

Healthy Eating and Physical Activity at Residential Summer Camps: An In-Depth Examination of Programming

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A Thesis
Submitted in partial fulfillment of the requirements of the degree

Master of Science
in
Natural Resources
(Youth Programming and Camp Management)

College of Natural Resources
UNIVERSITY OF WISCONSIN
Stevens Point, Wisconsin

May 2016

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Abstract

Residential summer camps are often thought of as settings for school-aged children to have fun in the outdoors, while participating in a variety of different activities. Research on summer break for school-aged children has shown that this time period can contribute to an increase in children's sedentary activity and cause weight gain. Yet residential summer camps have previously been overlooked as settings for healthy eating and physical activity programming. The purpose of this research was to identify and examine the efforts that Wisconsin residential summer camps are using that support campers in meeting national physical activity and dietary guidelines, to identify the challenges that these camps face in supporting and promoting healthy eating and physical activity at their camps, and to develop recommendations of current program practices that are consistent with supporting the national recommendations. Data were collected from an online survey and in-person or phone interviews with American Camp Association members to examine Wisconsin residential summer camp programming that provides and promotes healthy eating and physical activity to campers. Thirteen camp directors and owners were purposefully selected or reached through snowball sampling for the interview in order to provide representativeness of the population. Open-ended survey response and interview data were analyzed using NVivo. Results revealed that camp directors in Wisconsin believed their campers were physically active because of the amount of walking each camper had to complete in order to get from one side of camp to the other, in addition to their participation in a variety of program activities. Results indicated that camp directors are trying to provide, or already providing, healthy food that support the national dietary recommendations to their campers. This is achieved either by

providing healthy snack and menu options or by limiting dessert and visits to the camp store. The results of this study showed that campers who attend residential summer camps in Wisconsin are meeting or exceeding the national physical activity recommendations and that camp directors are intentionally providing opportunities for their campers to eat healthy food. Residential summer camps in Wisconsin are an ideal setting for the promotion of healthy eating and physical activity for children.

Acknowledgements

I am truly grateful to all of the individuals who provided me with guidance and support while developing this thesis. This whirlwind experience is most certainly a marathon and not a sprint. First I would like to thank my advisor, Kendra Liddicoat, for her patience, leadership, and expertise. Getting my plan set in stone was important for me, and Kendra supported me through it all. I would also like to thank Becca Franzen and Annie Wetter for providing support and perspective while serving on my committee.

I would also like to thank everyone at CWES for their support. It has been such a pleasure to be able to share the trials and tribulations of this process with the staff.

I am so appreciative of being able to interview all of the camp directors and owners, whether in person or on the phone. Visiting the different camps gave me a new perspective on what it is like to manage a camp, and I would not have been able to do it without the assistance of the Wisconsin American Camp Association Local Council of Leaders.

I am indebted to my family and graduate school friends for their assistance with seeing me through this project. Thank you for the guidance, reassurance, and distractions. And for serving as editor of my chapters!

Finally I would like to thank Caleb Klima for his on-going commitment to my education and future. I would not be where I am today without his contribution to my overall well-being.

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Chapter 1: Introduction

For children and adolescents, the summer months can seem constantly out of reach, especially during long winters. Many dream of a specific residential summer camp they visited the previous summer. There are currently 72 residential summer camps in Wisconsin accredited by the American Camp Association (ACA), each operating for a minimum of five days (American Camp Association, n.d.-a). Yet many parents choose to send their son or daughter to a sports camp, hoping to keep their child active throughout the summer. Research on summer break for school-aged children has shown that this time period can contribute to a raise in sedentary activity in children (Carrel, Clark, Peterson, Eickhoff, & Allen, 2007), and likelihood of weight gain (Moreno, Johnston, & Woehler, 2013), with recommendations for school-based summer programs that increase physical activity in children during the summer. The United States government has introduced several initiatives that demonstrate its commitment to providing healthy eating and physical activity opportunities for children and adolescents that overcome these issues (e.g., MyPlate Campaign, Let's Move, Healthy People 2020, and the Healthy Hunger-Free Kids Act of 2010). In addition, the U.S. Department of Health and Human Services recommended in the 2008 Physical Activity Guidelines that children participate in at least 60 minutes of moderate- to vigorous-intensity physical activity on most days of the week (U.S. Department of Health and Human Services, 2012).

Residential summer camps have previously been overlooked as settings for healthy eating and physical activity programming; however, recent summer camp research has begun to examine how summer camp programming can help fight childhood obesity. These studies have focused on camp as a place to explore obesity prevention in

youth (Ventura & Garst 2013), on the role of the camp counselor in promoting healthy eating behaviors during camp mealtimes (Ventura, Anzman-Frasca, & Garst 2014), and on the amount of physical activity at camps (Hickerson & Henderson 2014). This study sought to build on prior research to determine how residential summer camps in Wisconsin provide healthy eating and physical activity opportunities to their campers, and if they should be considered as a setting for the promotion of healthy eating and physical activity in children and adolescents.

Purpose of the Study

The purpose of this study was to identify and examine the efforts that Wisconsin residential summer camps are using that support campers meeting national physical activity and dietary guidelines.

Research Question

What program approaches have Wisconsin residential summer camps taken to provide and promote healthy eating and physical activity to their campers?

Research Objectives

1. **Summarize Program Practices:** summarize the practices Wisconsin residential summer camps are already using to support campers achieving national physical activity and dietary recommendations.
2. **Current Challenges:** identify challenges that Wisconsin residential summer camps face in supporting and promoting healthy eating and physical activity at their camps.

3. **Practices aligning with national recommendations:** develop recommendations for residential summer camps of current program practices that are consistent with healthy national dietary and physical activity recommendations at camps.

Limitations

1. **Population:** this study was limited to studying Wisconsin residential summer camps accredited by the ACA
2. **Data:** this study uses self-report data from ACA Wisconsin Members.
3. **Sampling:** this study utilized snowball and purposeful sampling to identify participants.

Abbreviations and Definitions of Terms

Agency – A camp sponsored by a national or international non-profit organization (American Camp Association, n.d.-c).

American Camp Association (ACA) - A community of camp professionals who have joined together to share knowledge, experience, and to ensure the quality of camp programs

Healthy Eating - A healthy eating plan that emphasizes fruits, vegetables, whole grains, low-fat dairy products, and fewer foods with sodium, saturated fats, trans fats, cholesterol, added sugars, and refined grains (MyPlate, 2016).

Independent for Profit – An Independent for Profit camp (American Camp Association, n.d.-c).

Independent not for Profit – An Independent not for Profit camp that may also be affiliated with a non-profit organization (American Camp Association, n.d.-c).

Physical Activity - Physical activity that is health enhancing (U.S. Department of Health and Human Services, 2012).

Residential Summer Camp – An overnight summer camp offering one or more weeks of programming to campers aged 7-16 (hereafter referred to as camp).
(American Camp Association, n.d.-b)

Religious – A faith-based camp or a camp sponsored by a religious denomination
(American Camp Association, 2015).

Chapter 2: Literature Review

The purpose of this study was to investigate the program approaches of Wisconsin residential summer camps that promote and provide healthy eating and physical activity to their campers. This study's exploration will help to identify the barriers that Wisconsin camps face to provide healthy eating and physical activity at their camps. It will also contribute to an understanding of current program-related practices for supporting healthy eating and physical activity at camps. These study objectives were formed in response to previous research that examines the potential of camps as places that promote healthy eating and physical activity behaviors among children (Ventura & Garst, 2013). In order to provide further background information on this topic, this chapter will: 1) summarize the research surrounding residential summer camps, 2) examine studies that determine approaches to increasing physical activity in youth, 3) examine studies on provision of healthy eating opportunities for youth, 4) describe specific research on healthy eating and physical activity in residential summer camps, after-school programs, or the day camp context, and 5) provide a background for understanding healthy eating and physical activity through social learning theory.

Residential Summer Camp Research

Residential summer camp research has previously described the effects of attending a camp on youth. More specifically, camp research has described camp characteristics promoting positive youth development and has created developmental outcomes of the camp experience (Garst, Browne, & Bialschki, 2011; Thurber, Scanlin, & Scheuler 2007). The first major overview of basic youth development outcomes

provided by Thurber et al. (2007) examined positive identity, social skills, physical and thinking skills, and positive values and spirituality of 8-12 year olds who attended American Camp Associated (ACA) accredited camps. These positive youth development outcomes of the camp experience contributed to the creation of the ACA Youth Outcomes Battery, a scale individual camps can use to evaluate skills learned at camp. This battery is composed of twelve measures, and includes measures such as teamwork, spiritual well-being, and independence (Garst et al. 2011). Although this scale is diverse, it does not explore healthy eating or physical activity. Other camp related-research has examined the best ways to improve existing programs and operational practices of camps (Henderson, Bialeschki, & James 2007). These operational studies of practices are now included as part of the ACA accreditation process, including identifying how camps address campers physical and emotional health and safety while attending camp. These research studies mostly demonstrate a focus of camp research on youth development outcomes of the camp experience. Thurber et al. (2007) suggest that future camp related research should examine other specific effects of attending a camp on youth. The gap in research examining both healthy eating and physical activity at camp has been recently identified by studies conducted by Ventura and Garst (2013) and Ventura, Anzman-Frasca, and Garst (2014), that are discussed below.

