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Impact of Social Connectedness Programs on Healthy Behavior Decisions Amongst
Adolescent Girls: An Evaluation of Ladybug for Girls Inc. in Atlanta, Georgia

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An abstract of
A thesis submitted to the Faculty of the
Rollins School of Public Health of Emory University
in partial fulfillment of the requirements for the degree of
Master of Public Health
In Global Health
2019

Abstract

Impact of Social Connectedness Programs on Healthy Behavior Decisions Amongst Adolescent Girls: An Evaluation of Ladybug for Girls Inc. in Atlanta, Georgia

By: Adamma Ibe

Background: Obesity is a widespread public health issue in the United States, particularly among adolescents. With the rate of obesity estimated around 18% among 10-17 year olds living in Georgia, the importance of healthy eating habits and physical activity cannot be stressed enough (The State of Obesity, 2018). The purpose of this project was to evaluate the Ladybug for Girls Foundation Inc. (LGFI) program and understand how social connectedness focused programs affects healthy behavior decision-making among young female adolescent participants of the LGFI program.

Methods: This was an exploratory qualitative research design, in which semi-structured in-depth interviews were conducted. A total of 24 interviews were conducted. All participants were selected using convenience sampling that were either past or current program participants, program sponsors, program implementers, or program founder. The evaluation team used qualitative data analysis methods including content and thematic analysis. This was done in order to identify key themes and provide evidence-based recommendations.

Results: The following themes were identified: shift to healthier diet, increased physical activity, exposure to new things, outgoing personality, new friendships, soft skills, improved academics and program critiques. In addition, six recommendations were made which included: increase in program frequency, hiring of full-time staff, earlier program start, expanding recruitment options, embedding monitoring & evaluation (M&E) into the system, and expanding the gardening program.

Discussion: Overall, the impact that the Ladybug for Girls program has had on female adolescent participants of the program has been positive. Students' knowledge about nutrition, physical activity, and gardening were enhanced. The implications of this for young girls includes: decreased risk of obesity and subsequent disease burdens, along with increased ability to make healthy behavior choices, increased life expectancy, autonomy, and self-confidence. In the context of current literature, the findings in this evaluation are concurrent with what other research suggests.

Keywords:

Evaluation, Obesity, Afterschool Program, Nutrition, Physical Activity, Gardening, Yoga, Adolescent Girls, Ladybug for Girls, Empowerment, Social connectedness, Healthy Decisions

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Acknowledgements

To all of my mentors, friends, and family, I am sincerely appreciative for your continued support and encouragement over this last year. Thank you for listening, providing feedback, editing chapters, and giving me the push to finish.

I would like to thank and acknowledge Trinita Ervin, the founder of the Ladybug for Girls program and her staff members for entrusting me to complete this program evaluation. It was my pleasure to conduct this research and I know that this organization will go far.

I am grateful to all of the research participants for their involvement in the evaluation and their willingness to share their experiences so openly. Without their engagement, it would not have been possible.

I would like to thank my research assistant Leah Jennings whose assistance was integral in the completion of this project. Finally, I would like to acknowledge my thesis advisor Fauzia Malik for her feedback during my thesis writing process.

Table of Contents

INTRODUCTION	8
BACKGROUND	8
LITERATURE REVIEW	13
METHODOLOGY	20
ANALYSIS PLAN	23
RESULTS	28
DISCUSSION	40
RECOMMENDATIONS	43
LIMITATIONS	48
CONCLUSIONS	49
REFERENCES	50

Introduction

Background

Obesity is a widespread public health issue in the United States, particularly for young people. The United States population is currently experiencing the highest rates of obesity in the history of the nation. According to the 2015-2016 National Health and Nutrition Examination Survey (NHANES), nearly 2 out of every 5 adults and 1 out of every 5 children, aged 2-19, were classified as obese. According to the Center for Disease Control (CDC), obesity is categorized as having a body mass index (“person's weight in kilograms divided by the square of height in meters”) above 30 in adults and above the 95th percentile in children. Typically, the body mass index or BMI is a screening tool utilized to assess an individual's body fat indirectly but is not indicative of the overall health of an individual. It doesn't take into consideration bone density, muscle mass, or overall body composition.

