SNAP-ED, and promoting these so people know they are available can help increase participation since it seems some are unaware free programs exist. Providing free child care or transportation or additional financial incentives during programs may increase participation. Providing training opportunities to staff at work may help increase participation by reducing barriers like childcare and transit. Policies to promote designated funds for programs at Telamon centers would be beneficial so education specialists can promote these programs.

Lack of Time. For staff, incorporating activities in the workplace for nutrition and physical activity promotion may help them practice a healthier lifestyle despite the barrier of time. Considering policy, systems, and environmental changes to help with staff health promotion should be explored. For parents, innovative ways to offer programs to save time may increase participation, including during existing meetings they attend with Telamon. Since time is a barrier, it may help to think of ways to reach them remotely with additional education materials. For parents, it is essential to understand barriers related to time with work, and that the priority may be to spend time with family instead of taking care of themselves. Blending classes to support the whole family in education or providing child care may help increase participation.

More Tangible Materials. Including incentives to use for education could help with reinforcing messages at home with participants as funding allows.

Language and Culture. Future programs for this population should offer programs and materials in Spanish to make this more welcoming. When delivering and designing a program, one must keep in mind how difficult it is for MSFW to include personal health as a priority when they life a busy and difficult lifestyle. Every effort should be made to make programs easy for them to access. It is important

to be sensitive to the cultural norms surrounding food in this population. Educators should understand that many barriers may make it difficult to make health a priority, and instructors should receive training in this topic.

Lack of Energy. It is important to understand how tired parents and staff can be after working and try to make programs that are easy to complete around their schedule. Policies at Telamon can encourage a healthy atmosphere at work to promote healthy activities for staff. Educating about the benefits for good health may help them see the need to prioritize this in their life.

Lack of Self-Motivation. Group support, including wellness groups through Telamon may help promote a positive environment for staff. Promoting the need for health for children, as well as personal benefit, should be encouraged since some participants expressed concern for learning about ways to promote health in their children.

Low Self-Esteem. Low self-esteem, including health barriers can become a barrier to participating in nutrition education programs. Future programs should note positive ways to encourage behavior change in training those conducting these programs.

T**ransportation.** Offering free transportation or vouchers for transit or holding classes in locations that reduce the need for transportation may increase participation.

General Life. When establishing a program, one should realize that this population has restricted time interest in a health program may not be their top priority. Making a program that is easy for them to access and requires minimal effort may increase participation.

5.4 Overall Discussion

To date, we are not aware of nutrition and physical activity educational programs exclusively catering to MSHS caregivers and children that provide in-house training and operate long term. This study identified needs for a sustainable in-house program to meet the needs of MSHS caregivers and children to promote healthy lifestyles. In this focus group study, the program content needs, barriers,

and facilitators to participation in nutrition and physical activity education programs by MSHS caregivers were identified. Overall, major themes related to content needs (n=4), barriers (n=4), and facilitators (n=5) were identified. Content needs identified included nutrition knowledge, cooking and meal planning, and physical activity. Nutrition knowledge included desire to learn about components of food, food labels, food preservation, learning how to eat healthy foods that are enjoyable, and benefits for children and families to eat healthy. Cooking and meal planning included convenient cooking and cooking in ways to benefit children and their families. Physical activity included approaches that are simple and activity involving children. The need for budget friendly nutrition and activity practices were identified. Notably, all these topics align with content of federal nutrition education programs such as SNAP-ED or EFNEP.

Therefore, future education interventions for this population can be best achieved by aligning with existing federal nutrition program resources as well as creating referrals for these programs through MSHS. Given MSFW caregivers are likely to qualify for federal assistance programs, an opportunity exists for coordination at the national level by tailoring existing federal nutrition program resources to meet the needs of this audience around the country. This can be a significant way to reach MSFW and MSHS populations with existing funding sources and network systems while increasing outreach of federal nutrition programs. However, one important caveat is to involve bilingual and culturally competent staff members for the target population, and those who are willing to work around the transient MSFW's lifestyles and in remote locations where MSFW and MSHS programs are clustered.

Other themes emerged regarding clinical health education including diabetes, high blood pressure, and oral health. Since these clinical topics are not covered by federal nutrition education programs such as SNAP-Ed and EFNEP, opportunity emerges to enhance community health education efforts for the target population. In the meantime, healthcare referrals should continue for children and expand to parents to meet their medical needs to address these topics of interest.

CHAPTER 6: CONCLUSION AND IMPLICATIONS

6.1 Overview

Whether education efforts are aligned with existing federal nutrition programs or are developed through other funding sources, programmatic implications should be considered before launching an intervention in community-based education for this unique high-risk population. Several opportunities and barriers related to program delivery aimed at the specific needs of MSFW caregivers, including parents and MSHS staff, were identified in focus groups. One major barrier to program participation was cost, suggesting the need to offer program at no cost. Offering desirable incentives that offset financial struggles in this population may encourage participation. For example, offering free child care for participants an alleviate this additional cost and increase program accessibility. This may also offer an opportunity to provide children with similar programmatic lessons simultaneously. Classes should also be in a convenient location to avoid additional transportation costs for parents. Parents input should be considered given that their availability may constantly change due to the nature of their work. Additional ways to increase program accessibility to caregivers, such as reaching out to key community sites, should be explored for education delivery. Other learning approaches beyond direct education should be explored, such as use of videos, online content, or other learning approaches. For instance, online education for MSHS staff may reduce travel time and increase education opportunities. An approach based in social cognitive theory can address the multitude of factors that can prevent MSFW caregivers from making healthy choices.

Another important theme identified by this study was the importance of interpersonal components such as esteem, group support, and instructional delivery. When training instructors to deliver these programs, the results of these focus groups suggest that a community peer model would be beneficial since the MSFW lifestyle faces so many health-related barriers. If this is not feasible,

training instructors to be aware of cultural barriers unique to this population is crucial. Low self-esteem was a barrier identified in focus groups. Training should emphasize strategies to help participants feel good about attending to encourage rather than discourage participation. Group support can be offered to help motivate individuals. Another consideration for program content in this population is addressing the participants' desire to learn how nutrition can benefit children. Focusing education material around ways nutrition and activity helps the child and family can make this more relevant for participants and increase their interest. Additionally, physical activity content should include activities conducted with children; this can be offered to staff in MSHS to incorporate throughout the school day in addition to ideas for parents to participate in physical activity with their children at home.

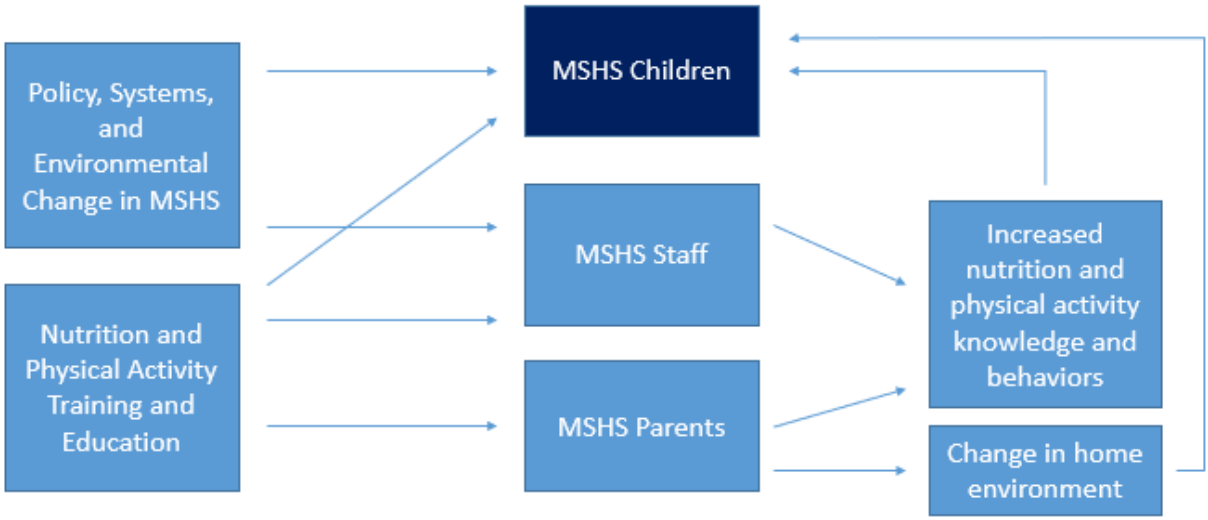

Figure 9: Model for Intervention in MSHS

Policy, systems, and environmental approaches can benefit staff and children at MSHS. Some examples of PSE applications could include healthy snack and meal policies for events, additional toys to encourage activity or playground equipment for children, or fruit and vegetable posters in staff breakrooms and in classrooms. Fostering support groups for staff, and possibly parents can encourage a supportive environment to motivate change. Physical activity with staff can include PSE approaches by involving both children and staff at centers to motivate all to be healthy, such as scheduled physical