Increasing Physical Activity among Youth in the Camp Environment

Youth physical activity research has previously included school physical education or curriculum-based studies. Whereas camp research as a whole has examined outcomes of the camp experience, other out-of-school time research has focused on programs that try to increase physical activity in youth. Researchers are increasingly

looking to examine out of school physical activity programming due to the recent declines in time allotted for school physical education. These approaches have been understood as non-curricular approaches. According to Jago and Baranowski (2004) non-curricular approaches are “[school programming] interventions that did not focus upon modifications to school physical or health education” (p.157). Jago and Baranowski (2004) conducted a literature search on non-curricular physical activity intervention approaches between 1970 and 2002 that increased physical activity in children and adolescents and evaluated their effectiveness. This systematic review included nine studies each examining after-school programs, school break periods, travel to school, or summer day camp programs. Results from the summer day camp intervention programs demonstrated no significant difference in increased self-reported blocks of moderate to vigorous or vigorous physical activity participation from the initial baseline test. The researchers concluded that summer day camps offered a potential for increasing activity in youth, but suggested that future research should examine how to convert camp physical activity into habitual activity.

Similar summer day camp research conducted systematic observations of play and leisure activity in youth (Zarrett, Sorensen, & Skiles, 2013) at four youth recreational summer day camps. The researchers observed daily activities for four days across two-week periods at each camp. Every fifteen minutes, camps were assessed on levels of youth physical activity, physical features (such as use of equipment), staff and camper interactions, and social climate components. The researchers found that the social climate components (clarity of roles, autonomy, high engagement, inclusion, positive youth interactions, and bullying) are the most predictive of youth physical activity participation.

Zarrett et al. (2013) discovered that direct observation of youth could be a highly successful tool to conduct youth obesity research. Despite the central focus of these studies on summer day camps, this research shows the importance of future research on residential summer camp programming that could increase physical activity participation among youth. Although this study will not systematically review residential summer camps through observations of play, it will adopt a similar approach to Zarett et al (2013) in order to highlight best physical activity practices at residential summer camps.

The U.S. Department of Health and Human Services (2012) contributed to this conversation by stating in their *Physical Activity Guidelines Midcourse Report* that “camps and scouting organizations increase youth physical activity through strategies, such as providing opportunities for youth to be active during the camp or scouting experiences” (p. 17). These opportunities for increased activity include swimming or boating at the waterfront or participation in sport related camp activities throughout the day. Nevertheless, the report concludes that there is presently insufficient evidence that promoting physical activity as an intervention in camp increases physical activity among youth. This could be possible due to the challenges associated with acquiring data from campers during camp sessions.

However, in a recent study, researchers used pedometer data to examine the amount of physical activity occurring in day and residential summer camps (Hickerson & Henderson, 2014). The daily physical activity guidelines for children recommend a minimum of 60 minutes per day (U.S. Department of Health and Human Services, 2012), or an estimated 12,000-13,000 steps counted on a pedometer. Two hundred seventy seven campers at eight camps (four residential camps and four day camps) were given

pedometers to track the number of steps taken over the course of their 13-hour (residential) or 7.5 hour (day camp) day. Additionally, the simple conversion method, the intermediate conversion method, and a self-reported estimate of energy expenditure were used to help track physical activity that may not be reflected in the number of steps taken such as swimming or boating. The researchers found that campers at day camps averaged 11,916 steps per day and resident campers averaged 19,699 steps/day, although day campers recorded a higher number of steps taken per hour compared to residential campers. The researchers speculate that day campers are more active than residential summer campers because of the shorter day. Hickerson and Henderson (2014) concluded that youth summer camps demonstrate the potential to provide ample opportunities for physical activity during the summer months and suggest further research to examine a longitudinal physical activity participation pattern of summer campers.

In summary, the research discussed above on increasing physical activity among youth provides a clear background for the need to further examine the camp environment as a setting that could increase physical activity among youth. Although Hickerson and Henderson (2014) provide important research on the amount of physical activity that exists at a cross-section of camps, they do not describe the specific programmatic efforts or differences made by the camps. The current study seeks to identify specific programs and practices among residential summer camps that are likely to increase physical activity among youth instead of focusing specifically on the outcomes of participating in physical activity while attending camp.

Healthy Eating Research among Youth

Camp related research has also studied healthy food intake in the camp environment. One setting that research has observed healthy food intake is at a hands-on cooking camp. Nutrition researchers created a five-day culinary program to teach food preparation to middle school aged youth from a variety of perspectives, including: a chef, faculty members, and dietetic students (Condrasky, Quinn, & Cason 2007). The goals of the camp were to teach basic cooking fundamentals, cooking methods, and for the students to explore a variety of ingredients. Twenty-four campers completed a pre and post questionnaire to assess the students' nutrition knowledge and behavior change. In addition, the researchers conducted qualitative focus groups with the campers to better understand the learning outcomes of attending the week long camp. The results of this study were not reported in-depth in terms of healthier eating, but rather focused on if the goals of the program were met, and on the overall importance of teaching with a hands-on cooking approach to engage children in nutrition programming. Overall, the researchers found that the youth who participated in this program gained confidence and mastery of food skills, and even applied their new skills by teaching them to a family member or friend. In this cooking camp setting, the campers had constant interaction with others. Additionally, the cooking camp programming resources Condrasky et al. (2007) provide are enough information for another residential summer camp to adapt this hands-on model for their programming.

Researchers from the University of South Carolina investigated healthy eating in a camp setting differently than Condrasky et al. (2007). Tilley, Weaver, Beets and Turner-McGrievy (2014) developed an incentive program called the "Healthy Lunchbox

Challenge.” The purpose of the article was to describe the development and evaluation of the Healthy Lunchbox Challenge and its influence on the amount of fruits, vegetables, and water brought by children and staff to a summer day camp. This study collected data over two summers to compare baseline and intervention data at four day camps in central South Carolina. One thousand nine hundred and seventy seven children and 241 staff were observed over 43 days across the four sites. The results showed that the healthy eating education information distributed as part of the challenge helped to inform parents of healthy eating options and the adaptability of trying out healthy eating in a summer camp setting. Overall, Tilley et al. (2014) found positive results of change in the lunchbox food among summer day campers.

Another intervention study evaluated the effects of fruit and vegetable intake in a residential summer camp based environment (Noia, Orr, & Byrd-Bredbenner 2014). The intervention methods conducted for this study involved a food service, counselor, and child component. Noia et al. (2014) measured fruit and vegetable intake, counselor social support for fruit and vegetable intake, and the children’s views on fruit and vegetable characteristics. The food service component involved meetings to expand their fruit and vegetable offerings, whereas the counselor and child components of the intervention involved nutrition education lessons. Between three different camps, over 200 youth’s fruit and vegetable intake were analyzed during the baseline and intervention studies. Results of this research were mixed. The researchers found that those youth who received the nutrition lesson increased their fruit and vegetable intake. However, there was not conclusive evidence that the role modeling conducted by the counselor influenced increased fruit and vegetable intake on the youth. This could be due to the number of

intervention components (three) used by the researchers, or that the counselor's relationship with the campers was more formal and limited in time.

Ventura, Anzman-Frasca and Garst (2014) recently addressed this idea of the role of the counselor in providing support for healthy food intake. Their research examined the role of summer camp staff in promoting camper healthy eating behavior at camp and found that camps are not providing direction to summer staff on their role of monitoring camper eating behaviors. Ventura et al. (2014) conducted 52 qualitative interviews with summer staff that primarily focused on camper eating habits. These interviews were coded using inductive thematic analysis into three overall themes: staff's perceived responsibilities during mealtimes, staff's perceived problems and frustrations related to child eating during mealtimes, and feeding practices used to deal with mealtime problems and frustrations. Within these themes, subthemes were created to further assist with the data coding process. This hybrid analysis approach to data analysis was also used in the present study. The summer staff reported that they felt their main role was to ensure that the campers ate and that some staff engaged in strategies such as reasoning, modeling behavior, setting limits, and even providing punishment to their campers while eating meals. These results demonstrate the possibility of counselor modeling during meal times in a residential summer camp setting.

This research will not use intervention methods to evaluate if campers will eat more fruits and vegetables with education, nor will it examine counselor-modeled behavior. However the studies discussed above do provide an important foundation to investigate camp related efforts that improve healthy eating in campers. The studies suggest future research to examine the specific role of the summer camp staff in

promoting healthy eating behaviors, to provide recommendations on introducing healthy eating to campers, and to understand the role of learning healthy eating behaviors through observation and interaction with other campers. Because of the results discussed by Ventura et al. (2014), this study included questions addressing concepts of the summer staff's role in promoting healthy eating behaviors to campers during data collection.

Healthy Eating and Physical Activity Research

The literature summarized thus far has supported research on youth development outcomes, healthy eating promotion, and increasing physical activity all in the camp setting. This literature review has also examined research focusing on healthy eating and physical activity among youth in camp settings as separate from one another; yet other studies have examined healthy eating and physical activity among youth together. This specific body of combined research examines how the camp environment addresses unhealthy behaviors aimed at changing body size or shape, develops healthy childhood behavior, and provides a venue for nutrition education and physical activity promotion.