Two major sources of obesity are fast food and video games. Throughout the last three decades, the United States has experienced a significant increase in the number of full service and fast food chain restaurants (Johnson, 2012). In an almost \$200 billion-dollar industry, according to the North Ohio Heart Ohio Medical Group, 58% of adults dine out at least once a week on fast food and about 34% of children and adolescents consume fast food daily (Partners For Your Health, 2019). Coupled with decreased levels of physical activity, adults and children in the United States have continued to get heavier. According to a study conducting by the NPD Group, about 211 million Americans over the age of two play video games, making up about 67% of the population. Typically, playing video games

is a sedentary activity, and leaves users staring at a screen for hours. On average, this takes up about twelve hours per week of leisure activity time (NPD Group, 2018). Researchers have concluded that there is a need for more fun and active options for children to be engaged and stimulated away from a screen.

In Georgia—where the rate of obesity among children ages 10 to 17 is over 18% (The State of Obesity, 2018)— the importance of healthy eating habits and physical activity cannot be stressed enough. Innovative health programs have been developed to counter the rise of childhood obesity. One such program is the Ladybug for Girls Foundation, Inc. (LFGFI) afterschool program. Since its inception in 2008, LFGFI's goal has been and is to address the concerning rates of childhood obesity and decreased levels of engagement with physical activity among young girls compared to their male counterparts and to provide resources to improve the overall well-being of young children. LFGFI's mission has remained consistent: promoting "healthier lifestyles, building self-confidence, strengthening social awareness, and advocating for healthier environments locally and globally" (Ladybug for Girls Foundation, Inc., 2018). The hope is that each girl that participates will see herself as beautiful, strong and capable of taking charge of her health; at a young age, she will be equipped to carry this knowledge with her from adolescence through adulthood (Ladybug for Girls Foundation, Inc., 2018).

The purpose of this research was to evaluate the Ladybug for Girls program and assess the effectiveness of its social-connectedness programming model. T. Van Bel, et al defines social connectedness as "a short-term experience of belonging and relatedness, based on quantitative and qualitative social appraisals, and relationship salience" (T. Van

Bel, 2009). As a program focused on the specific concept of social connectedness, the evaluation team wanted to understand how social-connectedness-focused programs affected healthy behavior and decision-making among young adolescent girls who participated in this program.

LFGI works to “put the power in their girls’ hands” by way of three different programs, all of which combine education, health, and fun (Ladybug for Girls Foundation, Inc., 2018). LFGI started with 12 Liberian refugee girls at the Clarkston Community Center, and now has been able to extend their reach to help hundreds of girls in the metro Atlanta area realize their beauty, strength, and ability from the inside out. LFGI works to provide after-school enrichment programming and community workshops to instill messages of unity, self-empowerment, and healthy living for girls in elementary and middle schools.

In order to join the program, participants are recommended by their school counselors. The first program, Ladybug for Girls Club, is dedicated to teaching young girls healthy lifestyle choices, which include nutritional literacy, balanced/healthy eating habits, and the importance of physical activity. LFGI is committed to introducing, developing, and nurturing “transformational healthy life skills”, in order to ensure that the girls are learning healthy ways to live, not only in their present, but in their future as well (Ladybug for Girls Foundation, Inc., 2018).

The second program, Ladybug for Girls Yoga, not only provides an opportunity for the girls to be physically active, but also helps the girls become more comfortable with and aware of their bodies. According to the National Organization for Women, over 50% of girls have reported not being happy with their body image (National Organization for Women,

2019). The after-school yoga classes seek to target these insecurities. The girls learn a variety of techniques to manage their emotions, control their breathing, and increase their overall self-confidence. This in turn aids in the development of the girls' self-efficacy and mental strength as well as increasing their physical strength.

The third program, Ladybug Farm to School, like the Yoga program, actively engages the girls' participation. Through school gardens, cooking lessons, and partnerships with Georgia Organics and Farmer D Organics, among others, girls are exposed to information on our "food system, agriculture, and the environment" (Ladybug for Girls Inc., 2018). Farm to School works in such a way that allows the girls to get real life applications of the information learned in the nutritional literacy programming. The school gardens allow the girls the opportunity to experience the complete cycle of farming, from planting to harvesting plants, fruits, and vegetables. This offers a fun way for the girls to gain more insight into how different types of healthy foods are grown, while also teaching them a new skill and discipline in order for their crops to reach maturity.