activity breaks for children and staff. PSE can also help staff improve their own health and the atmosphere for child health at centers, if this is done in a positive way, such as an incentive program rewarding positive behaviors such as physical activity or consumption of fruits and vegetables by staff. The MSHS environment can be enhanced to provide an environment promoting health for children and caregivers with emphasis on nutrition and activity.

Related to PSE efforts, policy at MSHS can improve the health environment for children and caregivers. Establishing policy recommendations and resources to support parent healthcare referrals, similar to those referrals in place for children, can benefit the health of the entire family. Creating MSHS policy to promote resources for and marketing of existing local and federal programs for families can benefit them. Examples could include existing nutrition and physical activity programs among other community resources.

In conclusion, we identified content and delivery needs for nutrition education programs for MSFW caregivers. Aligning nutrition education for this population with existing federal nutrition education programs can benefit the MSFW population nationwide. PSE initiatives in MSHS across the country can encourage the health of MSHS staff and MSFW families. Future research should focus on program interventions and their effectiveness in this unique and vulnerable population.

6.2 Strengths and Limitations

A unique and significant strength of this study is the partnership with key organizations and programs that work with MSFW: Telamon Corporation and MSU College Assistant Migrant Program (CAMP). Telamon Corporation, an agency with strong rapport and services in place to serve the MSFW population, made it logically possible to reach participants. MSU CAMP provided community peers from an MSFW background to facilitate focus groups and collect surveys with parents in Spanish directly, without need for a translator, likely increasing accuracy and depth of information collected. Data

collection at MSHS centers and with CAMP students made it possible to reach parents in a culturally appropriate way and in a familiar environment to encourage participation. A multitude of perspectives were provided by parents, MSHS staff, and MSHS center directors. A qualitative approach provided rich data from MSFW child caregivers who are challenging to reach.

Limitations include focus groups primarily addressing education delivery and content for this population, not providing extensive opportunity to explore values and beliefs regarding nutrition and physical activity among MSFW caregivers. Additional information regarding these beliefs could inform successful interventions in this population. In this study, all MSFW parent participants have children enrolled in MSHS. Because they receive services from Telamon, their perspectives may be different than MSFW lacking access to community resources. By nature of qualitative studies, the qualitative data collected is not generalizable to the entire population of MSHS parents or staff participants. This sample only included MSHS staff and parents in Michigan, and needs may differ geographically. While Spanish focus groups were translated and verified by bilingual student researchers, it is possible some details in focus groups were lost in translation. Self-selection bias may have impacted MSFW parent participants.

6.3 Recommendations for Future Research

Future research should develop and implement nutrition education programs to meet the needs of MSFW caregivers and explore the efficacy of these programs through monitoring and evaluation. Innovative ways to reach the MSFW population with education delivery should be explored. Programs can align with existing federal nutrition efforts when feasible to coordinate resources and save costs. Intervention studies should investigate the impact these education programs have on nutrition and physical activity knowledge, attitudes, and behaviors of staff and parents. Studies should also identify the impact of program attendance on feeding practices and OW/OB status of parents, staff, and children over time.

APPENDICES

Appendix A: IRB Application

APPLICATION FOR INITIAL REVIEW

APPROVAL OF A PROJECT INVOLVING HUMAN SUBJECTS

Biomedical, Health Sciences Institutional Review Board (BIRB)
Social Science, Behavioral, Education Institutional Review Board (SIRB)
207 Olds Hall, Michigan State University
East Lansing, MI 48824-1047
Phone: (517) 355-2180
Fax: (517) 432-4503
E-mail: irb@msu.edu

Office Hours: M-F (8:00 A.M.-5:00 P.M.)

IRB#: x16-799e
ID# i051651

1a.	**Responsible Project Investigator:** Name: **Won Song** ID#: **XXX-XX-6358** Department: **FOOD SCIENCE & HUMAN NUTRITION** College: **AGRICULTURE & NATURAL RESOURCES** Academic Rank: **Professor** Mailing Address: **139 GM Trout Building** Phone: **5-8474 x 109** Fax: **2-7753** Email: **song@msu.edu**
1b.	**Secondary Investigator:** Name: **SuJin Song** ID#: **XXX-XX-0138** Department: **FOOD SCIENCE & HUMAN NUTRITION** College: **AGRICULTURE & NATURAL RESOURCES** Academic Rank: **Research Assistant** Mailing Address: **3131 Trappers Cove Trail APT 2A** **48910** Phone: **5179748907** Fax: Email: **sjsong9635@gmail.com**
1c.	**Additional Investigators and Key Personnel:** Amanda Knox Kaitlyn Moorhead-Hill Yuen Mei Lim Nabila Farabi

Appendix A: (cont'd)

	Other Personnel:
1d.	**Study Coordinator:** Name: **SuJin Song** ID#: **XXX-XX-0138** Department: **FOOD SCIENCE & HUMAN NUTRITION** College: **AGRICULTURE & NATURAL RESOURCES** Academic Rank: **Research Assistant** Mailing Address: **3131 Trappers Cove Trail APT 2A** **48910** Phone: **5179748907** Fax: Email: **sjsong9635@gmail.com**
2.	**Title of Project:** Nutrition and Physical Activity Education Needs Assessment among Caregivers of Michigan Migrant Head Start (MHS) Children
3.	**Have you ever received a 45 CFR 46.118 designation for this project?** — NO
4a.	**Please describe why your project is minimal risk. For example, "My research includes an anonymous survey about...explain what your survey is about" or "my subjects are identifiable, but the questions are not in any way harmful."** This project is eligible for the exemption category 45 CFR 46.101(b)(2). Our research includes an anonymous survey about subjects' nutrition knowledge, attitudes, and behaviors as well as barriers and facilitators to nutrition and physical activity education. In addition, we will not collect names for our subjects for focus group interviews. The questions in focus group interviews includes subjects' barriers and facilitators to nutrition and physical activity education.
4b.	**Indicate Exempt sub-category(ies). NOTE: Appendix 1 (exempt categories) must be submitted with the Exempt Application. An application cannot be reviewed without Appendix 1.** ☐ 45 CFR 46.101(b)(1) ☑ 45 CFR 46.101(b)(2) ☐ 45 CFR 46.101(b)(3) ☐ 45 CFR 46.101(b)(4) ☐ 45 CFR 46.101(b)(5) ☐ 45 CFR 46.101(b)(6) ☐ Demonstration Project Category 7
5.	**Is this project being conducted to fulfill the requirements of an education/training program?** — Master's Thesis

Appendix A: (cont'd)