Linder, Russell-Mayhew, Adair, & McLaren (2012) explored body dissatisfaction and body change behaviors for campers and counselors at a three and a half week residential summer camp in Ontario, Canada. The researchers found that camp can have a positive and negative influence on adolescent body image and body change behaviors. On the positive side, camp provides structured activities, a lack of media and parental influence, and peer support. However, camp life also contributes to a lack of privacy, lack of access to healthy food, and enhanced body awareness due to time spent in a bathing suit every day. The research design for this study contained semi-structured interviews either as one-on-one interviews with the counselors, or two-on-two interviews

with the children who did not want to be interviewed by themselves. Because of the added complexity of a two-on-two interview, this current study will not replicate Linder et al.'s (2012) research design. However, this study does provide a foundation for future research to use camp settings as a place to study the overall health benefits of attending a camp.

One pilot study that did examine wellness benefits tested the effects of a short-term wellness summer camp on changes in a child's knowledge about healthy foods and snacks, physical activity and eating behaviors, and self-perception of competence (Seal & Seal 2011). Similar to the research conducted by Condrasky et al. (2007), this study based its age appropriate development theory largely on social cognitive theory, which explains that social influence contributes to an individual's learned behavior. For example, participating children were divided into groups based on their ages to develop healthy behavior skills and reinforce effective healthy behavior choices. Additionally, a pre and post-test evaluation was conducted on physical activity and nutrition components. The physical activity component included small and large group activities for the students to learn how their bodies move and how to incorporate physical activity into their daily routine. The nutrition component included information on the food guide pyramid, serving sizes, examples of healthy foods and snacks, and eating balanced meals. The researchers found that healthy eating behavior programs can contribute to children's increased knowledge and ability to identify healthy foods and snacks.

While Seal and Seal (2011) researched the benefits of attending a wellness summer camp, Ventura and Garst (2013) examined the potential of residential summer camps as a venue for the promotion of healthy eating and physical activity behaviors

among children. Ventura and Garst (2013) used data from the ACA 2007 Emerging Issues survey distributed online to camp professionals which asked questions about food options offered by camps with residential summer camp programs, strategies used by residential summer camp programs to address unhealthy eating behaviors of children, and ways in which camps have tried to increase children's physical activity level at camp. Results showed that camp professionals believe it is important to address healthy eating and physical activity at their camps. Ventura and Garst (2013) suggest future research should investigate strategies that promote and provide healthy eating and physical activity in children, and examine how to improve existing programs designed to combat the rise of childhood obesity.

Studies conducted by Linder et al. (2012), Seal and Seal (2011), Ventura and Garst (2013), have focused on the residential summer camp environment as a setting to understand healthy eating and physical activity of campers. Additional research has turned to after-school programs that conduct healthy eating and physical activity education programs. Werner, Teufel, Holtgrave, and Brown (2012) explored the effects of a new nutrition education and physical activity intergenerational program called Active Generations as a childhood education program facilitated by older adult volunteers. This program is very similar to the cooking camp research conducted by Condrasky et al. (2007), but it also provided physical activity programming. This program included 760 third through fifth graders who attended a ten week after school program that consisted of a hands-on nutrition lesson, preparation and consumption of a healthy snack, and 20-30 minutes of physical activity. An adult over the age of 50 led all of these activities. This study asked students to complete the same survey before and after

the program began which assessed the student's knowledge, attitudes, and behaviors of nutrition and physical activity. The results showed positive changes in reading food labels and increased confidence that the students could participate in physical activity. The overall model of this program is one that could be adapted by residential summer camps using similar programming.

Similarly, McCabe-Sellers, Strickland, Lovera, Yadrick, & Bogle (2009) examined nutrition education strategies for children living in the Mississippi Delta. These strategies included exposing young people to fruits and vegetables in order to expand their willingness to try healthier foods, and to encourage physical activities that are fun. These nutritionist researchers suggest that these strategies should be able to encourage healthy eating, but they have not been evaluated to determine if the exposure actually increases children's willingness to try healthier foods. This research cites the necessity for future research to examine more closely the specific programming at camps that can positively contribute to a child's health, and the possibility of implementing strategies that have previously been successful in afterschool settings.

The research reviewed on healthy eating and physical activity in a residential summer camp setting has outlined that camps can be understood as a place to study the health benefits of attending a camp (Linder et al. 2012), that camp participation can contribute to a child's increased knowledge and ability to identify healthy foods and snacks (Seal & Seal 2011), and that camp professionals believe it's important to address healthy eating and physical activity at their camps (Ventura & Garst 2013). The body of research discussed above has also recommended that future research examine the specific programming that can explain camper's increased participation in physical activity or

willingness to try new foods. One such explanation could be through social learning theory.

Social Learning Theory

Camps offer many opportunities for campers to try new activities, make new friends, and eat different foods. This process of learning new skills such as social or technical skills can be understood through social learning theory or learning that can occur by observing others. According to Bandura (1977), observation and direct experience contribute to an individual learning experience. Bandura (1977) explains that most human behavior is learned “through modeling: from observing others one forms an idea on how new behaviors are performed, and on later occasions this coded information serves as a guide for action” (p. 22). Furthermore, repeated exposure to modeling contributes to a longer lasting impression of an activity. An individual, therefore, can watch the actions of another person repeatedly and witness the reinforcements he or she receives. Reinforcement is another important concept in social learning theory, which is a response to a person’s behavior that increase or decrease the likelihood of reoccurrence. Camps provide a minimum of twelve hours for youth physical activity participation, which would allow for campers to learn from each other and observe the reinforcement responses others receive, and for that learning to be long lasting.

Social learning theory describes human behavior in terms of a continuous interaction between cognitive, behavioral, and environmental influences. It is the constant interaction between a person, the environment, and a behavior. Bandura (1977) identified this construct as reciprocal determinism, and explains that “there are times when environmental factors exercise powerful constraints on behavior, and other times when

personal factors are the overriding regulators of the course of environmental events” (p. 10). Therefore, if an individual produces a behavior, the environment (such as a camp) could affect how that behavior is learned.

The natural social environment of residential summer camps is important when considering the factors that may contribute to a camper’s participation in physical activity, or eating healthy food. Social learning theory concepts such as modeling, reinforcement, and reciprocal determinism are important to consider in the camp context. This study examined how residential summer camps create an environment in which campers interact with and learn from their peers during physical activity and meal times.

Summary

There are many approaches suggested in this literature review that improve healthy eating and physical activity of youth while attending camp. One approach includes providing nutrition classes that expose children to fruits and vegetables while engaging the children in actively preparing for a healthy snack (Werner et al. 2012; Condrasky et al. 2007). Along the same lines, another approach is to further examine the gap in the understanding of the role of the summer camp counselor in modeling healthy eating and physical activity behavior (Noia et al 2014; Ventura et al. 2014). One more approach is to simply count the number of steps taken by youth who attend residential and day camp programs (Hickerson and Henderson 2014). However examining residential summer camp as a place where healthy eating and physical activity programming exists is a relatively new focus to camp programming related research. In a research briefing on physical activity and health in camps, Hickerson and Henderson (2012) explain “more research is needed to further explore the circumstances that create

the healthiest and most physically active environments for young people at camp” (p. 6). In this briefing, Hickerson and Henderson (2012) describe that, in general, physical activity and health have been previously known to be part of the camp experience, but that more research is needed to explore the specific circumstances that contribute to healthy and physically active camp environments.

The body of research cited in this literature review suggests future research to more closely examine program approaches of camps in promoting healthy eating and physical activity and the potential residential summer camp has in the fight to combat childhood obesity.

Chapter 3: Methods

The purpose of this mixed methods study was to investigate the program approaches that residential summer camps are using to promote and provide healthy eating and physical activity opportunities to their campers. Both quantitative and qualitative methodologies were utilized to answer the research question. Data from surveys completed by ACA Wisconsin members and in-depth interviews with camp directors at Wisconsin ACA-accredited camps explored programming efforts made by residential summer camps to implement healthy eating and physical activity at their camps.

Research Methodology

This study took a mixed methods approach with data collected from a survey and from in-depth interviews. Mixed methods originated in 1959, when researchers began to use multiple approaches to data collection, such as combining observations with surveys. Researchers began to feel that “all methods had bias and weaknesses, and the collection of both quantitative and qualitative data neutralized the weaknesses of each form of data” (Creswell, 2014, p. 15). Although conducting research using quantitative and qualitative approaches can reduce the power of the underlying assumptions of positivism and constructivism within each tradition, this mixed approach will take advantage of the strengths of both in order to expand understanding of the topic. According to Maxwell (2013), there are three purposes for combining methods. The first is triangulation, or using different methods to check one another. The second purpose is to gain information about different aspects of the topic, and the third purpose is to generate a dialogue among

the results of the different methods. Therefore, collecting data with a mixed approach has its advantages because it provides a more complete picture of the research topic.

The purpose of this sequential mixed methods study was to obtain quantitative results to assist in the interpretation of the qualitative findings. Creswell (2014) explains that the primary focus of the sequential exploratory strategy is to explore a phenomenon: or in this study the different program approaches of summer camps. Generally conducted in two phases, with one phase given priority over the other. Qualitative data collection therefore was the priority in the present study.