In an effort to maintain the connection to their beginnings, LFGI also engages in global health education for girls. Worldwide, there are over 60 million girls who are not enrolled in school (USAID *'Let Girls Learn'* Factsheet). In 2017, LFGI was able to charter its first international chapter at the ICF Mission of Hope School in Bong County, Liberia, West Africa. Today, LFGI efforts have grown to reach numerous schools in not only Africa, but India as well. While the global programming includes similar information related to nutritional literacy, there is a bigger emphasis placed on advocacy, menstrual hygiene, and

Water and Sanitation Hygiene (WASH) related initiatives. These initiatives are guided by several United Nations Sustainable Development Goals (SDG):

- SDG #2 Zero Hunger
- SDG #3 Good Health and Wellbeing
- SDG #4 Quality Education
- SDG #5 Gender Equality
- SDG #6 Clean Water and Sanitation
- SDG #12 Responsible Consumption and Production

LFGI is continuing their work to ensure girls across the world are built up from the inside out to take control of their health and live strong and healthy lives. LFGI works to create a strong foundation on which these girls can build their lives on and help others to do the same.

Literature Review

The following section, will explore the existing literature on some pertinent ideas and concepts such as research on the health implications of obesity, prevalence rates, the disparities across genders, social determinants, guiding theoretical frameworks, psychosocial consequences, and benefits of afterschool programming.

According to the National Institute of Diabetes and Digestive and Kidney Diseases, research has shown that obesity is linked to several chronic health issues such as diabetes, heart disease, hypertension, arthritis, kidney disease, sleep apnea, cancer, and complicated pregnancies among women (The National Institute of Diabetes and Digestive and Kidney Diseases, 2015). With rates not showing any signs of a decrease, obesity is still a major public health issue. In the last 15 years, rates of obesity have increased nearly 10% among US adults, and 5% among youth, aged 2-19 (The State of Obesity, 2018). Nationally, within the United States, Georgia ranked as the 24th highest state for adult obesity, and eighth highest for obesity among adolescent youth aged 10 to 17 (The State of Obesity, 2018). The current rate of adult obesity is 31.6% in the state of Georgia, an 11% increase since 2000 and a 20.5% increase since 1990 (The State of Obesity, 2018). Unhealthy choices made during childhood have been shown to follow individuals into adulthood. In 2015, the CDC estimated that about 3,575,201 Georgian adults were considered overweight, and about 3,064,458 were considered obese.

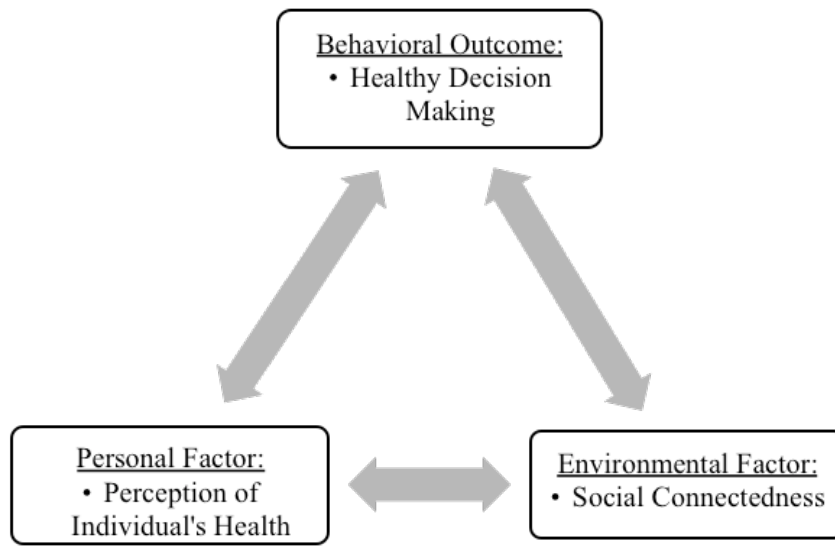
Research has shown that disparities exist between males and females, particularly in youth, when it comes to reports of obesity. While boys are often more likely to experience obesity in their youth, women are more likely to be obese during adulthood