6a.	**Funding:**	NO
6b.	**The protection of human subjects often requires resources be dedicated for things such as the consent process (space, personnel), the performance of the research (trained personnel interacting with subjects, time, access to subjects, access to facilities) care of subject issues or injuries (counseling, medical care), confidentiality of data (space, equipment) and other monetary and non-monetary resources. Describe the resources that are available for this project for the protection of human subjects.** The resources available to protect human subjects involved in this study are as follows: 1) Informed written consent will be obtained from each subject at the study site, 2) Paraprofessionals will be trained to collect data from subjects by our research team, 3) Focus groups and surveys will be carried out in private rooms at each site, 4) Any data collected will be made anonymous, and 5) our research team is going to provide incentives to subjects for their participation in this study.	
7a.	**List all sites where this research will be conducted.** This research will be conducted at 18 Michigan Migrant Head Start centers operated by Telamon Corporation. The location and contact number of each site can be founded at this link (http://www.telamon.org/michigan-migrant-head-start.aspx).	
7b.	**Do any of these sites have their own IRB?**	NO
7c.	**Have you or will you submit this to any non-MSU IRBs?**	NO
8a.	**Describe the purpose, hypotheses and objectives of the research project.** The purpose of our research project is to understand and evaluate barriers and facilitators to participation in nutrition and physical activity education among caregivers of Michigan Migrant Head Start (MHS) children, including parents and staff working in MHS centers. We hypothesize that identifying barriers and facilitators will increase participation in these programs. Our research project will collect both qualitative and quantitative information on caregivers' nutrition knowledge, attitudes, and behaviors as well as their barriers and facilitators to federal nutrition and physical activity education programs through conducting focus groups and surveys. All research activities of this project will be conducted at 18 Michigan MHS centers: 1) focus groups with parents at up to 5 centers, 2) interviewer-administered surveys with parents at up to 13 centers, 3) focus groups with MHS staff at up to 5 centers, and 4) surveys for MHS staff will be conducted using an online survey tool. Each focus group will take about 1-1.5 hours and each survey will take about 30-40 minutes. Our plan is to work closely with all the 18 MHS centers in collaboration with MSU College Assistance Migrant Program (CAMP) Students, MSU-Extension, Telamon Corporation, Inc., and Dr. Jackie Hawkins (MSU Social Work).	
8b.	**Describe all procedures, measures and analyses you will use in collecting data from human subjects. This pertains to both prospective and retrospective (i.e. pre-existing) research procedures.** Our needs assessment will collect both quantitative and qualitative data through carrying out focus groups and surveys. All research activities will be carried out at 18 MHS centers. Questionnaires for the focus group and survey are developed by our research team. The focus groups targeting parents of MHS children will consist of approximately 5 to 6 parents per group with up to a total of about 30 parents at 5 MHS centers. It will be conducted during parent meetings or nutrition banquets and will last for approximately 1 to 1.5 hours. The focus groups with staff will consist of approximately 5 to 6 staff per group for a total of 30 staff at 5 MHS sites and will last for approximately 1 to 1.5 hours. In the focus group, subjects will be asked about their barriers and facilitators to participation in nutrition and physical activity federal programs. The survey questionnaire includes information on sociodemographic characteristics, lifestyle, nutrition knowledge, attitudes, and behaviors, and participation in federal programs as well as their needs on nutrition education and physical activity programs. The survey will be administered to approximately 150 parents with the assistance of an interviewer at up to 13 MHS centers and will take about 30 to 40 minutes. The survey will be distributed online to approximately 400 staff at MHS centers and Telamon Corporation, Inc with an online questionnaire format and each will take about 30 to 40 minutes to complete. Through qualitative and quantitative analysis, we will assess the needs, barriers, prior knowledge, behaviors and attitudes of the caregivers (parents and staff) of MHS children.	
8c.	**Are any procedures done for non-research purposes?**	NO
8d.	**Summarize the project in one paragraph in completely lay terms.** In our proposed project, we plan to understand and determine barriers and facilitators to participate in nutrition and	

Appendix A: (cont'd)

	physical activity federal programs among caregivers of MHS children with the collaboration of MSU CAMP, MSUE, Telamon, and social workers. Our target subjects are caregivers of MHS children, ages 18-80 including parents of MHS children and staff working at Telamon. Total expected number of subjects is 610: 150 parents and 400 staff will be recruited for the surveys and 30 parents and 30 staff will be recruited for the focus groups. Our research team will collect both qualitative and quantitative information on caregivers' nutrition knowledge, attitudes, and behaviors as well as their barriers and facilitators to federal nutrition and physical activity education programs through conducting focus groups and surveys. All research activities of this project will be conducted at 18 Michigan MHS centers: 1) focus groups with parents at up to 5 centers, 2) interviewer-administered surveys with parents at up to 13 centers, 3) focus groups with MHS staff at up to 5 centers, and 4) surveys for MHS staff will be conducted using an online survey tool. Findings of this project will help identify caregivers' needs on nutrition education contents and delivery methods based on specific nutrition education theory and increase caregivers participation nutrition and physical activity programs.	
8e.	~~**Are you obtaining consent (telling subjects ahead of time that they are in a research study)?**~~	~~YES~~
8f.	**Please indicate if you or your research team will be collaborating with any of the following organizations for this research project.** ☐ Allegiance Health ☐ Borgess ☐ Bronson ☐ Covenant HealthCare System ☐ Genesys Health System ☐ Hurley Medical Center ☐ Marquette General Health System ☐ McLaren Health Care ☐ Memorial Healthcare ☐ Mercy Health Saint Mary's ☐ Michigan Department of Health and Human Services ☐ Michigan Public Health Institute ☐ Munson Medical Center ☐ Pine Rest Christian Mental Health Services ☐ Sparrow Health Systems ☐ Spectrum Health System ☐ Van Andel Research Institute ☑ None	
9a.	**Describe your subject population (e.g., high school athletes, small business owners, children with ADHD).** Our study population will include the parents of the children enrolled in the MHS centers and the staff working at Telamon and the MHS centers. MHS centers provide comprehensive early childhood education services for children of 0 to 5 years of age from MSFW families. The age range of subjects is between 18-80 years. Staff at MHS centers provide early childhood comprehensive services. Parents are Migrant and Seasonal Farmworkers.	
9b.	**Age range of subjects**	18 to 80
9c.	**The study populations includes:** **Purposeful Inclusion** ☐ Children ☑ Women of Childbearing Age ☐ College Students ☑ Minorities ☐ Psychiatric patients ☐ Wards of State ☑ Pregnant Women ☐ Institutionalized Persons ☑ Low Income Persons	

Appendix A: (cont'd)

	☐ Prisoners ☐ Persons with diminished capacity ☐ None of These	
9d.	**Total expected number of subjects (including controls) for the entire project period**	610
9e(1).	**will the subjects be identified and recruited? Include who will make initial contact with the subjects.** Project flyers targeted to parents will be handed out to center directors of all 18 MHS centers. The flyers will be distributed with the help of staff working at MHS centers as an advertisement in order to promote recruitment of study participants. The flyers will be prepared in both English and Spanish and will detail the goal, purpose, activities, and incentives of our study. During parents meeting and nutritional banquets, interested parents will have the opportunity to participate in the survey and focus groups. In order to recruit staff for the study, meetings will be conducted with the center directors of MHS sites; they will then encourage staff to participate in the study. Project flyers targeted to staff will be handed out to center directors. The surveys will be emailed out to all the staff. Staff members, who are interested, will have the opportunity to participate in the focus groups as they are scheduled.	
9e(2).	**Will subjects be recruited using a student research pool?**	NO
9f.	**Will subjects be compensated?** **(1) Provide details concerning the payment, including the amount and schedule of payments including any conditions. In addition, this information must also be explained in the consent form.** Parents, who participate and complete the surveys, will be compensated with $10 gift certificate from Walmart or Meijer. Parents, who participate in the focus groups, will be compensated with $15 gift certificate from Walmart or Meijer and snacks will be provided during the focus group meeting. No compensation will be provided to each staff for participating and completing the surveys. However, the MHS center with the highest completion of surveys by staff will be compensated with lunch (Subway, Fresh Fit platters and water) for all the staff working at that site. Staff members, who participate in the focus groups, will be compensated with $15 gift certificate from Walmart or Meijer and snacks will be provided during the focus group meeting. This information on compensations is explained in the consent form.	YES
9g.	**Will the subjects incur additional financial costs as a result of their participation in this study?**	NO
9h.	**Are you associated with the subjects (e.g., your students, employees, colleagues, patients)?**	NO
9i.	**Will this research be conducted with subjects in another country?**	NO
9j.	**Will this research be conducted with subjects in the U.S. from an ethnic group of sub-group or other non-mainstream minorities (including non-English speakers)?** **(1) What country/sub-group are they from?** The majority of migrant and seasonal farmworkers are Mexican American or Hispanic/Latino who speak Spanish as a primary languge. **(2) Does the different cultural context present any problems or risks that need to be addressed? If so, describe the issues and how you will address them.** To address the language barrier of migrant and seasonal farmworker parents to participate in this study, our research team will recruit bilingual MSU CAMP students who have migrant farmworker backgrounds and are proficient in English and Spanish. These students will conduct surveys and focus groups in Spanish within migrant and seasonal farmworker parents. In addition, the investigators and CAMP students will be trained by Michigan Telamon Corporation Inc. program coordinators on cognitive interview protocols to ensure safety and protection of participating migrant and seasonal farmworker parents. The survey questionnaires of this study will be back-translated between English and Spanish by native speakers (CAMP students) to ensure an accurate translation.	YES