Conducting qualitative research allows for an in-depth understanding of healthy eating and physical activity at camps. Qualitative research can be characterized by taking place in the natural setting, providing rich description, and offering an interpretative perspective (Creswell, 2014; Merriam 2009). These characterizations provide an opportunity for the researcher to understand more fully the participating site or individual and to be able to draw conclusions surrounding the topic of study while understanding the participant's point of view. Qualitative research therefore allows for the researcher to use literature to guide the study in the beginning, and then compare and contrast the literature with the findings at the end of the study. Quantitative methods however, are designed to provide numeric descriptions of the sample in order for the researcher to generalize to the population (Creswell, 2014). The qualitative in-depth interviews and short-answer response survey questions were designed to explore the topic, while the quantitative survey questions were designed to be able to generalize the results to the wider residential summer camp population.

Sample

The population of this study was ACA Wisconsin members and residential camp directors in the state of Wisconsin, and therefore limited to those members of ACA Wisconsin who work at a residential camp. Out of 245 current members with ACA Wisconsin, 12 submitted complete survey responses. The last section of the survey, the quantitative portion, was open only to camp directors or camp owners and operators, and six of the 12 respondents fulfilled this requirement. Due to the low response rate on the survey, only the open-ended responses were analyzed. The sample of camp directors participating in the in-depth interviews consisted of camp directors selected purposefully and through snowball sampling. Names of the purposefully selected camps were generated first based on if the camp provided garden programming or if it were known that the camp director would be willing to participate in the research study. This list was then broadened after further review of ACA residential camps in Wisconsin. The researcher asked participants at the conclusion of the interview to suggest other potential camp directors or owners that might be interested in participating in the study. These sampling techniques were chosen to ensure representativeness of camps that are including healthy eating and physical activity into their programs. Overall, 13 camp directors were interviewed as part of this research project, both in person and on the phone. See Table 1 for the number of participants in this study, divided by camp type.

Type of Camp	Number of Camps in Survey	Number of Camps in Interview
Agency	4	4
Independent Not for Profit	1	3
Independent for Profit	2	5
Religious	5	1
Total	12	13

The Institutional Review Board at the University of Wisconsin – Stevens Point approved this research. At the beginning of the survey, participants read an informed consent to participate in this research, and knew that their completion and submission of the survey represented their consent to serve as a subject. Interview participants signed an informed consent form to participate as human subjects in this research. Survey informed consent forms are reproduced in Appendix A; interview consent forms are reproduced in Appendix B.

Instrumentation

Survey questions asked ACA members in the state of Wisconsin who work at a residential summer camp to answer five open-ended response questions regarding healthy eating and physical activity at camp. These questions asked about the traditions at camp that support or hinder healthy eating and physical activity in the camp context, the priority their camp places on healthy eating and physical activity, and the factors that have assisted or challenges that their camp has faced in providing healthy eating and physical activity at camp. These questions were created to explore the programmatic efforts made by camps in order to better understand current healthy eating and physical activity practices. Two demographic questions were included: the affiliation of the camp

and the respondent's current position. These questions were included to better understand if a certain camp affiliation is providing healthy eating and physical activity more or less than other affiliations, and to determine what position the respondent has in order to compare similar groups of respondents. If the respondent was not a camp director or owner, he or she exited the survey after those questions. If the respondent was a camp director or owner, he or she continued to complete the survey. Two questions were included in this part of the survey from the ACA Emerging Issues survey (Ventura & Garst, 2013) on how camps have addressed concerns related to eating healthy and providing physical activity at camp. The final questions asked camp directors to indicate how important different topics related to healthy eating and physical activity are to his or her camp. The survey and interview questions were piloted to camp professionals in order to ensure that the questions were asking what the researcher intended the questions to ask.

Interview questions were developed to better understand the efforts made by camps to align their programming with the national dietary and physical activity guidelines. These questions asked camp directors to explore how their camp incorporates healthy eating and physical activity into their programming, how personnel management decisions influence their camp's ability to provide healthy eating and physical activity at camp, and how the organization is organized in order to provide healthy eating and physical activity at camp. All of the survey and interview questions were created to accomplish the research objectives and can be found in Appendices C and D, respectively.

Data Collection

Data for this research came from the open-ended responses to the survey of ACA Wisconsin members and from in-depth interviews with camp directors at Wisconsin residential summer camps accredited by the ACA. An invitation to take this survey was part of the ACA Wisconsin's bi-weekly email newsletter, distributed to ACA Wisconsin members. The ACA membership and customer development specialist announced the survey three separate times between September and October. Conducted by the researcher in September and October 2015, the interviews lasted between 30 minutes and an hour.

Data Analysis

Open-ended response and interview data were analyzed using NVivo, a qualitative data analysis software. Since there were only six responses to the quantitative portion of the survey, only the 12 responses to the qualitative open-ended response questions were presented as part of the results. The researcher first completed transcriptions of the recorded interview data, and uploaded the transcriptions and open-ended responses into NVivo. Second, data were analyzed using a conventional content analysis and inductive thematic analysis approach. According to Hsieh and Shannon (2005), a conventional approach to content analysis is appropriate to allow categories and code names to flow from the data when existing research literature or theory on the topic is limited. Codes and themes were therefore based on research questions asked during the interview process. This coding process followed Fereday and Muir-Cochrane's (2006) six stages of data coding: Stage 1) develop the code manual; Stage 2) test the reliability of codes; Stage 3) summarize data and identify initial themes; Stage 4) apply template of

codes and additional coding; Stage 5) connect the codes and identify themes; and Stage 6) corroborate and legitimate coded themes. It also followed Creswell's (2014) sixth stage of coding, where "researchers. . .discuss the literature at the end of the study" (p. 200), which allowed the researcher to make an interpretation of the findings and results that emerged from the study and compare it to what is already known about the results.

Trustworthiness

This study took a mixed method approach, however the data were predominately qualitative due to the low survey response rate. Researchers have continuously refined the concepts of validity in qualitative research, and how to best assess validity with a constructivist approach (Maxwell, 2013). Lincoln and Guba (1985) explain that the needed criteria for establishing trustworthy research are credibility, transferability, dependability, and confirmability.

The researcher was able to increase credible and dependable findings through methods triangulation, recorded interviews, and member checks. Member checks were achieved through a preliminary presentation of the results of this study at the 2015 ACA Wisconsin regional conference. Transferability was increased through providing thick description, or rich details of the data, and was obtained by the in-depth interviews. According to Lincoln and Guba (1985), qualitative researchers "can provide only the thick description necessary to enable someone interested in making a transfer to reach a conclusion about whether transfer can be contemplated as a possibility" (p. 420). It is then the external reviewer's responsibility to determine the possible transferability of these results to other settings. A detailed audit trail was kept throughout this research process establishing confirmability.

Although all efforts were made to establish trustworthiness in this study, it is not possible to control for all of the trustworthy criteria. The researcher did not account for the possibility that more than one person from an organization could take the survey because all members of ACA Wisconsin received the invitation. It is also possible that individuals who participated in the interview also participated in the survey due to the fact that survey responses were submitted anonymously. These factors could have influenced the credibility of the data.

Chapter 4: Results

The purpose of this study was to identify and examine the efforts of Wisconsin residential summer camps that support campers meeting the national physical activity and dietary guidelines. Of the 12 total respondents to the survey, only five were camp directors or owners who completed the quantitative section of the survey. Therefore, due to the small sample size, quantitative results reflecting answers to the second half of the survey questions are not reported. Results from the short-answer response questions included in the first half of the survey are presented as part of the qualitative results, and include the 12 total respondents. In addition, 13 camp directors or owners participated in either an in-person or phone interview. Interview demographic data are shown in Table 2, including type of camp, camp position of interview respondent, and if the camp is girls only, boys only, or co-educational.

Interview Number	Type of Camp	Position at Camp	Gender
Interview 1	Independent for Profit	Camp Owner	Girls only
Interview 2	Agency	Assistant Director	Co-ed
Interview 3	Agency	Camp Director	Girls, Boys only*
Interview 4	Independent for Profit	Camp Owner	Girls only
Interview 5	Independent for Profit	Camp Owner	Boys only
Interview 6	Independent for Profit	Camp Owner	Co-ed
Interview 7	Independent for Profit	Assistant Director	Boys only
Interview 8	Religious	Camp Owner	Girls only
Interview 9	Independent not for Profit	Camp Director	Co-ed
Interview 10	Independent not for Profit	Camp Director	Co-ed
Interview 11	Agency	Camp Director	Girls only
Interview 12	Agency	Assistant Director	Co-ed
Interview 13	Independent not for Profit	Executive Director	Co-ed

* This camp operates with half of their summer only open to girl campers, and the other half to boy campers.

Survey respondents were given six options to best describe their current position at camp: Camp Owner or Operator, Camp Director, Agency Executive or Denominational Executive, Camp Administrative Staff (assistant director, program director, business manager, etc.), Full-time camp staff member, and Seasonal camp staff member. Survey respondents by camp type and position at camp are shown in Table 3.

Table 3: Survey Demographics by Survey Respondent		
Survey Number	Type of Camp	Position at Camp
Survey 1	Agency	Camp Director
Survey 2	Independent not for Profit	Full-time camp staff
Survey 3	Religiously Affiliated	Camp Director
Survey 4	Religiously affiliated	Camp Administrative Staff
Survey 5	Agency	Camp Director
Survey 6	Independent not for Profit	Camp Director
Survey 7	Agency	Camp Administrative Staff
Survey 8	Agency	Camp Administrative Staff
Survey 9	Religiously Affiliated	Camp Administrative Staff
Survey 10	Religiously Affiliated	Camp Administrative Staff
Survey 11	Independent for Profit	Camp Director
Survey 12	Religiously Affiliated	Camp Administrative Staff

Results are organized by four themes that emerged from both data sets: physical activity participation, commitment to healthy food, learning opportunities, and challenges.