(State of Obesity, 2018). Across the nation, 19.1% of young boys, aged 2-19 are reported as being obese, an 11% increase over the span of 2-3 years (CDC, 2018). 17.8% of young girls, aged 2-19, are reported as being obese, up 4% over the past 2-3 years. In 2006, Lule and colleagues reported that more than a third of the disease burden experienced by adults in the US could be traced back to behaviors that began in adolescence, such as unhealthy eating habits and substance abuse (Lule, et al., 2006). Considering the increased rates of overall (adult and childhood) obesity and physical inactivity, it is appropriate to assume that the contribution to disease burden is even higher now. According to the 2016-2017 National Survey of Children's Health, the highest rates of childhood obesity are concentrated in the southern United States (State of Obesity, 2018). Nine of the top ten states with the highest rates of childhood obesity among 10-17 year olds are in the south, with rates ranging from 15% to 26% (State of Obesity, 2018). These behaviors and outcomes both contribute to an overall decreased quality of life. There continues to be a gender gap in physical activity engagement and a lack of female-led resources to support girls in their achievement of optimal physical, social and emotional development.

Unhealthy behaviors have several influencing factors. For years, researchers have drawn on the social ecological model (SEM) to examine the relationship between personal and environmental factors and an individual's behaviors in order to develop interventions (Ohri-Vachaspati et al., 2014). As it relates to childhood obesity, there are individual factors at work such as sedentary lifestyle (watching television and snacking) and diet that are modifiable (Sothorn, 2004). Children's level of activity and the types of food they consume are largely attributable to their home and school environments. At the interpersonal level, children often receive the highest concentration of influence and direction from their peers

and immediate family. Generally, children are able to engage in physical activity through their social networks. Before the age of the Internet and other technologies, children would tend to engage with their peers in-person (e.g. playing outside together, sports, etc.).

In addition, the Social Cognitive Theory (SCT) can help guide research and the assessment to understand the connection between the social connectedness and the impact on healthy behavior choices. This theory suggests, “Evaluating behavioral change depends on the factors environment, people and behavior” (University of Twente, 2017). The conceptual model visualizes the reciprocal determinism within a triangular dimension, showing the relationship between individuals, their environment, and the behavior outcome (University of Twente, 2017). In the diagram below, healthy decision-making as it relates to the behavioral outcome refers to increased physical activity, making healthier nutritional eating choices, and engaging in healthy behavior choices. The perception of health as it relates to the personal factor, refers to an individual's own feeling or understanding of their personal health. Social connectedness as it relates to the environmental factor, refers to the type of environment an individual is in that may or may not foster a positive impact on one’s behavioral outcome and/or personal factor.



However, consequences of obesity are not just limited to physical complications. According to the American Psychological Association, obesity has also been linked to cause mental health issues such as depression (Weiss & Molitor, 2019). Though not the only factor, students who are perceived to be overweight and/or obese can also be targets for bullying. Children who are bullied can experience loneliness, depression, sadness, anxiety are at risk for mental health morbidity including suicide (U.S. Department of Health and Human Services, 2018). Bullying is defined as “when 1 or more students tease, threaten, spread rumors about, hit, shove, or hurt another student over and over again” (Youth Risk Behavior Surveillance System, 2017). Research has shown that bullying is a risk factor for suicide (Bullying Statistics, 2015). According to the Center for Disease Control (CDC), suicide is the third leading cause of death among the youth. With such a high incidence rate; suicide is a critical public health problem. Efforts have been taken to reduce the incidence of bullying, because victims and bullying perpetrators are at risk for suicide (Centre for Suicide Prevention, 2018). Signs and symptoms of bullying may not always be

easily noticed, such as embarrassment, low self-esteem, and hopelessness (Centre for Suicide Prevention, 2018). Understanding children's emotions and discussing their feelings may help in identifying children at a heightened risk for attempting/committing suicide (Underwood, Rish-Scott, 2011).

