Making Healthy Fun:
Understanding the Impact of Children First/Communities in Schools Learning Centers in Public Housing Communities

Rebecca Gwen Williams
University of North Carolina at Asheville
Health & Wellness Promotion and Interdisciplinary Studies

Faculty Advisor: Dr. Ameena Batada
Community Advisors: Barbara Norton & Natasha Adwaters,
Children First/Communities in Schools of Buncombe County

Abstract

In 2010, Buncombe County Health Department reported that 33.7% of K-5 students were overweight or obese and of that 33.7%, those living in poverty are at the highest risk. Children First/Communities in Schools of Buncombe County is a local organization that is devoted to empowering children and families to reach their full potential through advocacy, education and services. Their “Learning Centers” program provides a safe, free-of-charge afterschool environment for some of the 25% of Buncombe County children who live in poverty. The Learning Centers Program incorporates new initiatives specifically geared toward improving children’s health and school readiness through increased physical activity, improved eating habits and increased knowledge. The purpose of this public service project was to work with Children First/Communities in Schools to conduct a program evaluation of recently added program initiatives, funded by a Mission Community Benefits Grant. The evaluation included analysis of qualitative and quantitative data collected from children and parents participating in the Learning Centers Program. At the time of writing this abstract, the baseline data were collected and a follow-up survey will be conducted in May 2014. It is our shared hope that in completing this evaluation, Children First/Communities in Schools will find a meaningful connection between their recent efforts and increased health knowledge among their participants. As a result, we hope the organization will receive additional funding from local sponsors and continue to engage their program participants in a truly holistic program that fosters knowledge and practice of healthy behaviors. Through my work with Children First/Communities in Schools I have gained skills in the area of formal program evaluation and been able to experience
the impact that the incorporation of creative nutritional and physical activity programs has on the empowerment and health status of at-risk youth within my local community.

**Key Words:** Program Evaluation, Children’s Health, Public Housing, Learning Center, Health Disparities, Social Determinants of Health

**Origins of the Project**

The evolution of this project began with my academic relationship with Dr. Ameena Batada of the Health and Wellness Promotion department. As part of her Service Learning designated course, *Health Parity*, Ameena has an established relationship with the community partner *Children First/Communities in Schools of Buncombe* (CF/CIS) as one she currently has students participating alongside with for community engagement work. Following recent funding on behalf of the Mission Community Benefit Grant, CF/CIS decided to implement a new program specifically designed to improve low-income children’s health and school readiness through increased physical activity, improved eating habits and increased knowledge. This new initiative has been implemented through CF/CIS’s Learning Center program at three low-income housing communities through two new dynamic partnerships. Beginning in January of 2014, CF/CIS began partnering with two local organizations: FEAST and WNC Health Network’s campaign, *5-2-1 Almost None.*

The CF/CIS’s Learning Center Program chose *FEAST* for its history of successful and creative community engagement within the Buncombe County community. As an organization, *FEAST* is devoted to “promoting healthy eating choices and making them accessible to people of all income levels through hands-on cooking classes that encourage and empower participants by teaching skills needed to make fresh, wholesome and tasty food” (About FEAST). *FEAST* classes focus specifically on goals that directly associate with the needs of the community involved with CF/CIS’s Learning Centers and align harmoniously with the mission and intentions found at the basis of all CF/CIS’s community work. Specifically, *FEAST* classes focus on the following:

- Problem solving, communication and teamwork; increasing fresh, locally grown produce in everyday living; gaining confidence by exploring different ways to prepare fresh produce; creating and changing recipes and substituting ingredients; learning how food affects your brain and body; and lastly, connecting to Core Curriculum and Essential Standards in math, reading, writing, science, health and nutrition (About FEAST).

The *Five-Two-One-Almost None* campaign is a *WNC Healthy Kids* population health program used by the WNC Health Network, in association with hospitals and health departments in our region. *WNC Healthy Kids* acts as the means by which this extensive network engages community members and at-risk communities to reduce and prevent childhood obesity in Western North Carolina through local community partnerships (*WNC Healthy Kids*). *Five-Two-One-Almost None* specifically has been incorporated into local education systems and community programs as a campaign that promotes healthy nutrition, regular physical activity and reduced television and computer screen time. As the name describes, *Five-Two-One-Almost None* stands for the following guiding principles for participating members:

- **Five** stands for five or more servings of fruits and vegetables per day.
- **Two** stands for no more than two hours per day in front of a screen as a number of studies show a correlation between watching television and obesity.