Appendix A: (cont'd)

	(3) Will the research materials (e.g, survey, interview questions, consent) be translated into another language (non-English)? YES **(i) List the languages that materials will be translated into. Attach copies of translated materials.** Spanish	
10a.	**Describe and assess any potential risks (physical, psychological, social, legal, economic) and assess the likelihood and seriousness of such risks.** The potential risks involved in this study is minimal because the contents of survey and focus group interview are subjects' nutrition knowledge, attitudes, and behaviors as well as their barriers and facilitators to nutrition education programs. However, some participating parents and staff might feel uncomfortable with sharing about their nutrition knowledge level and dietary behavior.	
10b.	**Describe the procedures for protecting against or minimizing potential risks and an assessment of their likely effectiveness.** To protect or minimize the potential risk, we will make sure to keep all data confidential and private. In addition, our research team includes bilingual and trained paraprofessionals (MSU CAMP Students) to conduct surveys and focus groups within this sub-population while ensuring safety and privacy of the sub population. Surveys and focus groups will be conducted in private space and survey questions will be asked on one to one interview basis for parents and using a online survey tool for staff. If there is some potential concern, the families will be referred to Telamon family specialists for additional resources and to help meet their personal needs. If they do not feel comfortable in answering questions, they may choose not to answer.	
11a.	**How will subjects' privacy be protected?** Only the MSU Research Team and trained CAMP students will conduct all the one-on-one survey interviews and focus groups assuring that all participant information is protected and confidential. These surveys and focus groups will be conducted in private space at each MHS centers. In the audio recording for focus groups for parents and staff, the research team will not collect names. Audio recordings for focus groups will be deleted after they are transcribed. No name identifiers will be asked in the survey questionnaire. Information will be filed in a locked file cabinet and in password protected computers in the PI's MSU Research Lab.	
11b.	**Explain how you will ensure the confidentiality and/or anonymity of the raw research data (e.g. completed survey, interview notes, signed consent). Include in your description where the data will be stored (e.g., locked filing cabinet), who will have access to the data, and how long the data will be stored. If this is question is not applicable, please explain. Please note per the universities best practices the responsible project investigator must maintain the data for a minimum of three years after closing the project.** Raw research data, such as completed surveys, focus group interview notes, and signed consent forms, will be stored in locked filing cabinets and in password protected computers in the PI's office. Only research investigators will have access to these documents. All the documents will be stored for three years in principal investigators property after completion of the research study.	
11c.	**Explain how you will ensure the confidentiality and/or anonymity of the electronic research data (e.g. data entered into database, spreadsheet, stored on a computer, data collected via the web). Include in your description where the data will be stored (e.g. password protected computer), who will have access to the data, and how long the data will be stored. If this is question is not applicable, please explain. Include electronic security measures (e.g., password protected files, data encryption, and other protective measures for computer and/or network storage devices such as jump drives and CDs).** Raw research data, such as completed surveys, focus group transcripts, and signed consent forms, will be stored in password protected computers in the PI's office. Only research investigators will have access to these documents. All the documents will be stored for three years in principal investigators property after completion of the research study.	
12.	**Does this project involve protected health information as defined by HIPAA?**	NO
13a.	**Does any person responsible for the design, conduct, or reporting of findings of this protocol**	NO

Appendix A: (cont'd)

	have a Significant Financial Interest (as defined for the MSU Faculty Conflict of Interest Policy) or other opportunity for tangible personal benefit related to the conduct of the research that might compromise, or reasonably appear to compromise, the independence of judgment with which their responsibilities would be completed under this research protocol? A reportable financial interest includes, but is not limited to, a financial interest in the sponsor, product, or service being tested, or in a competitor of the sponsor or product or service being tested.	
13b.	**Has any financial arrangement, including compensation, ownership interest, stock options, or other ownership interest, (e.g., compensation that is: explicitly greater for a favorable result; in the form of an equity interest in the sponsor of a covered study; or in the form of compensation tied to sales of the product, such as a royalty interest) been established whereby the value of compensation or ownership interest to investigators conducting the study could be influenced by the outcome of the study?**	NO
13c.	**Is this a clinical study where the results may be used to support marketing applications for new human drugs and biological products and marketing applications and reclassification petitions for medical devices to the FDA, as required by law?**	NO
14a.	**When would you prefer to begin this project?**	7/1/2016
14b.	**Estimated end date of project:**	8/31/2018

ADDITIONAL DOCUMENTS/ATTACHMENTS

01. 6/10/2016 **Exempt Appendix 1** (i051651_06-09-2016_Exempt Application Appendix 1_v14-01_2-27-14_0-1.docx)

02. 6/10/2016 **Survey/Instrument** (i051651_06-09-2016_Nutrition and Physical Activity Education Needs Assessment_Survey_Parents.docx)

03. 6/10/2016 **Survey/Instrument** (i051651_06-09-2016_Nutrition and Physical Activity Education Needs Assessment_Survey_Staff.doc)

04. 6/10/2016 **Focus Group Questions** (i051651_06-09-2016_Focus Group Questions_Directors 6.8.docx)

05. 6/10/2016 **Focus Group Questions** (i051651_06-09-2016_Focus Group Questions_Parents 6.8.docx)

06. 6/10/2016 **Focus Group Questions** (i051651_06-09-2016_Focus Group Questions_Staff 6.8.docx)

07. 6/10/2016 **Consent Form** (i051651_06-09-2016_MSU IRB Consent Parent - Focus Group Final.doc)

08. 6/10/2016 **Consent Form** (i051651_06-09-2016_MSU IRB Consent Parent - Survey Final.doc)

09. 6/10/2016 **Consent Form** (i051651_06-09-2016_MSU IRB Consent Staff - Focus Group Final.doc)

10. 6/10/2016 **Consent Form** (i051651_06-09-2016_MSU IRB Consent Staff - Survey Final.doc)

11. 6/10/2016 **Recruiting Advertisement** (i051651_06-09-2016_2016ParentsEnglishFG.pdf)

12. 6/10/2016 **Recruiting Advertisement** (i051651_06-09-2016_2016ParentsEnglishSurvey.pdf)

13. 6/10/2016 **Recruiting Advertisement** (i051651_06-09-2016_2016StaffEnglishSurvey.pdf)

COMMENTS	**COMMENT AFTER REVIEW / EDIT BY IRB STAFF (Viewable by PI)**	**PI RESPONSE**
Comment # Reviewer #		
	Dear Investigator(s), Thank you for submitting your application to the IRB. We ask that you submit the PI Assurance/Signature Page, survey, consent form and exempt appendix to irbdocs@ora.msu.edu. Once all required documents have been received, we will forward your project to your Case Manager for review.	