Physical Activity Participation

Results showed that campers are meeting or exceeding the physical activity recommendations through participating in their activity and program areas, walking to and from various activities throughout the day, and the varying physical layout of the camp. Each of these factors is discussed below.

Activity and Program Areas

Campers participated in at least four program activities in each day, each lasting between 45 and 90 minutes. The offered activities varied by camp, but most included swimming, team sports, a fitness-based activity (such as weightlifting or calisthenics), and other typical camp activities such as fishing, archery, and arts and crafts. The physical-activity-based classes offered a skill-based lesson in order for the camper to progress through that activity. More than one camp has developed an activity where the campers rotate between archery, the GaGa pit, and tramp-ball, as one respondent explained. “That’s within the programming schedule . . . and it encompasses all three of those areas up there so they can rotate between them, so they are always active and keep going. We’re trying to eliminate the just sitting around” (Interview 1).

Walking Across Camp

Camp directors reported that they believed their campers were physically active because of the amount of walking each camper had to complete in order to get from one side of the camp to the other. One camp director mentioned, “from one end of camp to the other of where the buildings are, it is a mile. So the kids are definitely hiking back and forth between activities” (Interview 1). Another camp explained that “we are a very large decentralized camp and having to walk a few miles a day to get to activities naturally creates physical activity” (Survey 11). Camp directors also recognized that their campers make several trips every day to the dining hall, their cabins, and the program area across camp, keeping them physically active throughout the day.

Physical Layout of Camp

Camp directors described the geography and landforms of their camp property and how these contributed to their camper's physical activity participation throughout the day. One camp's activities are all located on the top of a large hill, and the dining facilities and cabins are located along the lake shoreline. According to the director, "we really talk to the parents at length about it. It's way more activity than a girl would get in her day to day life in school" (Interview 8). This camp director went on to describe that if the activities a camper takes do not take place consecutively on top of the hill, then the girls are "climbing the hill up and down, back and forth." In these ways, the physical geography of a camp can also contribute to a camper's physical activity participation in a day.

Commitment to Healthy Food

Results showed that camps are trying to provide, or already providing, healthy food to their campers that supports the national dietary recommendations. They do so either by providing healthy snack and menu options or by limiting dessert and visits to the camp store where less healthy food may be purchased.

Healthy Snack and Menu Options

Many camps stated that they make fresh fruit accessible to their campers so that they can grab a healthy snack between meals. Camp directors are also intentionally providing healthy menu options to their campers. In one camp, "food choices always include fresh fruits, salad, and vegetables" (Survey 2). One camp director reported having a conversation with her food service manager, "we had a big conversation this year about limiting sugar intake and really kind of focusing on getting extra sugars out of our foods"

(Interview 6). This camp intentionally limits the amount of added sugar the campers are served during a meal, and also does not use a deep fryer. For example, “we don’t eat nuggets of anything, we don’t eat French fries.” This camp owner (Interview 6) intentionally works alongside the kitchen manager when planning meals in order to ensure that the campers are receiving healthy meals. “We participate in the summer food program through the federal government . . . so that pushes you to have a healthy menu. To have whole grains, etc.” (Interview 9). Four of the camp directors interviewed participated in the summer food program through the federal government. Camps that participate in this program receive a reimbursement for serving nutritious meals to students who qualify for free and reduced lunch. These meals must follow the Dietary Guidelines for Americans (USDA and HHS, 2010).

Limiting Dessert and Visits to the Camp Store

Camp staff in Wisconsin explained that if they provided dessert at dinner, many would not make the camp store available to the campers. Others would only serve a dessert at lunch, and then open the camp store after dinner. Of the camp directors interviewed, five mentioned that they do not sell food in their camp store. One camp does not offer a visit to the camp store if they serve dessert during meal time. Others explain that “we don’t do dessert at dinner; we’ll do a dessert at lunch most days” (Interview 5). This director went on to explain that it’s important to allow the campers an opportunity to expend those extra sugars that can come from candy bars, which is why his camp does not allow sweets after dinner time.

Learning Opportunities

There are many different learning opportunities for campers while attending camp. The interview participants offered insights into how much learning happens, and when it happens. One example is on social interaction during physical activity related program times.

I watch the activities, you see a lot of behaviors where the kids kind of learn from each other where they have social success or sometimes lack of social success, and they learn from all those activities. And so you know I think definitely with the athletics where you are in a team environment, you've got to interact to be successful. (Interview 7)

This director went on to say that “that’s one of the things we really push with our staff is, they [the campers] are not always going to be successful, but what we want them to do is learn from their failure.” Whereas this director focused on the learning opportunities at camp as inherently social, another director focused on individual goal setting and goal achieving within the larger camp context.

Our goal here at camp is to learn it and be confident and pass skills, not just have fun. But at the same time these girls are learning group dynamics, they are learning how to work well with each other. They are learning how to encourage each other, they are learning how to share, and help somebody else out. Um and oh, achieve goals. And if they can't achieve that goal, they feel satisfied that they tried. And they had the encouragement of not only the staff, but they had the encouragement of their fellow campers of all ages. (Interview 4)

Several camp directors also brought up that the mixed age activity groups also allowed for learning skill development from other campers. “I do go out and I see older kids leading drills or helping younger kids or just being role models of this is what it looks like. Football is another great example, like you have all skill levels out there playing and they are kind of learning and doing that together” (Interview 9). Overall, these camp directors believed there were plenty of opportunities for campers to not only learn social

skills while playing a sports game or participating in a physically active activity while at camp, but that campers can also learn the basic skills of a sport from interacting with each other.

Many learning opportunities took place during meal times. Camp directors identified meal-time manners as a learning opportunity for campers while at camp. “They are learning to you know say pass, and say please and thank you, and [to] wait your turn” (Interview 10). One camp provides campers with an opportunity to intermingle with the entire camp for a few meals throughout the week (instead of sitting by cabin group). Interview participant 1 explained, “When you can talk with the older kids, and say ‘What did you do today in your activities?’ and say ‘Oh, I learned to jump on horse back,’ and so the little kids hear that and say ‘Oh that’s cool!’ Camp directors recognized the importance of the younger campers interacting and learning from their older campers, particularly during meal times. Of the camp directors interviewed, 10 explained that their camp eat meals family style, where campers pass food around the table and sit either by cabin group or a mix of age. Camp directors also identified outdoor cooking as an opportunity for campers to learn a new skill. “So I would say you know as you’re working a group you are naturally going to have those girls who are like ‘Oh, let me show you how to do this’, or ‘I can cut this,’ or ‘You should try this, it’s really good’-that kind of thing” (Interview 11). One director even mentioned this learning opportunity as a contributing factor to a camper’s growth.

But I think that a lot of the growth, a lot of the important stuff that are relationship building, happens during those quote unquote down times. It might be rest periods, it’s going to be cabin clean up, it’s going to be at meal times, where it may not be intentional on the part of campers, they just think they are eating and sitting with their cabin having food, but they are having conversation and that discourse. (Interview 7)

These moments for communication amongst the various campers while eating are identified by the camp directors as important for camper growth and development.

Challenges

Although camps in Wisconsin are providing ample opportunities for campers to choose healthy snacks or participate in activities that are physically active, camp directors did identify a few challenges to providing healthy eating to their campers. Camps did not mention any challenges to promoting physical activity to their campers, aside from the participation and excitement brought by the summer staff. The challenges to healthy eating include garden management, the camp store, and the food budget.

Garden Management

Several camp directors reported challenges with maintaining a garden at camp, including getting it to be able to produce enough to be able to incorporate into the food service plan. Fifty-four percent of the camps interviewed do not have a garden on site that produces food to be incorporated as part of food service. One camp director said, “in the past we also had a camp garden. But we found that with the area that we are in, the growing season went past camp season, so the campers didn’t always get to experience actually eating the food that they helped grow” (Survey 7). This sentiment was shared by other camp directors as well. The majority of the interviewed camps do not operate past mid to late August for summer camp, and therefore did not believe in the work necessary to maintain and create a garden if the summer campers would not benefit.

Other camp directors talked about which staff members would maintain the garden. “But I think it would look good on a brochure, and it would look good in a

movie, you know a promotional movie, but the honest truth is if we're going to have the garden, 90% of the work would be done as a staff" (Interview 5). This notion that staff would do the majority of the work was shared at other camps as well. However, one camp director did identify the passion of staff members to be the driving force behind the garden. "Another area where I had staff who was pretty passionate about it, but did not really understand what it was going to take to plan and maintain a garden for so many people and a lot of work" (Interview 9). That camp director went on to explain though that "programmatically it would be great, and it's just going to take someone with a real passion in that area to figure out how to incorporate that into programming, and make gardening fun for kids." Overall camp directors believed in the value of the camp garden, but struggled with the amount of time dedicated toward its maintenance, in addition to balancing the best time to plant it in order for the campers to benefit the most.

While some camps struggle with incorporating the camp garden into programming and dining services, staff from two of the camps that participated in this study provided evidence that it can work. The camp owner of one of these believes strongly in "wanting our kids to know that food comes from the ground and not the grocery store" (Interview 10). This camp incorporates gardening as a program activity, and even allows the campers to prepare meals alongside their kitchen staff. The second camp incorporates taking care of the garden into their counselor in training program, where the 15-year-old campers pick food from the garden and teach the younger campers how to cook (Interview 13).