- **One** means at least one hour of physical activity per day. Physical activity is vital to maintaining a healthy weight and overall good health. Kids who are raised in active families tend to stay active as adults.

- **Almost none** refers to almost no sugary beverages—no more than two servings per week of soft drinks, sports drinks and fruit drinks that are not 100% juice. Over the last few decades, soda consumption has doubled for girls and tripled for boys (Five-Two-One-Arrnott None).

Through the involvement of these two community partners in their Learning Center Program, CF/CIS demonstrates a keen and progressive understanding of the burden of obesity in our local community. “Child obesity is becoming a public health problem worldwide, but the prevalence of obesity varies remarkably across countries with different socioeconomic development levels. Different socioeconomic groups are at different risks, and the relationship between obesity and socioeconomic status varies across countries” (Wang 1129). In one study entitled *Cross-National Comparison of Childhood Obesity: The Epidemic and the Relationship between Obesity and Socioeconomic Status*, research concluded that the environment of obesity in the United States is unique and distinct from other countries around the world. While countries such as China and Russia were found to demonstrate decreased levels of obesity in groups of low socioeconomic status, the United States was unique in its demonstration that “low socioeconomic groups were at a higher risk” (Wang 1129) for obesity. “One possible explanation for the different socioeconomic-obesity relationship in developing countries such as the United States and the developing countries such as China is that the influence of socioeconomic status on people’s lifestyles such as diet and physical activity may differ” (Wang 1134).

What we learn from this cross-national comparison is meaningful in understanding the culture of nutrition and physical activity in the United States and the relationship between health status and access to resources. Low-income communities in other countries experience lower rates of obesity often because wealth is typically associated with the consumption of foods higher in fat and rates of processing, as they are considered decadent and luxurious while fruits and vegetables are considered food of the average layperson (Wang 1134). Furthermore, private transportation is considered a privilege of the wealthy, leaving those with lower socioeconomic statuses to practice higher levels of physical activity in everyday life. However, we do not find this same type of cultural experience in regard to physical activity and diet in the United States. It is only in this country that we find the exact opposite and low-income communities are subjugated to such an extent that healthy, fresh food is virtually inaccessible.

At the state level, North Carolina had the fifth highest rate of childhood obesity in 2007. Among North Carolina children ages 10-17, 20% were overweight and 14% were obese (United States). In a report completed by the North Carolina Department of Health and Human Services (NCHHS) in 2007, researchers implied that “high rates of overweight may be attributed to physical inactivity and unhealthy eating habits among youth in the state.” In 2006 alone, “one-third of North Carolina children typically consumed one serving or less of vegetables per day and one in three North Carolina children ate fast food two or more times per week.” NCHHS’s report additionally encouraged the notion that “sedentary lifestyles contribute to overweight and
obesity among the state’s children and youth [as]…49.9% of children watched more than two hours of television on a typical day” in 2007. These statistics are of serious concern for educators, community organizations and families of North Carolina and set the stage for why programs such as those that have become a part of CF/CIS’s community work are so very important. Specifically among children and youth, Obesity is associated with an increased risk of high cholesterol, liver abnormalities, diabetes, and becoming an obese adult. Obese children and youth may develop type II diabetes, high blood lipids, hypertension, asthma, sleep apnea, early maturation and orthopedic problems. In addition, a significantly higher percentage of adolescents who were obese had a claim for diabetes, asthma, or other respiratory conditions than did adolescents who were at a healthy weight. Despite medical advances, child life expectancy may be declining, due in part to an increase in overweight (United States).

Buncombe County has taken notice of these statewide issues and also recognized them as pertinent to the health status of youth within our local region. Following the release of its 2012 Community Health Assessment, Buncombe County Health Department included “Healthy Weight and Healthy Living” and “Children’s Health and Early Child Development” as two priority areas for the following year (Buncombe County Community Health Assessment 2012). In addition to obesity as an epidemic facing our local children, the health department’s report found that “25% of Buncombe County children are living in poverty” and among those living in this state of poverty, “children face greater morbidity and mortality due to greater risk of accidental injury, lack of health care access, and poor educational achievement.” Furthermore, “early (or prenatal) poverty may result in developmental damage and children’s age-five IQ correlates more with family income than with maternal education, ethnicity and single female-headed households.” CF/CIS takes these local realities seriously and understands that the communities they work with are those same poverty-stricken families and children in need of the greatest intervention.