The importance of feeling connected is a powerful innate human need. Evidence has shown that there are underlying connections between a sense of belonging and overall health, wellbeing, and mental health. The Pfizer Medical Team defines social connectedness as "the measure of how people come together and interact". These interactions are what also tend to drive our behaviors as human beings (Pfizer Medical Team, 2018). If the individuals that a child is immediately connected to (i.e. parents, friends, and peers) are exhibiting behaviors that could lead to negative health outcomes, it is likely he or she will follow those same behaviors. The same is true if a child's interpersonal and community level connections promote healthy lifestyle choices such as healthy eating habits and physical activity.

At the community level, students' school and neighborhood environments can also have a strong impact on behavior. If youth are not involved in sports or other extra-curricular activities, a proven alternative to assist in their development is after-school enrichment programming. Students who participate in after-school programming tend to demonstrate higher levels of self-confidence and communication skills (Shernoff, 2010). Additionally, the interactions with faculty and peers helps to further develop interpersonal skills and what researchers call school connectedness. Often defined as "the belief by students that adults in the school care about their learning as well as them as individuals",

fostering school connectedness can serve as a protective factor to help safeguard against unhealthy or detrimental behaviors (Centers for Disease Control and Prevention, 2009). Across the nation, content programming varies in terms of what aspects of the enrichment process are prioritized. Some programs highly emphasize academic performance in the core subject areas (math, English, history, and science) and homework completion. While this is a necessity for students, making other aspects such as mental, physical, and emotional health a lower priority has the potential to be counterproductive (Huang & Cho, 2009). Others take a more holistic approach to learning and work to incorporate the numerous facets of health, wellness, empowerment, and knowledge.

It is imperative that youth are guided at a young age on the skills necessary to develop healthy lifestyle choices. According to the Centers for Disease Control and Prevention, many unhealthy behavioral habits develop during early adolescence (CDC, 2017). These habits are then carried through adolescence and into adulthood, where it is much harder to make significant behavior change. While equipping youth with the skills to lead healthy adult lives is critical, it is crucial to recognize the developmental gender differences that exist among youth. From a very young age, girls begin to experience various societal pressures that can play a large role in the development of their self-esteem and self-worth (or lack thereof). Often times, these pressures, largely unrealistic physical requirements, have the potential to lead girls down the path of several unhealthy behaviors such as eating disorders, risky sexual activity, and drug use (LeCroy, 2004). Boys do not experience these pressures in the same manner. This added layer of risk to girls' development is why all-girl enrichment programming is essential.

The goal of many girls-only enrichment programs is to empower their girls and to equip them with feelings of independence, assertiveness, and self-esteem (LeCroy, 2004). All-girl enrichment programming offers girls the opportunity to not only feel a sense of safety, but also a place where they can wholeheartedly be themselves without any fear of judgment (Sleeter, 1991), as is not necessarily the case with co-ed programming. Instilling knowledge tailored to girls' development, encouraging critical and abstract thinking, as well as a holistic approach to health education and promotion all work together to help young girls transition into and maintain a healthy adult livelihood.

Methodology

This section discusses the research methodology utilized to conduct this qualitative project. This includes information on the data collection procedures, sample population, data collection tools and design, data management, data analysis process, project objectives, and ethical considerations.

An overall exploratory qualitative research design was developed. Data was collected in the form of semi-structured in-depth interviews. A total of twenty-four (24) interviews were conducted. All interviews were conducted during November 2018-February 2019. Given participant's unique experiences within the program, in-depth interviews allowed participants to provide their emic perspective, including their opinions, feedback, and experiences in greater detail. Student participants were selected using convenience sampling, which is a "specific type of non-probability sampling method that relies on data collection from population members who are conveniently available to participate" (Saunders et. al 2012), or who have a strategic role to play in the program design and implementation. A list of past and current student participants was provided by the organization where their contact information was given to the evaluation team; contact information was also given for program implementers and sponsors. The inclusion criteria for the evaluation project required that program participants were female adolescent girls who had or are currently participating in the Ladybug for Girls program in the metro Atlanta area prior to March 2019. Students were aged 10-18 and there was no race, ethnic, or religious restriction. Participants had to be able to communicate in English. Also interviewed were program implementers, program sponsors, and the founder of the

organization. Each participant was contacted by email and/or by phone and notified about the evaluation project being conducted and was asked to participate. Interviews were therefore scheduled at day and time most convenient for the participants who were available and willing.