Appendix A: (cont'd)

	Please note that if we do not receive the requested attachments within one week, your application will be turned incomplete. Thank you and have a great day! Sincerely, IRB Staff 517-355-2180	
Comment #3 **Reviewer #**	15:34:55	**6/14/2016** 10:49:25
	Dear Investigators: Thank you for the application request. You have submitted three different interview guides (i.e. parents, staff, director). But I only received two consents (i.e. parents and staff). Please forward the consent form for the directors. Thanks, Tonya	Hi Tonya, The consent form for "staff" is going to be used for both general staff and directors. Sorry for the confusion and let me know if you have additional questions.

Appendix B: IRB Approval

MICHIGAN STATE UNIVERSITY

Initial IRB Application Determination *Exempt*

June 27, 2016

To: Won Song
139 GM Trout Building

Re: **IRB# x16-799e** Category: Exempt 2
Approval Date: June 14, 2016

Title: Nutrition and Physical Activity Education Needs Assessment among Caregivers of Michigan Migrant Head Start (MHS) Children

The Institutional Review Board has completed their review of your project. I am pleased to advise you that **your project has been deemed as exempt** in accordance with federal regulations.

The IRB has found that your research project meets the criteria for exempt status and the criteria for the protection of human subjects in exempt research. **Under our exempt policy the Principal Investigator assumes the responsibilities for the protection of human subjects** in this project as outlined in the assurance letter and exempt educational material. The IRB office has received your signed assurance for exempt research. A copy of this signed agreement is appended for your information and records.

Renewals: Exempt protocols do not need to be renewed. If the project is completed, please submit an *Application for Permanent Closure*.

Revisions: Exempt protocols do not require revisions. However, if changes are made to a protocol that may no longer meet the exempt criteria, a new initial application will be required.

Problems: If issues should arise during the conduct of the research, such as unanticipated problems, adverse events, or any problem that may increase the risk to the human subjects and change the category of review, notify the IRB office promptly. Any complaints from participants regarding the risk and benefits of the project must be reported to the IRB.

Follow-up: If your exempt project is not completed and closed after three years, the IRB office will contact you regarding the status of the project and to verify that no changes have occurred that may affect exempt status.

Please use the IRB number listed above on any forms submitted which relate to this project, or on any correspondence with the IRB office.

Good luck in your research. If we can be of further assistance, please contact us at 517-355-2180 or via email at IRB@msu.edu. Thank you for your cooperation.

Sincerely,

H. McGee

Harry McGee, MPH
SIRB Chair

c: SuJin Song, Amanda Knox, Kaitlyn Moorhead-Hill, Yuen Mei Lim, Nabila Farabi

Office of Regulatory Affairs
Human Research Protection Programs

Biomedical & Health Institutional Review Board (BIRB)

Community Research Institutional Review Board (CRIRB)

Social Science Behavioral/Education Institutional Review Board (SIRB)

Olds Hall
408 West Circle Drive, #207
East Lansing, MI 48824
(517) 355-2180
Fax: (517) 432-4503
Email: irb@msu.edu
www.hrpp.msu.edu

Appendix C: Selected Survey Results

Table 17: Selected Survey Results

Select Survey Results for Staff and Parents Staff n = 280, Parents n=135				
	Staff #	Staff %	Parent #	Parent %
Interest in nutrition or physical education or training?				
No	87	31.1	12	8.9
Yes	193	68.9	123	91.1
How often would you like to receive nutrition or physical activity education or training?				
Other	24	8.6	2	1.6
Daily	20	7.1	4	3.3
Weekly	93	33.2	67	54.5
Monthly	93	33.2	47	38.2
Yearly	50	17.9	3	2.4
What topics would you like to learn (multiple choice)?				
Breastfeeding/Infant health	39	13.9	38	30.9
Healthy choices on a budget	151	53.9	46	37.4
Meal preparation	135	48.2	89	72.4
Physical activity	168	60.0	69	56.1
Other	1	0.4	1	0.8
What delivery model would work best for you (multiple choice)?				
Newsletters	164	58.6	51	41.5
Class/Cooking demonstration	103	36.8	64	52.0
Online course	111	39.6	19	15.4
Group discussion	62	22.1	30	24.4
None	11	3.9	2	1.6

Appendix D: Parent Focus Group Flyer

QUEREMOS SABER DE USTED

NECESITAMOS PADRES

Telamon y el equipo de MSU investigación de nutrición invitan a usted a participar en un grupo enfocado para aprender acerca de la nutrición y la actividad física de las familias de trabajadores migrantes.

Pregunten a un trabajador del programa local de Migrante Escolar como puedes participar!

¿Que es un grupo de enfoque?

Es un grupo de 5 o 6 personas que se reunen para una discusión guiada en el tema de nutrición y actividad física.

¿Cuánto tiempo se Tarda?

No se tarda mas de 60 o 70 minutos.

¿Sobre de que nosotros hablaremos?

Vamos a hablar sobre la nutrición y la actividad física que necesitamos y las barreras que nos detienen de estas necesidades.

¿Por qué debo participar?

Todo la información que vamos a renuir es para poder tener mejor conocimiento de como nosotros podemos ayudarlos

Tarjetas De Regalo de $15

Appendix E: Focus Group Flier Staff

WE WANT TO HEAR FROM YOU!

STAFF NEEDED

Telamon and MSU Nutrition Research Team ask you to participate in a focus group to learn about nutrition and physical activity of MHS staff.

What is a focus group?

It is a group of 5-6 people gathered for a guided discussion on nutrition and physical activity.

How long will it take?

It should only take 60-75 minutes.

What will we talk about?

We will talk about nutrition and physical activity needs and barriers.

Why should I participate?

Information collected will help us learn how we can HELP YOU!

$15 Gift Cards

ASK Your Local Migrant Head Start Director How You Can Participate!

Appendix F: Parent Survey Flyer

LA SALUD DE SU FAMILIA ES IMPORTANTE

NECESITAMOS PADRES

¿Como pudiera participar?

Nosotros estaremos haciendo cada 30 minutos en los banquetes de nutrición.

Todos los que participen van a recibir una recompensa.

Tarjetas De Regalo de

$10

Todo la información que vamos a reunir es para poder tener mejor conocimiento de como nosotros podemos ayudarlos.

Telamon y el equipo de MSU Investigación de Nutrición invitan a usted a participar en un estudio donde nosotros podemos aprender acerca de la nutrición y la actividad física de las Familias de trabajadores migrantes.

¡ Hable con su secretaria de la escuela migrante para inscribirse!

¡ Los espacios son limitados!

Appendix G: Staff Survey Flyer

HEALTH OF MHS CHILDREN IS IMPORTANT

MHS STAFF NEEDED

Telamon and MSU Nutrition Research Team ask you to participate in a survey to learn about nutrition and physical activity of MHS staff.

Don't miss out on your chance to participate!

THE MHS CENTER WITH HIGHEST PARTICIPATION WILL GET A PRIZE!

Information collected will help us learn how we can HELP YOU!

Check your EMAIL for a link to PARTICIPATE!