The budget for these new program initiatives supports key partners and an evaluation component, which I have been given the opportunity of completing. Through the assessment of survey-derived data collected at the initiation of these program changes, I am in the process of conducting a formal evaluation to highlight the strengths, weaknesses and implications in an effort to demonstrate the degree of effectiveness and efficacy. It is a shared hope that collected data will reflect a positive impact of the program so that CF/CIS may garner future funding. This evaluation has the potential to demonstrate how the program is beneficial to the sustainability and improvement of the work CF/CIS conducts with the low-income communities at its three learning centers.

Methods & Work Undertaken

In completing the program evaluation for CF/CIS, I adhered to a framework of evaluation that is endorsed by the Center for Disease Control and has been incorporated as part of my educational experience in coursework specifically pertaining to community health promotion and health communication (Program Performance and Evaluation Office – Program Evaluation).
The evaluation process began with the development of the research plan, measures, and instruments. These steps took place prior to my joining the project.

The survey format used by CF/CIS was adopted from a framework created by the reputable organization, CATCH Kids Club, a think tank organization first established in Texas in the late 1980’s by the University of Texas School of Public Health (The CATCH Vault). CATCH Kids Club began with a series of trials assessing nutrition and physical activity interventions among youth in their local area. The initial study was “a multi-component, multi-year coordinated school health promotion program designed to decrease fat, saturated fat and sodium in children’s diets, increase physical activity and prevent tobacco use.” This initial work on behalf of CATCH was the largest school-based health promotion study ever funded in the United States of its time. Their initial trial involved a team of researchers from four different universities funded by the National Heart Lung and Blood Institute. The completion of their studies yielded successful results, leading to evidence indicating that CATCH “indeed decreased student fat consumption and increased physical activity among children and adolescents,” and led to further funding on behalf of the Texas Department of Health to disseminate their new evidence-based program in elementary schools throughout the state. CATCH Kids Club has since implemented their program in all fifty states, Canada and Armed Forces stations all over the world. As a research entity of their organization, “The CATCH Vault,” serves as a database for “communities to access and download a wealth of information and knowledge acquired over the years of developing and studying CATCH and childhood obesity.” Furthermore, these educational materials created on behalf of CATCH and now virtually available to community organizations have great credibility as their development has involved review by government agencies, universities, researchers, program and instruction developers and grant writers.

In using the CATCH Kids Club design of investigative research, Dr. Batada and CF/CIS formulated a set of surveys distributed to three groups associated with their learning centers: children enrolled in school levels kindergarten through second grade, children enrolled in school levels third through fifth grade and the parents of these aforementioned children. Survey assessments were performed in early January, at the start of the newly added FEAST and Five-Two-One-Almost None campaign interventions. These same survey assessments are planned to disseminate amongst the same three groups of participants at the end of the school year in May to assess the impact of the learning center program additions. For the purpose of this portion of the public service project, the first set of data was assessed through the collection of surveys and data organization through the online resource, Survey Monkey, by which data was entered and stratified to illustrate trends occurring within this community prior to the initiation of new program interventions.

Once I joined, the project consisted of organizing data collected through surveys, consisting of pre-program initiation feedback from child and parent participants of CF/CIS Learning Centers located at Deaverview, Woodbridge and Pisgah View public housing communities. Collected information included quantitative measures such as eating habits and amount of physical activity per week as well as qualitative measures including improved body image, self-efficacy and increased knowledge. It has been my responsibility to translate this preliminary raw data as part of a larger formal evaluative report that CF/CIS will be able to use in assessing and improving their program strategies and effectiveness. The evaluation will organize and demonstrate data
results in such a way that will encourage program corrections and improvements so that initial program goals can be better accomplished in the future and CF/CIS can request additional funding on behalf of local sponsors to sustain their newly incorporated and creative program initiatives.