Camp Store

Camp directors and staff also identified their camp store as a place at camp that may hinder healthy eating. One camp director explained that the campers “get two snacks while they are there. It could be like a pop and an ice cream or like a bag of chips or something, so they can get two snacks a day, . . .and I’ll be honest: the snacks are not great” (Interview 12). Another director agreed, “right now our trading post offerings are mostly high calorie empty nutrition snacks. The campers drink caffeinated sugar soda, eat chips and candy” (Survey 4). Of the interviewed camps, 69% sell these types of food items in their camp store. In an effort to provide alternative snack options at the camp store, some camps have begun offering pretzels or nuts. “They can get a bag of pretzels you know if they don’t want something sweet. Those don’t sell real well . . . we have a lot of pretzels left over” (Interview 5). Although some camps intentionally limit the amount of access to unhealthy snacks, other camps are still identifying allowing these snacks as a challenge that their camp faces in offering healthy eating opportunities to their campers. Camps are trying to offer an alternative to their campers, but those alternatives are being picked over by most campers in favor of the candy bars and other high calorie snacks.

Food Budget

Another challenge many camps identify is their food budget. When responding to the survey question of what challenges has your camp faced in offering healthy eating and physical activity opportunity to campers, one staff member stated, “Money is a big contributing factor, especially with food. It would be better if we had the money to buy local, fresh foods, but that’s not within our budget” (Survey 7). Another staff mentioned

“the price of food is always an issue, especially the fresh fruits” (Survey 8). Managing the food budget can be complex. Whereas the cost of food may prohibit some camps in their ability to provide fresh fruits and vegetables, others add extra money into their budget because that’s what they want to be able to provide to their campers. One camp explains that they provide a “large budget for food to ensure fresh fruits, and vegetables, salad options, etc.” (Survey 3). Some camp directors are okay with a more expensive food budget if it means healthy food. For example, one camp discussed their commitment to healthy food “is a huge commitment financially, but that won’t end anytime soon because we’ve bought into that” (Interview 8).

Additional Findings

Many camp directors explained that they train their counselors to monitor camper’s eating habits, such as encouraging camper’s to try new food, or to use a hand signal with a camper who may not need that third helping of food. Finding an excellent head chef can also be a challenge for many camp directors, especially someone who wants to serve campers fresh, healthy food and not food that is pulled straight from the freezer. Most of the Independent not for Profit camps interviewed provide additional health related resources to campers such as basic hygiene supplies, sessions with a health coordinator to discuss mental health, or self-esteem workshops. Other camps have physically demanding traditions or requirements for each camper, such as participating in a wilderness experience, swimming half a mile to an island, or in their annual all-camp Olympic games. The camps that require their campers to participate in a wilderness experience let campers know ahead of time how physically demanding it can be to portage with a canoe, or hike more than five miles in a day. According to Interview

respondent 7, “We’ll send out quite a bit of material, and some potential recommended regiments to get yourself physically ready for that trip”

Summary

The interview and open-ended response survey responses indicate that campers are meeting or exceeding the physical activity recommendations while staying at a residential summer camp in Wisconsin. Camp directors are intentionally providing opportunities for their campers to eat healthy food, but that effort can be discounted when considering the dessert options after meal times and at the camp store. The camp setting offers a variety of learning opportunities for campers, including during meal and program times. Camp directors explained that their campers learned social, technical, and goal setting skills while attending camp.

Chapter 5: Discussion

The purpose of this study was to identify and examine the efforts that Wisconsin residential summer camps are using that support campers in meeting national physical activity and dietary guidelines. This chapter will interpret the results and discuss their implications, and offer recommendations for future research and practice.

Discussion

Physical Activity

Results of camper physical activity participation at camps in Wisconsin are consistent with Hickerson and Henderson's (2014) findings that campers met or exceeded the national physical activity guidelines after attending eight different camps. The analysis of the current programs offered at camps in Wisconsin offers data showing that camps can and should promote themselves as an opportunity for summer physical activity participation for children and adolescents. The results suggest that camps could broaden their audience, including to new parents who may want to send their child to a school-based summer health education or physically active program such as a sports camp that keep their child physically active in the summer months (Carrel, Clark, Peterson, Eickhoff, & Allen 2007; Moreno, Johnston, & Woehler 2013).

Healthy Eating

Residential summer camps in Wisconsin are shifting their meal options to fresh, healthy foods. The Healthy Hunger-Free Kids Act of 2010 set out to improve child nutrition in schools, afterschool programs, and in the summer with updated nutrition standards. Some camps are able to take advantage of this legislation through the Summer

Food Service Program if they serve students who qualify for free and reduced lunch and are tax exempt, and as a result are required to provide food options that align with the Wisconsin Department of Public Instruction's Nutrition Standards to their campers.

There are few studies that have examined the impact of this legislation on schools; one study that did so interviewed food service directors in rural school districts and found that the most difficult requirements to implement (in terms of encouraging students to eat the new foods) were the vegetable, whole grain, and non-meat protein component (Cornish, Askelson, & Golembiewski 2016). The researchers examined the challenges to implementing the new school menus, and found that the food service directors saw finding an affordable whole-grain vendor was difficult due to the cost. This observation is consistent with those of the camp directors who participated in the present study that healthier foods are more expensive, and can be a challenge to incorporate with a limited food budget. According to Cornish et al. (2016), "vegetables were perceived more positively when presented in a salad bar" (p.117) and that one of the easiest requirements to implement overall was the fruit and vegetable requirement. Hanks, Just, & Wansink (2013) found in their study on interventions in a smarter lunchroom makeover project that when fruit was displayed in nice bowls or tiered stands, and vegetables labeled with descriptive names, students were 13.4% more likely to take a fruit and 23% more likely to take a vegetable. These changes in the school system are simple changes that residential summer camps could also make in order to encourage campers to make healthier choices. Camp directors reported in the present study that they want fresh fruit accessible to their campers between activities and meal times. If the fruit were placed outside of the dining hall, in easy to find locations across camp, or in a nice display inside

the dining hall, that would attract more campers to the fruit. Similarly, camp directors also reported that providing a salad bar as an option to campers during lunch and dinner meal times was important. Hanks et al. (2013) suggested changes such as descriptive names and labels that increased vegetable consumption among students. None of the camp literature reported examined the impact of these recommendations on increased fruit and vegetable intake on campers. The literature did describe how providing educational information about healthy food increased changes in eating habits (Tilley, Weaver, Beets, & Turner-McGrievy, 2014), and increased knowledge and ability to identify healthy food and snacks (Seal & Seal 2011). This could suggest that if camp directors provided more information to their campers about the types of foods offered during mealtimes then the campers may be more willing to try new foods while at camp.

Learning Opportunities

Social learning theory methods such as observational learning, learning through direct experience, modeling, and reinforcement are used widely in the camp context either by the camp staff, older camper role models, or through direct participation in team sports and during meal times. Campers are learning social skills, how to set individual goals, and learning technical skills related to specific activities while participating in physical activity programs. These physical activity programs are composed of either same age or mixed aged groups, which offer an opportunity for campers to gain knowledge of an activity and learn important team dynamics. Campers are also learning appropriate mealtime manners and new cooking skills based on mealtime procedures or activities. Repeated exposure to these activities and new skills contributes to a camper's ability to process and learn from other campers, which can serve as a guide for his or her

own future behavior. Social learning theory provides four conditions for effective modeling, or learning from observing others: attention, retention, motor reproduction, and motivation (Bandura, 1977). Campers in a residential summer camp study can observe each other's physical activity participation (attention) and their exact pedometer results (retention). This could encourage them to increase their own physical activity participation (motor reproduction) so that they can show the results to their counselor (motivation). This suggests that residential summer camps could provide an environment in which campers have several opportunities to learn new behaviors such as healthy eating or increased physical activity participation through direct experience, modeling, and reinforcement.

Camp directors reported a diversity of learning opportunities available to campers during mealtimes. These results build upon Ventura, Anzman-Frasca, & Garst, (2014)'s suggestion for the possibility of counselor modeling of eating behaviors during meal times. A recent exploratory study conducted by Berge, Jin, Hannan, and Neumark-Sztainer (2013) aimed to describe structural and interpersonal characteristics of family meals to determine if these characteristics were associated with adolescent health outcomes. Results of this study found that families that had positive interpersonal dynamics during the family meal, had adolescents who ate more vegetables and had a lower body mass index score. Berge et al.'s (2013) research found that families that practice task accomplishment, communication, affect management, interpersonal involvement, behavior control, roles, and overall family functioning during a family meal have healthier adolescents. This study has important implications for the camp setting because many of these seven healthy family meal interpersonal dynamics are also seen

during mealtimes in camps. Camp staff eat three meals a day with their campers for a minimum of six days. This repetition establishes a routine, where campers and staff can communicate and share interest and concern over each other's lives. This amount of time suggests that camp counselors have plenty of opportunities to model eating healthy food, teach manners, introduce campers to new healthy foods, and ultimately affect the intake of what a camper may choose to eat.