Appendix H: Sociodemographic Data from Surveys with Parents and Staff

Table 18: Sociodemographic Data from Surveys with Parents and Staff

		Parents (n=135)			Staff (n=280)		
		n	%	Total n	n	%	Total n
Interview Language	English	22	16.3	135	280	100	280
	Spanish	113	83.7	135	30	10.7	280
Center	Adrian				21	7.5	280
	Bear Lake	2	1.5	135	23	8.2	280
	Buen Pastor				6	2.1	280
	Chase				17	6.1	280
	Conklin	25	18.5	135	28	10.0	280
	Decatur	27	20.0	135	12	4.3	280
	Hart	15	11.1	135	29	10.4	280
	Keeler	23	17.0	135	11	3.9	280
	Kent City	9	6.7	135	19	6.8	280
	Lansing				6	2.1	280
	Mears				17	6.1	280
	New Era				10	3.6	280
	South Haven				2	0.7	280
	Pullman				38	13.6	280
	Sodus	16	11.9	135	23	8.2	280
	Sparta	11	8.2	135	10	3.6	280
	Spinks Corner	7	5.2	135	4	1.4	280
	Suttons Bay				4	1.4	280
Gender	Male	24	17.8	135	26	9.3	280
	Female	111	82.2	135	254	90.7	280
Age	< 25 y	23	17.0				
	25-29 y	40	29.6				
	30-34 y	33	24.4				
	≥ 35y	39	28.9				
	<30 years				83	29.8	279
	30-39 year				74	26.5	279
	40–49 years				55	19.7	279
	50–59 years				40	14.3	279
	60–69 years				21	7.5	279
	≥70 years				6	2.2	279
Marital Status	Single	28	20.7	135	91	32.5	280
	Married	68	50.4	135	137	48.9	280
	Cohabitating	37	27.4	135	15	5.4	280

Table 18 (cont'd)

	Separated/Divorced/Widowed	2	1.5	135	37	13.2	280
Hispanic/Latino	Yes	131	97.0	135	145	51.8	280
	No	4	3.0	135	135	48.2	280
Education	No school	3	2.2	135			280
	Elementary school	50	37.0	135	2	0.7	280
	Middle school	47	34.8	135	3	1.1	280
	High school/GED	24	17.8	135	86	30.7	280
	Some College				58	20.7	280
	Associate's Degree/Certificate				63	22.5	280
	College or above	11	8.1	135			280
	Bachelor's Degree or Beyond				68	24.3	280
Number of people living in house hold	1				18	6.4	280
	2	4	3.0	135	82	29.3	280
	3	11	8.2	135	43	15.4	280
	4	33	24.4	135	61	21.8	280
	5	47	34.8	135	46	16.4	280
	6	22	16.3	135	14	5.0	280
	7	10	7.4	135	9	3.2	280
	8	4	3.0	135	7	2.5	280
	9	4	3.0	135			280
Number of children below 5	0	2	1.5	135	203	72.5	280
	1	51	37.8	135	43	15.4	280
	2	48	35.6	135	23	8.2	280
	3	26	19.3	135	10	3.6	280
	4	6	4.4	135	0	0.0	280
	5	1	0.7	135	1	0.4	280
	6	1	0.7	135			280
	Less than $10,000	47	34.8	135			
	$10,000-$14,999	39	28.9	135			
	$15,000-$19,999	27	20.0	135			
	$20,000-$29,999	12	8.9	135			
	$30,000 or above	10	7.4	135			
Family income	>$15,000				40	14.3	280
	$15,000-$24,999				80	28.6	280
	$25,000 - $34,999				45	16.1	280
	$35,000 - $49,999				47	16.8	280
	$50,000 - $74,999				42	15.0	280
	$75,000 or above				26	9.3	280
Migrant or Seasonal	Migrant	98	72.6				
	Seasonal	37	27.4				
How many years of MSFW	0-2 years	16	11.9				
	3-5 years	18	13.3				
	6-9 years	29	21.5				
	10 or more years	72	53.3				

Table 18 (cont'd)

How many years child MSHS	0-2 years	34	25.2				
	3-5 years	34	25.2				
	6-9 years	32	23.7				
	10 or more years	35	25.9				
Position	Director				16	5.7	280
	Coordinator				2	0.7	280
	Specialist				58	20.7	280
	Teacher				50	17.9	280
	Assistant teacher				16	5.7	280
	Centre aide/assistant				58	20.7	280
	Food service staff				16	5.7	280
	Secretary				14	5.0	280
	Bus Driver				19	6.8	280
	Data entry clerk				10	3.6	280
	Custodian				8	2.9	280
	Special service assistant				7	2.5	280
	Health aide				3	1.1	280
	Other				3	1.1	280
Do you speak Spanish?	Not at all	1	0.7	135	56	20.0	280
	Not very well	5	3.7	135	75	26.8	280
	Very well	129	95.6	135	149	53.2	280
Do you speak English?	Not at all	65	48.2				
	Not very well	42	31.1				
	Very well	28	20.7				
Health insurance?	Yes	51	37.8	135	250	89.3	280
	No	84	62.2	135	30	10.7	280
Heard about federal gov. prog.	Yes	132	97.8	135	262	93.6	280
	No	3	2.2	135	18	6.4	280
Which programs have you heard of?	SNAP	96	72.7	132	240	91.6	280
	SNAP-Ed	12	9.1	132	23	8.8	280
	EFNEP	5	3.8	132	14	5.3	280
	WIC	129	97.7	132	247	94.3	280
	Other	5	3.8	132	4	1.5	280
Where do you get info from?	Friends/Family	73	55.3	132	189	72.1	280
	Internet/Social Media	6	4.5	132	60	22.9	280
	Flyer/Poster	8	6.1	132	55	21.0	280
	Church/Religious Group	4	3.0	132	9	3.4	280
	Clinic/Hospital	31	23.5	132	10	3.8	280
	Telamon MHS	17	12.9	132	19	7.3	280
	Government Agency	9	6.8	132	16	6.1	280
	School/College/Class	4	3.0	132	8	3.1	280
	Other				4	1.5	280
	None				14	5.3	280

Table 18 (cont'd)

Do you participate in federal government programs?	Yes	106	78.5	135	81	28.9	280
	No	29	21.5	135	199	71.1	280
What programs do you participate in?	SNAP	65		106	59	72.8	81
	SNAP-Ed	2		106	2	2.5	81
	EFNEP	0		106	1	1.2	81
	WIC	97		106	40	49.4	81
	Other	6		106	2	2.5	81

Appendix I: Sociodemographic Data from Focus Groups with Parents, Staff, and Directors

Table 19: Sociodemographic Data from Focus Groups with Parents, Staff, and Directors

		Parents			Staff			Directors		
		n	%	Total n	n	%	Total n	n	%	Total n
Center	Conklin	8	24.2	33	6	21.4	28			
	Hart	6	18.2	33	6	21.4	28			
	Keeler	5	15.2	33	5	17.9	28			
	Sodus	8	24.2	33	6	21.4	28			
	Sparta	6	18.2	33	5	17.9	28			
	Mixed groups							13	100	13
Age	<30 y	10	35.7	28	7	27	26	0		
	30–39 y	14	50.0	28	11	42	26	5	38	13
	40–49 y	4	14.3	28	3	12	26	5	38	13
	50–59 y	0	0	28	4	15	26	1	8	13
	60–69 y	0	0	28	0	0	26	2	15	13
	≥70 y	0	0	28	1	4	26	0		
MSHS Position	Teacher			f	13	46	28			
	Teacher Assistant				3	11	28			
	Center Aide				7	25	28			
	Specialist				3	11	28			
	Secretary				1	4	28			
	Other				1	4	28	13	100	13
Gender	Male	4	27.3	33	2	7	27	1	8	13
	Female	9	72.7	33	25	93	27	12	92	13
Marital Status	Single	6	20.0	30	3	12	26	1	7.7	13
	Married	17	56.7	30	11	42	26	9	69.2	13
	Cohabitating	6	20.0	30	6	23	26	2	15.4	13
	Separated/Divorced/Widowed	1	3.3	30	6	23	26	1	7.7	13
Hispanic/ Latino	Yes	27	84.4	32	19	70	27	4	31	13
	No	5	15.6	32	8	30	27	9	69	13
Race	American Indian/Alaskan Native				1	5	22	1	8	13
	Asian				2	9	22			13
	Native Hawaiian/Pacific Islander				0	0	22			13
	Black/African American				0	0	22			13

Table 19 (cont'd)