The process of collecting and organizing this data consisted of meeting with CF/CIS’s Learning Center supervisor, Barbara Norton, in which program details and logistics were discussed and a plan of action for the successful completion of an evaluation was formulated. Through consistent communication with Ms. Norton and Dr. Batada as well as collaboration with students from Dr. Batada’s Health Parity course, we were able to collect and organize the data. Once data entry was completed with the support of these project partners, I then began to analyze the data and record and organize trends found among the three groups. As the first step in the formal evaluation process, these initial data serve as an important baseline reference and will be used for comparative analysis once the second set of data is collected at the close of the program in May. In organizing this baseline data I have been able to identify meaningful attitudes and practices in regard to nutrition, screen time and physical activity demonstrated by the CF/CIS learning center community. These initial trends will serve as a meaningful basis for understanding the impact that the incorporation of FEAST and Five-Two-One-Almost None will demonstrate at the close of the project.

In completion of the final evaluation at the close of the project, I plan to collect endline data in May and cross-examine the results with those reflected in the baseline collection. I will then begin to write a formal report to provide to CF/CIS that will follow the program evaluation framework endorsed by the CDC. I plan to work closely with my community advisors at CF/CIS to complete these final steps in the evaluative process and will continue to remain in consistent contact with them as I continue work on this project. Furthermore, a set of case studies of selected children and parents involved in the CF/CIS learning center program will be included in the final report but are currently still being worked on at the time of this paper writing and publication. These case studies have been conducted by UNC Asheville students currently enrolled in Dr. Batada’s Health Parity course as part of its service-learning requirement. These case studies were written following in-person interviews that addressed a series of IRB-approved questions in regard to what each individual’s experience with the CF/CIS learning center program is and what types of activities they are involved in.

**Ties to Academia**

In completing a formal program evaluation for CF/CIS Learning Center program, I have been able to directly implement knowledge and skills obtained from coursework within the Health and Wellness Promotion Department at UNC Asheville. In reference to the coursework of Health Communication specifically, I have directly incorporated the framework of program evaluation we were taught, one that is adopted by the Center for Disease Control and Prevention and commonly used among public health organizations in the United States. This framework follows a very distinct set of steps and incorporated standards in order to properly and thoroughly evaluate public health programs so that their efficacy, ethical integrity and sustainability can be properly assessed for the purpose of meaningful reflection and successful integration of existing and new program changes in the future.
In adhering to the CDC framework for my program evaluation of CF/CIS’s Learning Center program, I have considered the following steps:

1. Engage stakeholders
2. Describe the program
3. Focus the evaluation design
4. Gather credible evidence
5. Justify conclusion

While considering these six steps as a guide for my evaluation, I have also considered the following “standards” defined by the CDC as those by which programs must be evaluated effectively to ensure consistency and integrity in my work: utility, feasibility, propriety and accuracy. In considering these four standards in my evaluative process, I have been able to conduct an assessment that ensures my evaluation will: “serve the information needs of intended users; be realistic, prudent, diplomatic and frugal; be conducted legally and ethically; and consist of technically adequate information” (Miron).

However, despite using the very tangible tool of evaluation framework learned through my coursework with the Health and Wellness Promotion department, what I have been able to incorporate into my experience working with CF/CIS are the principles of working with community organizations directly as a health promoter. Through communication with CF/CIS, I have not only been able to apply what I have learned about community public health program structure and operation, but I have truly become involved in that very process. In Community Health Promotion: Theory and Practice and Health Parity specifically, we as health and wellness promotion students discuss the challenges that community organizations face when dedicated to working with communities representing disparity in health, socioeconomic status and access to health-related resources. And in working with the community addressed in CF/CIS’s work specifically, I have been able to reflect on the issue of childhood obesity and health in regard to social determinants from the perspective of those directly affected in my local area: the low-income children of public housing communities in Asheville. In understanding the limitations they specifically face in leading healthy, engaging lives I have been able to create a frame of reference that encompasses all stakeholders and community partners involved in the meaningful efforts of bridging the gap between social situation and health needs. Furthermore, the coursework of Health Parity and other equity coursework I have been involved with provided me with a keen understanding of the many factors that are associated with the relationship between low socioeconomic status and decreased level of health status. Through understanding this social determinant as means by which health is achieved and maintained, I have been able to understand the health status of CF/CIS learning center community as a result of systemic and institutionalized social situation rather than as a lack of initiative and responsibility of the community members themselves.