(1) Program Founder: Establisher of the Ladybug for Girls Organization.

(3) Program Implementers: Volunteer staff that facilitates regular school-based programming including those who run the yoga club and garden club.

(3) Program Sponsors: School staff members that support the logistical needs of the program at their respective school site.

(9) Past Participants: Students who engaged in the program prior to 2018.

(8) Current Participants: Students who are currently engaged in the program during the 2018-2019 academic school year.

All student participant interviews were conducted over the phone at a designated time that was agreed upon by participants. Two of the program implementer interviews were conducted in-person at a pre-determined location and designated time agreed by the participants. All interviews were conducted in English and all participant responses were kept anonymous. All interviews were recorded in order to accurately capture participant responses. Only the evaluation team (one researcher and one assistant) had access to the audio files. Audio was downloaded to a password-protected computer for data analysis. The data collection instrument utilized consisted of multiple different versions of semi-structured interview guides that contained a series of open-ended questions. Each

interview guide had questions, which were tailored depending on the participant's role as a student, implementer, program sponsor, or founder. In order to gain deeper understanding, clarity, and to further the conversations and facilitate deeper, more detailed responses, probing was utilized.

The data collection tool simple served as a guide and was modified when necessary to adapt to the natural flow of the conversation and to prevent repetition. However, the content and structure of each interview guide was consistent. The interviews included opening introductory questions, pre-program affiliation and/or post program affiliation, personal experience, feedback and closing questions. Each interview guide consisted of about 15-20 questions. These questions were in relation to a participant's role and/or nature of affiliation with the organization, experiences with the program itself, perceived impact, feedback and/or recommendations about the program. Questions were targeted to better understand the objectives outlined for this evaluative project.

An allotted time of one hour was designated for each interview but some variation occurred. Audio recordings were transcribed, and participants were de-identified. These de-identified transcripts were then coded for thematic data analysis across the participant pool to gain insight on the student participant experiences. After data analysis and the evaluation were complete, all audio files were deleted.

After submitting a determination application, it was determined that IRB approval was not required for this evaluation project. As this project consisted of a program evaluation at the request of the Ladybug for Girls Foundation Inc., it was not considered human subject research. Information collected during this evaluation process will not be

used as generalizable information, nor is it a clinical investigation. There were no risks identified for any of the participants.

The main objectives for this evaluative research was to:

1. Understand the types of knowledge students gained through their participation in the Ladybug for Girls programming
2. Understand the impact the program has had on students and how students were able to apply what they've learned to their daily lives
3. Better understand how the social connectedness model impacted students' personal relationships and interactions with others
4. Compare and contrast students' personal physical activity, nutritional habits, and behavioral changes prior to joining the program to after "graduating" the program
5. Identify programmatic modifications that participants desire and/or believe would strengthen the program

Analysis Plan

The evaluation team used qualitative data analysis methods including content and thematic analysis. The evaluation team transcribed all digital recordings from in-depth interviews. Generated codes were utilized to identify each transcript so that participants' names were not used. All qualitative data was organized and analyzed using MAXQDA software. Qualitative research utilizes non-quantifiable methods. In more general terms, qualitative research seeks to explain the "how?" and "why?". MaxQDA is a computer software package for qualitative and mixed methods research (MaxQDA, 2019). It allows

researchers to systematically collect, organize, analyze, visualize, evaluate and interpret data (MaxQDA, 2019).

In congruent with the methodology that the Center for Innovation in Research and Teaching at Grand Canyon University has for qualitative data analysis, five key steps were utilized in order to thoroughly examine the data collected.