Social learning theory aligns with the conclusions of Zarrett, Sorenson, & Skiles (2013) that the social climate components are the most predictive of youth physical activity participation. If campers are reporting positive youth interactions, high engagement, and an inclusive environment, then they are more likely to participate in a physical activity and learn a new skill. In the school setting, Button, Trites, and Janssen (2013) concluded that school social capital can be a more important factor in increasing the moderate to vigorous physical activity than the school environment, where social capital is defined simply as the social connections that people have. This awareness of the social effect on participation in an activity has implications for residential summer camps in regards to programming, due to the natural social atmosphere of camps.

Residential summer camp programs offer a unique setting for the application of social learning theory. Results from this study demonstrated widespread prevalence of learning opportunities for campers while attending camp. Considering that campers attend residential camp for a minimum of a week, the repeated exposure to try something new, and opportunity for campers to learn while attending camp is wide-ranging. Campers are constantly participating in an interaction between the camp environment and

new learned behavior. This could suggest that the camp environment is important for studying how campers learn new behavior.

Summer Camp Staff

Summer camp staff have a role in promoting and facilitating physical activity participation and healthy eating education and consumption among campers. Werner, Teufel, Holtgrave, & Brown (2012) reported in their research on the Active Generations program that the older adult volunteers who teach nutrition education and physical activity programs can facilitate a child's positive change in ability to read food labels and participation in physical activity programs. Similarly, camp directors in the present study reported that they have seen changes in camper participation of their physical activity programs, dependent on the staff member. Aside from the age of the older adult volunteers, much of the success of the Active Generations program can be attributed to the curriculum training and evaluation support the volunteer's received. Camps may already recognize the lasting impact that their summer staff can have on campers, but have many opportunities to provide more training and guidance for staff on their role at mealtimes and how to positively encourage campers to try something new or get involved in an activity. Camp directors also explained that the campers who participated in cooking food from the garden during camp were able to use those skills in future employment. This hands-on experience, under the direction of staff, can have a lasting effect on the future career of the camper. This curriculum or program training could also extend to nutrition education programming that specific staff could receive from local community members. One camp that participated in this study explained that the collaboration they have with other organizations is crucial to their camp's functionality.

This camp has a relationship with a community program that provides cooking classes and other health related programming which educates their campers on portion control, essential nutrients, and much more. Research presented in the literature review of the present study has shown that participation in healthy eating programs can contribute to school-aged children's increased knowledge and ability to identify healthy foods (Seal & Seal 2011) and increased fruit and vegetable intake (Noia, Orr, & Byrd-Bredbenner, 2014). Programming such as this may also be beneficial to other residential summer camps.

Limitations

This research offers an understanding of programming at residential summer camps that provide and promote healthy eating and physical activity to their campers; however, it did not examine the day-to-day camper experience. Due to the exploratory nature of this study, this research used self-report data from camp directors and owners, and therefore did not evaluate campers' level of physical activity and if they were eating healthy foods. This research is also limited to the staff perspective and did not include campers' or parents' perspectives. Although this study asked camp directors to describe if their camp offers healthy eating-related programming and reviewed research pertaining to nutrition education, specific questions related to nutrition education were not asked in the interview or survey questions. Another limitation is the survey response rate. Only 12 participants responded to the survey, some of whom could have been from the same camp or participated in the interview. Finally, although every effort was made to purposefully select a diversity of types of camps, a disproportionate amount of participants were from independent for profit camps in comparison to ACA camps in

Wisconsin overall, which typically have a higher operating budget and can therefore offer more diverse programming than independent not for profit and agency camps.

Conclusions

Based on the findings and within the limitations of this study, it is reasonable to conclude that campers who attend the camps that participated in this study are meeting or exceeding the national physical activity recommendations. These camps provide several program approaches that promote healthy eating and physical activity to their campers. They are keeping their campers active through their participation in a variety of sports and fitness-based activities held across a camp's large property. Camp activity periods are designed either by age or mixed aged groups, which offers an opportunity for campers to learn technical skills, team dynamics, and gain knowledge of the activity. Camp staff have the ability, when given proper training and expectations, to facilitate this learning and encourage camper healthy eating and physical activity participation. The findings on these aspects of camp life provide a positive narrative on the success of these camps in promoting a healthy, physical, and social lifestyle.

Camp directors are making an effort to provide their campers with healthy food options during a meal or as a snack, and understand the importance of serving campers healthy and nutritious food. Campers are given plenty of opportunities to learn healthy eating and physical activity habits while attending these camps. The results of this study support previous research showing camps to be places for obesity prevention in youth. Residential summer camps should be considered ideal settings for the promotion of healthy eating and physical activity programming for children and adolescents.

Recommendations for Practice

Residential summer camps in Wisconsin provide opportunities for campers to be physically active while also learning to eat healthy foods. Camp professionals should recognize the potential of their role in combatting childhood obesity through these opportunities, and place more emphasis on eating fresh fruits and vegetables and physical activity at their camp. Camps could even begin to market themselves as out-of-school programming that emphasizes campers eating healthy foods and participating in physical activity.

Camp professionals planning on implementing a healthy lifestyle at camp should communicate this desire to summer staff throughout the hiring period. This will ensure that summer staff fully agree and comply with the director's vision for the summer. These questions could be as simple as, "Would you be comfortable role modeling eating healthy food and demonstrating proper portion control to your campers?" Additionally, camp professionals should communicate the role of the summer staff during mealtimes to the counselor throughout training, and remind them of their role throughout the summer. This was identified by camp directors as an important time for camper growth and development and will ensure proper attention is given to campers.

Camp professionals should also consider implementing activity standards for each of the program areas offered at camp. This will ensure that activity expectations are clear to counselors leading the activity, and that campers are gaining the knowledge and practice in that activity area. These standards should be modeled during staff training, including hosting sessions at a variety of the program areas across camp. By hosting staff training sessions throughout the camp property, counselors will not only begin to

familiarize themselves with camp, but they also can see how they can model activities for their campers throughout camp. Staff would then learn to situate activities far from the dining hall and would contribute to camper increased activity level. In addition to the activity standards, camp professionals should consider requiring half of the program activities their campers participate in to be active. This will ensure that the campers are meeting the Physical Activity Guidelines.

Camps should also provide an opportunity for campers to eat healthy snacks throughout the day. Some camp directors mentioned that they allow older campers to come to the dining hall after the evening activities to eat an apple, banana, or even trail mix. Encouraging this snack time is recommended over having the campers hold onto sweets they purchased in the camp store and eat them in the evening. Leaving fruit out between meals or after dinner could be another option. Additionally, making an announcement or providing a sign with a description on what kinds of vegetables are available in a salad bar will help the campers try out new or unfamiliar sounding food. This would ensure that the campers can identify the vegetables in the salad bar and would encourage campers to actually eat what is available to them.

The camp garden was highlighted as a challenge for many camps to manage and provide programming for campers. In order to better learn techniques, best practices, and identify fast-growing crops, camp directors should attend garden-specific professional development opportunities. If managing a garden is not practical nor a priority, camp professionals could investigate other approaches to utilizing fresh produce such as participation in a local community supported agriculture share, or engaging with the local farming community through a different type of partnership. The type of junk food served

in the camp store was also highlighted as a challenge. Camps should consider limiting the amount of junk food sold in the camp store or offsetting it with what desserts are offered to campers during mealtimes.

Recommendations for Future Research

Results from this study provide an understanding for how selected residential summer camps in Wisconsin are meeting the national physical activity recommendations and attempting to provide healthy eating opportunities to campers. This study offered an exploratory approach into how camps are providing healthy eating and physical activity to their campers, and as a result provides the foundation upon which future research can build. Areas for future research include providing healthy food and physical activity, assessing food consumption, examining the lasting impacts related to physical activity and healthy eating, and conducting research with campers and parents.

One such area for future research is to more closely examine camper food intake. Examining what a camper chooses to eat at the beginning of a session and comparing it to what he or she chooses to eat at the end of the session would help assess the effectiveness of these strategies. It would also be interesting to determine the cost of providing healthier options to document cost-reducing strategies at camps trying to provide healthier eating options to their campers, or to examine the exact food purchases of a camp and the ratio spent on fresh fruits and vegetables compared to the larger food budget. Further camp research exploring the effects of meal-time structure on a camper's success in making new friends and willingness to try new foods has the potential to positively benefit how camp staff receiving meal-time training. Collecting observational data on the relationship between physical activity participation and social learning theory

would yield information on how campers can better learn technical skills related to a program area.

Investigating the extent to which a camper's activity level, interest in a specific activity, or food choices persist past the summer are also worth investigating in future research. Given that results from this study and previous studies have demonstrated that campers are meeting or exceeding the national physical activity standards while attending summer camp, it would be interesting to explore how campers' activity levels do or don't change once they return home. This could be explored through a longitudinal study that follows campers before they attend camp, while attending camp, and after the camp experience in order to determine what campers learned about new activities or new foods, and continued on with those activities or foods after the camp experience. Applying social learning theory would also be helpful when studying the lasting impacts of camp on youth or for camp directors who want to make improvements to their staff training or program activities.

Additional qualitative research exploring the camper's point of view would also supplement this research. Asking the campers if they believe they are more physically active than at home and if they eat differently while attending camp could provide interesting insights into the campers' experience of attending a residential summer camp. Collecting camper physical activity data and comparing it to their parents during that same period, and then comparing the physical activity data to a time period after summer would offer insight into any differences in activity level between campers and their parents. Asking the parents if they would pay more for a camp that provides healthier

food or the extent to which it contributes to the decision on which camp to send their child to would also be interesting.