In Health Communication we discussed the various steps involved in the process of creating social marketing campaigns and the importance of specializing such campaigns to the specific needs, desires and identity of the audience for whom its message is intended. As part of this course I was directly involved in creating a social marketing campaign on UNC Asheville’s
campus and learned firsthand the steps necessary in creating a campaign for a localized community. In working with the *Five-Two-One-Almost None* campaign specifically, I have been reminded of these social marketing campaign principles and have considered the campaign through a critical lens in my personal assessment of its efficacy in reaching its target audience and appealing to the needs and behavior changes hoped for in the community it addresses.

### Challenges Faced and Responses to those Challenges

We learn in health and wellness promotion coursework that working with community partners in addressing the health needs of unique communities is no easy task. Communication and interaction with community organizations is something that varies greatly and is strictly dependent on the resources and organization available within such social entities. I have personally faced several challenges in my work with CF/CIS’s Learning Center program, but the process has been one that is eye opening and illustrative of how educational such an experience truly is in the development of my career as a health promoter.

Perhaps one of the most educational of realizations in working with CF/CIS has been understanding the inner workings involved in the process of community organization funding and program implementation. For example, upon receipt of the Mission Community Benefit Grant, CF/CIS was involved in a mandatory and lengthy application process by which they had to definitively and specifically outline how they, as a community organization, were deserving of such a funding opportunity and the reasons and plans by which they determined funding would be used in sustaining community engagement. In CF/CIS’s application they outlined the ways by which their organization would plan to use funding supported by credible evidence on behalf of their work and demonstration of appropriate and realistic goals they will strive to achieve. CF/CIS contended that upon receipt of the Mission Community Benefit Grant, they would conduct proper evaluation of newly added program initiatives through a series of three survey evaluations: one at the beginning of the program in September, a second mid-course evaluation in February, and a final survey evaluation at the close of the program in May (Ammerman). However, CF/CIS was unable to adhere to this initial plan due to the energy and time needed to initiate their program additions, which was further complicated by staffing changes. As a result of these changes, plans for assessing the partnership with *FEAST* and the *Five-Two-One-Almost None* campaign did not begin until December and CF/CIS was unable to begin preliminary evaluation through the dissemination of surveys until January and has since removed the mid-course evaluation component. As a result of lack of resources and time, CF/CIS has had to change their program structure in regard to evaluation. I have been able to work with CF/CIS despite these changes and, working together, we have configured how a meaningful evaluation can still be performed despite the changes in the course of the program implementation and grant funding.

In addition to dealing with the change of plans in regard to evaluation, I have come across challenges in understanding the demographical and systemic situation of the learning centers due to a lack of published research and information. However, I have overcome these lapses of accessible information through remaining in consistent contact with my community advisers, Natasha Adwaters and Barbara Norton. It has been through contact with the two of them via in-person meetings, email correspondence, and phone communication that I have been able to refer
to them for answers to questions that arise and explanation of program details when I have been unable to define them in my evaluation process.

Furthermore, in completing this project with CF/CIS as my Community Engaged Scholar public service project, I have also been working with them in an additional capacity as the Student Reflection Leader of Dr. Batada’s Health Parity course this semester. As one of the partnering community organizations of this service learning designated course, I have specifically taken on the responsibility of organizing the student group involved with CF/CIS and served as a resource for them in the writing of their case studies and as a peer liaison between them and CF/CIS. I have faced challenges specific to this leadership role in particular in terms of receiving consistent communication and feedback from the Health Parity student group. In addition, I became involved in the process of seeking IRB approval for the set of interview questions this student group used in the creation of their case studies and was forced to schedule their formal interviews around the waiting period of receiving official approval.