	White/Caucasian	9	28.1	32	19	86	22			13
	Other (please specify)	23	71.9	32	4	18	22	12	93	13
	Not reporting				2					
Education	No school									
	Elementary school	18	54.5	33						
	Middle school	7	21.2	33						
	High school/GED	7	21.2	33	7	25	28	1	46.2	13
	Some College	1	3.0	33	4	14	28			
	Associate's Degree/Certificate				9	32	28	6	46.2	13
	College or above									
	Bachelor's Degree or Beyond				8	29	28	6	46.2	13
Household size	1	0	0	32	1	4	27			
	2	0	0	32	7	26	27			
	3	3	9.4	32	2	7	27			
	4	8	25.0	32	7	26	27			
	5	11	34.4	32	8	30	27			
	6	7	21.9	32	0	0	27			
	7	2	6.3	32	1	4	27			
	8	1	3.1	32	0	0	27			
					1	4	27			
Children Under 5	0	0	0	30						
	1	10	33.3	30						
	2	12	40.0	30						
	3	4	13.3	30						
	4	4	13.3	30						
	5	0	0.0	30						
	6	0	0.0	30						
Family income	Less than $10,000	12	37.5	32						
	$10,000-$14,999	6	18.8	32						
	$15,000-$19,999	9	28.1	32						
	$20,000-$29,999	5	15.6	32						
	$30,000 or above									
	>$15,000				3	10.7	28			
	$15,000-$24,999				11	39.3	28			
	$25,000 - $34,999				2	7.1	28	2	15.4	13
	$35,000 - $49,999				3	10.7	28	2	15.4	13
	$50,000 - $74,999				5	17.9	28	2	15.4	13
	$80,000-$99,999				2	7.1	28	6	46.2	13
	$100,000-$149,999				2	7.1	28	1	7.7	13

Table 19 (cont'd)

Migrant or Seasonal Farmworker	Migrant	10	30.3	33						
	Seasonal	24	72.7	33						
How many years of MSFW	0-2 years	2	6.1	33						
	3-5 years	7	21.2	33						
	6-9 years	13	39.4	33						
	10 or more years	11	33.3	33						
How many years child MSHS	0-2 years	8	24.2	33						
	3-5 years	13	39.4	33						
	6-9 years	6	18.2	33						
	10 or more years	6	18.2	33						
Do you speak Spanish?	Not at all	0	0	33	3	11	28	5	38.5	13
	Not very well	2	6.1	33	8	29	28	3	23.1	13
	Very well	31	93.9	33	17	61	28	5	38.5	13
Do you speak English?	Not at all	17	51.5	33						
	Not very well	13	39.4	33						
	Very well	3	9.1	33						
Languages spoken at home	English	5	15.2	33						
	Spanish	32	97.0	33						
	Other	5	15.2	33						
Health insurance?	No	18	56.3	32	2	7	28			
	Yes	14	43.8	32	26	93	28	13	100	13

Appendix J: Focus Group Questions for Staff

1. What does healthy eating mean to you?
    a. *Probe 1:* Can you name some examples of healthy foods?

2. If you currently or (have in the past) participated in nutrition and physical activity programs, can you share what you learned?
    a. *Probe 1:* Have you received government supported nutrition programs? If so, what program was it? (Bridge Card, WIC, SNAP-ED, EFNEP)
    b. *Probe 2:* What encouraged you to participate in them? What made it easy to participate?
    c. *Probe 3:* What do you wish you could learn more of?
    d. *Probe 4:* How did you use the knowledge learned from these programs in your everyday life?

3. If you have not participated in nutrition and physical activity programs, what prevents you from participating?
    a. *Probe 1:* What made it difficult for you to participate in them? (Are the programs running at an inconvenient time, lack of child care, lack of transportation, language barriers etc.?)
    b. *Probe 2:* Are there any health concerns or specific (personal) situations that prevent you from participating in a nutrition and physical activity program?

4. What nutrition or physical activity topics would you like to learn?
    a. *Probe 1:* What resources (gym, support groups, etc.) would you want access to help you improve your own nutrition and physical activity practices?

5. How should trainings at Telamon be administered to better meet your training needs?
    a. *Probe 1:* How long should the programs last per session (hours, minutes, etc.)?
    b. *Probe 2:* How long should the programs run (for how many weeks or months, etc.)?
    c. *Probe 3:* What time of day would make it more possible for you to attend? (at the end of work day, weekends, before the start of work day, during end of crop/work season, before start of crop/work season etc.?)
    d. *Probe 4:* What delivery model would work best for you (online, in person, info sheets, etc.)?

6. What prevents you as a caregiver of Migrant Head Start children from being physically active and practicing healthy nutrition habits?
    a. *Probe 1:* What prevents you from practicing these at work?
    b. *Probe 2:* What prevents you from practicing these at home?

7. How much control or influence do you have over the eating and physical activity behaviors of Migrant Head Start children?
    a. *Probe 1:* How can you influence children's behaviors at the MHS centers?
    b. *Probe 2:* Do you have little or no influence on them?

c. *Probe 3:* What factors (children's habit, inattentiveness, time of the day, etc.) make it difficult for you to influence children's behavior?
d. *Probe 4:* What techniques do you use to encourage good behaviors among the children?

8. What prevents you as a caregiver of Migrant Head Start children from modeling good nutrition and physical activity behaviors to children?
    a. *Probe 1:* Do you personally struggle with healthy eating and physical activity and therefore find it hard to be a good role model for children?
    b. *Probe 2:* Have you been trained or indicated to promote good nutrition and physical activity among the children?

9. What prevents children from eating healthy and being physically active at Migrant Head Start Centers?
    a. *Probe 1:* What foods and beverages do the children typically eat at the MHS centers?
    b. *Probe 2:* What activities are the children involved in for physical activity each day?

10. What encourages children to eat healthy and be physically active at Migrant Head Start Centers? (MUST ASK ALL PROBES)
    a. *Probe 1:* What types of resources at the MHS centers encourage children to eat healthy?
    b. *Probe 2:* What types of resources at the MHS centers encourage children to be physically active?

Closing Statement:
This is the end of our questions. Based on our discussion, do you have any addition comments for us?

Thank you for sharing this information. This will help us identify new opportunities for nutrition and physical activity programs in migrant family communities.

Appendix K: Focus Group Questions for Directors

1. What does healthy eating mean to you?
    a. *Probe 1:* Can you name some examples of healthy foods?

2. What may prevent caregivers of Migrant Head Start children from participating in nutrition and physical activity programs?
    c. *Probe 1:* What would make it difficult for caregivers to participate in them?
    d. *Probe 2:* Are there any programs caregivers cannot participate in? If so, why?
    e. *Probe 3:* How should the programs be administered to encourage caregivers' participation?

3. What would caregivers need to understand the importance of nutrition and physical activity?
    a. *Probe 1:* What nutrition and physical activity topics would be important for caregivers to learn about?
    b. *Probe 2:* What resources (info sheets, support groups, gym, etc.) would caregivers want to help them understand the importance of nutrition and physical activity?

4. What prevents caregivers of Migrant Head Start children from being physically active and practicing healthy nutrition habits?
    a. *Probe 1:* What prevents them from practicing these at work?
    b. *Probe 2:* What prevents them from practicing these at home?

5. How should staff trainings be designed to ensure they meet your staff's needs (in regards to nutrition and physical activity)?
    e. *Probe 1:* How long are the trainings running currently?
    f. *Probe 2*: How long should the trainings ideally last (hours, minutes, etc.)? How often should trainings ideally occur (weekly, monthly, etc)?
    g. *Probe 3:* When should they occur (early summer training, or throughout the summer, etc.)?
    h. *Probe 4:* How should they be delivered (online or in person, info sheets)?

6. How much control/influence do caregivers of Migrant Head Start children have over the eating and physical activity behaviors of children?
    e. *Probe 1:* How can caregivers of Migrant Head Start Centers influence children's behaviors at the centers?
    f. *Probe 2:* Do caregivers have little or no influence on them?
    g. *Probe 3:* What factors (children's habit, inattentiveness, time of the day, etc.) make it difficult for caregivers to influence children's behavior?
    h. *Probe 4:* What techniques do caregivers use to encourage good behaviors among the children?