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Appendix A

Informed Consent Form – Survey

Informed Consent to Participate in Human Subject Research- Survey

Ellen King, graduate student in the College of Natural Resources with an emphasis in Youth Programming and Camp Management at the University of Wisconsin-Stevens Point, would appreciate your participation in a research study designed to determine how summer camps are promoting and providing healthy eating and physical activity at their camps. You are being asked to complete an anonymous survey that should take up no more than 10 minutes of your time.

I anticipate no risk to you as a result of your participation in this study other than the inconvenience of the time to complete the survey.

While there may be no immediate benefit to you as a result of your participation in this study, it is hoped that I may gain valuable information about how children can be healthy and active in the summer while attending summer camp. This information will be shared with the camping field.

The information that you give to me on the questionnaire will be recorded in anonymous form. I will not release information that could identify you. All survey data will be kept under password protection and will not be available to anyone not directly involved in the study.

If you want to withdraw from the study at any time you may do so without penalty. The information on you up to that point would not be included in this study.

Once the study is completed, I would be glad to give you the results. In the meantime, if you have any questions, please ask or contact me:

Ellen King
College of Natural Resources
University of Wisconsin-Stevens Point
Stevens Point, WI 54481 eking@uwsp.edu

If you have any complaints about your treatment as participant in this study, please call or write:

Dr. Debbie Palmer, Interim Chair
Institutional Review Board for the Protection of Human Subjects
Department of Psychology
Science Building, D240
University of Wisconsin-Stevens Point
Stevens Point, WI 54481
(715) 346-3953
dpalmer@uwsp.edu

Although Dr. Palmer will ask your name, all complaints are kept in confidence.

Your completion and submission of the survey to the researcher represents your consent to serve as a subject in this research. This research project has been approved by the UWSP Institutional Review Board for the Protection of Human Subjects

Appendix B

Informed Consent Form – Interview

Informed Consent to Participate in Human Subject Research- Interview

Ellen King, graduate Student at the University of Wisconsin-Stevens Point, would appreciate your participation in a research study designed to determine how summer camps are promoting and providing healthy eating and physical activity at their camps. You are being asked to participate in an in-depth interview that should last no more than an hour.

I anticipate no risk to you as a result of your participation in this study other than the inconvenience of the time to participate in the interview.

While there may be no immediate benefit to you as a result of your participation in this study, it is hoped that I may gain valuable information about how children can be healthy and active in the summer while attending summer camp. This information will be shared with the camping field.

The information that you give to me during the interview will be recorded, and you will choose a pseudonym as your identifier. I will not release information that could identify you nor your camp's location. All recordings will be destroyed after they are transcribed. Transcribed interviews will be kept on a password-protected computer and will not be available to anyone not directly involved in this study.

If you want to withdraw from the study at any time you may do so without penalty. The information provided by you up to that point would be destroyed.

Once the study is completed, I would be glad to give you the results. In the meantime, if you have any questions, please ask or contact me:

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College of Natural Resources
University of Wisconsin-Stevens Point
Stevens Point, WI 54481 eking@uwsp.edu

If you have any complaints about your treatment as participant in this study, please call or write:

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Science Building, D240
University of Wisconsin-Stevens Point
Stevens Point, WI 54481
(715) 346-3953
dpalmer@uwsp.edu

Although Dr. Palmer will ask your name, all complaints are kept in confidence.

I have received a complete explanation of the study and I agree to participate.

Name _____ Date _____

This research project has been approved by the UWSP Institutional Review Board for the Protection of Human Subjects.

Appendix C

Survey Questions

Survey Questions

(Page 1)

This survey is only open to anyone who works for a residential camp in Wisconsin. If your camp does not provide residential summer camp programming please exit this survey now. Answers to survey questions should describe current program practices or programs that will be implemented Summer 2015. The survey begins on the next page. Thank you for participating in this research.

(Page 2)

Do you work at a residential summer camp in Wisconsin?

Yes No

If no, please exit this survey.

The following questions are open-ended response questions regarding healthy eating and physical activity at your camp. Please answer the questions completely.

1. What traditions at your camp support healthy eating and physical activity in the camp context?
2. What traditions at your camp hinder healthy eating and physical activity in the camp context?
3. What priority does your camp place on healthy eating and physical activity within the overall camp experience and how does this priority influence management decisions (such as purchasing, budgeting, hiring, training, camper recruitment, facility development, program development)?
4. What factors have assisted your camp in offering healthy eating and physical activity opportunities to your campers?
5. What challenges has your camp faced in offering healthy eating and physical activity opportunities to your campers?

(Page 3)

For the following questions, please select only one answer.

6. What is the affiliation of your camp?
 - a. Agency (e.g., YMCA, Girl or Boy Scouts, Camp Fire, 4-H, etc.).
 - b. Independent for Profit.
 - c. Independent Not for Profit.
 - d. Municipality or Government
 - e. Religiously Affiliated (e.g. a denominational or faith-based camp).
 - f. Other, please specify:

7. Which of the following best describes your current position in your camp?
 - a. Camp Owner or Operator
 - b. Camp Director
 - c. Agency Executive or Denominational Executive
 - d. Camp Administrative Staff (assistant director, program director, business manager, etc.)
 - e. Full-time camp staff member
 - f. Seasonal camp staff member

If you are a Camp Director or Camp Owner/Operator, please continue on with the survey. If you are not a Camp Director you may exit the survey at this time.

(Page 4)

For the following questions, please check all answers that apply to your camp.

8. How has your camp addressed concerns related to unhealthy eating behaviors of children?
 - a. Encouraged staff to model healthy eating in order to set a better example for the campers
 - b. Increased health drink options (milk, water)
 - c. Re-designed daily menus to incorporate healthier foods
 - d. Reduced sweets/sugary foods
 - e. Reduced fried foods
 - f. Provided more healthy food options in canteen
 - g. Reduced candy, soda, and other “junk food” in canteen
 - h. Prohibited candy, soda, and other “junk food” in canteen
 - i. Prohibited care packages containing food
 - j. Offer low/no fat alternatives where possible
 - k. Served smaller meal portions
 - l. Encouraged small-portion meals and/or healthy snacks
 - m. Other, please specify:
 - n. We have not addressed concerns related to unhealthy eating behaviors of children

9. How has your camp addressed concerns related to children’s physical activity level at camp?
 - a. Encouraged staff to be more physically active in order to set a better example for the campers
 - b. Increased the frequency of program options that incorporate vigorous physical activity
 - c. Increased desirable physical activity program options
 - d. Provided coaching/instruction to campers on the value of physical activity
 - e. Required participation in programs that incorporate vigorous physical activity
 - f. Decreased the frequency of any minimally physically active program options

- g. Other, please specify:
- h. We have not addressed concerns related to physical activity level of children

10. For the following questions, please indicate how important each topic is to your camp

- a. Very Unimportant Unimportant Neutral Important Very Important
 - i. Hiring a food service manager who values healthy eating
 - ii. Offering healthy food options to campers that align with federal dietary guidelines
 - iii. Training staff to model healthy eating behaviors during mealtimes
 - iv. Placing dietary recommendation posters in an area for campers to see
 - v. Providing nutrition education to campers such as cooking classes or garden related programming
 - vi. Hiring staff that value physical activity
 - vii. Training staff to engage campers in physical activity during downtime
 - viii. Providing physical activity opportunities to campers throughout our daily schedule
 - ix. Meeting the 60 minutes of daily recommended amount of moderate- to vigorous- physical activity to campers

Thank you for participating in this research. As an ACA Wisconsin member, you may also be contacted to participate in an interview. You can exit the survey here.

Appendix D

Interview Questions

Interview Questions

1. Does your camp offer healthy eating related programming?
 - a. Does your camp have a camp garden? Is this incorporated into your programming? If so, how? Is this incorporated into your dining services program? If so, how? Does your camp have a chef that leads campers in cooking activities?
2. Do food service staff receive training in federal dietary guidelines? If so, how?
 - a. Do other summer staff receive this training? What training do summer staff receive regarding eating behaviors of campers or modeling healthy eating behaviors?
3. What does your camp consider when menu planning?
4. Please describe how meals are structured (family style or buffet)
 - a. What additional food options are available to campers at a given meal? (Salad bar, alternative meals, snacks?)
5. Does your camp offer physical activity related programming?
 - a. What fitness classes or sports activities does your camp provide?
 - b. Does your camp offer activities desirable to both male and female campers?
6. Are all staff trained in the Physical Activity Guidelines for children? How?
 - a. Do staff receive training on how to encourage campers to be physically active? What training do staff receive regarding physical activity at camp?
7. How does the layout of your camp contribute to a camper's physical activity participation?
8. Is providing healthy eating or physical activity part of your camp's mission statement? (If yes, how?)
9. How do personnel management decisions (hiring, training, camper recruitment, budgeting, etc.) influence your camp's ability to provide healthy eating and physical activity?
10. Please describe how your camp creates an environment in which campers interact with and learn from their peers during physical activity
11. Please describe how your camp creates an environment in which campers interact with and learn from their peers during meal times.
12. What are areas for growth or improvement at your camp in terms of being able to provide healthy eating and physical activity to your campers?
 - a. What plans or actions are currently in place to support this growth/improvement?
 - b. What resources would support such growth?