Results

In completing this program evaluation for CF/CIS, I truly found myself emerged in a unique and meaningful organization whose mission directly aligns with my passion for health equity and justice. Been given the opportunity to work with CF/CIS in particular, I have been directly immersed in the inner workings of a nonprofit public health organization whose purpose and community action is integral to understanding the application of concepts I have learned in my experience with the Health and Wellness Promotion department at UNC Asheville. In an effort to empower local youth and improve access to health-related resources among low-income communities, CF/CIS’s Learning Center program is a valuable and seriously important effort represented in my local Buncombe County community in addressing health disparities. Specifically in the area of children’s health, my partnership with CF/CIS has introduced me to current and successful community intervention work that is devoted to improving rates of child obesity through education of nutrition, food origins, physical activity and personal empowerment.

At the close of evaluating the first set of data collected from the preliminary surveys, I have observed gaps within the communities of CF/CIS’s Learning Centers, specifically in being able to access the needs for proper education and resources in practicing healthy nutrition and physical activity. The child survey data is the most striking, as it includes responses from all child participants of the CF/CIS learning centers, a total of sixty child participants. However the parent survey data are less valuable, but still meaningful in that it only represents about half of all parents with thirty-one parental responses. The number of parents actually involved in the learning center program exceeds sixty, as at least one parent of every child is directly involved with CF/CIS’s learning centers in a volunteer capacity. Despite the disproportionate turnout on behalf of parental responses, the data set as a whole is still largely illustrative of the experience this community has in regard to their relationship with food and exercise in their daily lives. All survey responses will be included as part of the formal evaluation report for CF/CIS, but for the purpose of this paper I have only included a select few to demonstrate the types of trends found within the baseline data.
Of the children surveyed comprising the school age group of kindergarten through second grade, participants reported the following:

Q14 On school days, how many hours per day do you usually spend watching TV shows or videos?
Answered: 43  Skipped: 2

Q12 Yesterday, did you exercise or participate in sports activities that made your heart beat fast and made you breathe hard (for example: basketball, jogging, fast dancing, swimming laps, tennis, fast bicycling, or aerobics)?
Answered: 15  Skipped: 8

Q9 Yesterday, did you eat fruit? Do not count fruit juice.
Answered: 15  Skipped: 6

Q8 Yesterday, did you eat French fries or chips? Chips are potato chips, tortilla chips, cheetos, corn chips, or other snack chips.
Answered: 15  Skipped: 3

Of the children surveyed comprising the school age group of third grade through fifth grade, participants reported the following:
Of the select parents surveyed, participants reported the following:
Sustainability

As previously mentioned throughout this paper, the public service project conducted with CF/CIS has been sustainable from the start, with plans to continue my relationship with them into the summer months. As part of the evaluative process, it is critically important that survey evaluation not only reflects preliminary data, but also includes results at the close of the program to ensure a thorough and comprehensive understanding of the program’s efficacy and implications within the CF/CIS learning center community. In continuing my work with CF/CIS past the timeline associated with this project component, I will be directly involved in sustaining the efforts of the community organization at hand to understand and improve their efforts in addressing health needs of their organization community.

The program intervention implemented by CF/CIS’s learning centers are also sustainable in its very nature as a program model that derives directly from research materials and resources that have proven successful in reducing childhood obesity and increasing knowledge of healthy
nutritional and physical activity habits. Adopting their program implementation framework specifically from the reputable organization, *CATCH Kids Club*, CF/CIS’s efforts align with research-based interventions such as those completed on behalf of CATCH that have indicated that physical activity and nutritional interventions among youth “indeed decrease student fat consumption and increase physical activity among children and adolescents” (The CATCH Vault).

**Conclusion**

In conclusion, my work with CF/CIS’s Learning Center program as a program evaluator has been an amazingly illustrative and meaningful experience. In having the opportunity to work with this community organization, I have been able to directly become involved in the process of program creation and implementation as well as understanding the means by which our local community partners dedicated to addressing health disparities are able to effectively incorporate creative strategies to improve the health of those they address. In working with CF/CIS and completing a program evaluation for their newly added program initiatives dedicated to improving their youth community’s knowledge and practice of healthy eating, physical activity and screen time habits, I together with the help of CF/CIS have worked towards understanding to what extent the unique community represented by the CF/CIS learning centers needs, responds to, and changes their lifestyle habits with the assistance of CF/CIS’s learning center program. It is through this knowledge and evaluation of CF/CIS’s work that I along with my community organization partner are working toward improving the lives of those we share a community with and provide them with the resources and health education necessary to live lives of quality, equity and representation.
Works Cited