7. What prevents caregivers of Migrant Head Start children from modeling good nutrition and physical activity behaviors to children?
    c. *Probe 1:* Are the caregivers trained or indicated to promote good nutrition and be physically active among the children?

8. What prevents children from eating healthy and being physically active at Migrant Head Start Centers?
    c. *Probe 1:* What foods and beverages do the children typically eat at the MHS centers?
    d. *Probe 2:* What activities are the children involved in for physical activity each day?

9. What encourages children to eat healthy and be physically active at Migrant Head Start Centers? (MUST ASK ALL PROBES)
    a. *Probe 1:* What types of resources at the MHS centers encourage children to eat healthy?
    b. *Probe 2:* What types of resources at the MHS centers encourage children to be physically active?

Closing Statement:
This is the end of our questions. Based on our discussion, do you have any addition comments for us?

Thank you for sharing this information. This will help us identify new opportunities for nutrition and physical activity programs in migrant family communities.

Appendix L: Focus Group Questions for Parents (English)

1. Icebreaker Question: What is your favorite food?

2. What does healthy eating mean to you?
    a. *Probe 1:* Can you name some examples of healthy foods?

3. If you currently or (have in the past) participated in nutrition and physical activity education programs, can you share what you learned?
    a. *Probe 1:* Have you received government supported nutrition programs? If so, what program was it? (Bridge Card, WIC, SNAP-ED, EFNEP)
    b. *Probe 2:* What encouraged you to participate in them? What made it easy to participate?
    c. *Probe 3:* What do you wish you could learn more of?
    d. *Probe 4:* How did you use the knowledge learned from these programs in your everyday life?

4. If you have not participated in nutrition and physical activity programs, what prevents you from participating?
    a. *Probe 1:* What made it difficult for you to participate in them? (Are the programs running at an inconvenient time, lack of child care, lack of transportation, language barriers etc.?)
    b. *Probe 2:* Are there any health concerns or specific (personal) situations that prevent you from participating in a nutrition and physical activity program?

5. What nutrition or physical activity topics would you like to learn?
    a. *Probe 1:* What resources (gym, support groups, etc.) would you want access to help you improve your own nutrition and physical activity practices?

6. How should nutrition and physical activity programs be administered to encourage your participation?
    a. *Probe 1:* How long should the programs last per session (hours, minutes, etc.)?
    b. *Probe 2:* How long should the programs run (for how many weeks or months, etc.)?
    c. *Probe 3:* What time of day would make it more possible for you to attend? (at the end of work day, weekends, before the start of work day, during end of crop/work season, before start of crop/work season etc.?)
    d. *Probe 4:* What delivery model would work best for you (online, in person, info sheets, etc.)?

7. What prevents you from being physically active and practicing healthy nutrition habits?
    a. *Probe 1:* What prevents you from practicing these at work?
    b. *Probe 2:* What prevents you from practicing these at home?

8. What prevents you from good nutrition and physical activity behaviors to your children?
    a. *Probe 1:* Do you personally struggle with healthy eating and physical activity?
    b. *Probe 2:* Do you find it hard to be a good role model for your children?

9. What prevents your children from eating healthy and being physically active at home?
    a. *Probe 1:* What foods and beverages are typically eaten by your children? (this is asked a probe in question 9 in Spanish transcript)

    b. *Probe 2:* What foods and beverages are typically served and eaten by your children?
    c. *Probe 3:* What activities are your children involved in for physical activity each day?

10. What encourages your children to eat healthy and be physically active at home?

    a. *Probe 1:* What facilities (kitchen equipment, serving utensils, healthy recipes, more funds for food, etc.) or resources are needed at home to encourage children to eat healthy?
    b. *Probe 2:* What facilities (games, playground, parks, green areas, etc.) or resources are needed at home to encourage children to be physically active? *(this questions are all probes for question 10 in Spanish transcript)*

Appendix M: Focus Group Questions for Parents (Spanish)

1.Icebreaker
¿Cuál es su comida favorita?

2. ¿Qué significa una alimentación saludable para usted?
   a. Sonda 1: ¿Puede nombrar algunos ejemplos de alimentos saludables?

3. Si en este momento o (en el pasado) participaron en programas de educación de nutrición y actividad física, ¿puede compartir lo que aprendido?
   a. *Probe* 1: ¿Ha recibido apoyó de los programas de nutrición que ofrece el gobierno? Si es así, ¿qué programas era? (Tarjeta del puente (estampías), WIC, SNAP-ED, EFNEP)
   b. *Probe* 2: ¿ Por que participo? Qué fue lo que lo hizo fácil para participar?
   c. *Probe* 3: ¿Qué le gustaría aprender más?
   d. *Probe* 4: ¿Cómo utiliza lo que aprendió de esos programas (WIC, Tarjeta del puente) en sus vidas?

4. Que le impide su participación en programas de nutrición y actividad física?
   a. *Probe* 1: ¿Qué hace que sea difícil para que usted pueda participar en ellos? (¿
      *L*os programas se juntan en un momento inoportuno, no tiene a nadie que le cuide los niños, la falta de transportación, las barreras del idioma, etc.?)
   b. *Probe* 2: ¿Tiene problemas de salud o situaciones específicas (personales) que le impiden participar en un programa de nutrición y actividad física?

5. ¿Qué temas de nutrición o actividad física le gustaría aprender?
   a. *Probe* 1: ¿Qué recursos (gimnasio, grupos de apoyo, etc.) le gustaría tener para ayudar a mejorar sus prácticas de nutrición y actividad física?

6. ¿Cómo se deben administrar los programas para incluir su participación?
   a. *Probe* 1: ¿Cuánto tiempo le gustarían que los programas duren por sesión (horas, minutos, etc.)?
   b. *Probe* 2: ¿Cuántas semanas o meses deben de durar los programas?
   c. *Probe* 3: ¿A qué hora del día seria más posible para usted (Al final del día de trabajo, los fines de semana, antes del inicio de la jornada de trabajo, durante el final de la temporada de cultivo / trabajo, antes del inicio de la temporada de cultivos / trabajo, etc?)
   d. *Probe* 4: ¿Qué tipo de clase funcionaría mejor para usted (en línea, en persona, hojas informativas, etc.)?

7. ¿Qué le impide practicar buenos hábitos de nutrición y de ser físicamente activo?
   a. *Probe* 1: ¿Qué le impide la práctica de estos hábitos en el trabajo?
   b. *Probe* 2: ¿Qué le impide practicar estos hábitos en casa?

8. ¿Qué le impide a usted de ser un buen ejemplo para sus hijos en tener una buena nutrición y ser físicamente activo?
   a. *Probe* 1: ¿Usted personalmente lucha con tener una alimentación saludable y ser físicamente activo?
   b. *Probe* 2: ¿ Por qué se le hace difícil en ser un buen ejemplo para sus hijos?

9. ¿Qué impide que sus niños tengan una dieta saludable y que se mantengan activos físicamente en casa?

a. *Probe* 1: ¿Qué alimentos y bebidas normalmente coman sus hijos?
b. *Probe* 2: ¿Si sus hijos son físicamente activos que tipo de actividades hacen?

10. ¿Qué motiva a sus niños a comer saludable y hacer actividad física en casa?
(MUST ASK ALL PROBES)

a. *Probe* 1: ¿Qué tipos de recursos tienen en sus casas para que sus hijos coman más saludable?
b. *Probe* 2: ¿Que clase de recursos tienen en sus casa para que sus hijos pueden ser más activos físicamente?

Hemos terminado todas las preguntas.
En respecto de nuestra discusión de hoy, tienen algún comentario sobre de lo que estuvimos hablando?
Muchas gracias por su tiempo aquí con nosotros, esto nos ayudará en tener un mejor conocimiento para crear nuevos programas de nutrición y actividad física en las comunidades de familias migrantes.

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