1. Familiarization of the data. This involved thoroughly examining each interview transcript and noting impressions, looking for meaning and determining focal aspects.
2. Narrowing analysis objectives. Key questions and responses were identified through the analysis to focus on the key objectives of the project.
3. Categorization of the data. This refers to coding the data, which is a way to index the data. 'Codes' consisted of words and/or phrases that symbolized a concept or theme. Patterns were identified that consisted of a variety of behaviors, opinions, interactions, and events. Each of these "codes" was applied to segments of every transcript in order to simplify the retrieval and organizing process.
4. Pattern Identification. At this stage, relationships and themes were identified from the transcripts of each interview and an effort was made to ascertain explanations. There is no singular technique to generate findings, however, identified effective methods described by John Dudovskiy from Research-Methodology.net were utilized:

- **Word and phrase repetitions** – this included scanning each transcripts for common words and/or phrases used by participants, such as sisterhood, fun, and changes;
 - **Primary and secondary data comparisons** – comparing the findings from interviews with the findings from the literature review and assessing differences and/or similarities, such as past-post nutritional and physical activity habits;
 - **Search for missing information** – discussion about aspects of the issues not mentioned by participants, despite expectations, such as critiques;
5. Data Interpretation and Explanations. After all the themes were identified, the evaluation team attached meaning and significance to the data. It is important to highlight that qualitative data is not generalizable across populations but can help understand ideas and thoughts of specific groups and/or communities. At this stage linkages were made between the results and project objectives. Quotations from the transcripts were used in order to highlight major themes within findings.

The evaluation team used inductive and deductive techniques to identify codes and develop a codebook. Deductive techniques derive information and data from the literature and theoretical framework, these are topics and/or ideas that were expected to be seen. While inductive techniques seek to generate new themes that emerge from the participants' transcripts that may be unexpected and came from re-examining the data repeatedly. Using the software, memos were utilized to organize themes and sub-themes.

Once the themes were developed, they were applied to assess the evaluation areas of interest.

Before identifying these key thematic areas, it is important to understand how these areas were assessed. The five categories described below were fundamental to this assessment.

Types of knowledge

In order to understand if the program objectives were being met, participants were asked to describe the types of things they learned as a result of being a part of the program. This included but was not limited to questions about topics covered, new information gained, participation and experience with the yoga, garden clubs, and field trip excursions.

Application of lessons learned in student's daily life

The aim of this program is to effect behavior change among participants. After learning from the program, participants were asked how they applied the knowledge gained in their daily personal lives. They were asked to provide examples of how their behavior changed and what they have permanently adopted into their lifestyle.

Students' personal relationships and interactions with others

With social connectedness being integrated into the programmatic model, the evaluation team wanted to better understand how participants' relationships with

others were affected. Students were asked how they shared information with others; how their behavior (personality wise) changed, if at all; how they engaged with their peers; and how they would describe their overall experience participating in the program.

Changes in behavior, personal physical activity, and nutritional habits

In order to understand the behavioral effects in more depth, participants were asked to describe their nutritional and physical activity habits prior to joining the program and after program completion.

Desired programmatic modifications to strengthen the program

To aid in identifying areas of improvement, participants were asked to share things they would add, change, or remove from the program. This feedback provided insight into what was going well and what could be improved on in the future.

These five categories informed the interview questions developed by the evaluation team.

Results

This section discusses the results gathered from the data collection process. Results are grouped into eight specific thematic areas that have significant program implications.

Through in-depth interviews, the evaluation team gauged the impact that the Ladybug for Girls program has had on young adolescent girls and the effectiveness of the program model as a whole. With a total of 24 interviews conducted and analyzed, eight themes have been identified. Though some of the ideas between participants are similar, there are nuances in how participants applied or experienced events. Participants appreciated that time was taken for their voices to be heard.

Shift to Healthier Diet

With nutrition being one of the pillars of the program, it was no surprise for changes in nutritional habits to be noted. A number of participants described their past eating habits as consisting of a high consumption of junk food and snacks. In contrast, after participating in the program, participants stated that they incorporated more fruits and vegetables into their diet; they were more cognizant of the foods that they consumed.

I used to eat like a lot of junk food but after the Ladybug for Girls program, I find me being more healthy and thinking about what I eat.... I eat more fruits and vegetables. —Participant M

[I ate] snacks every day. I don't remember the last time I ate an actual good meal...but it's good. It's better now...I prefer fruits, water and everything basically over anything remotely to do with chocolate honestly...because they taught me that yes you can [have] fruits and water, and vegetables can be delicious. —Participant J

"I eat more vegetables than I did basically. It's more healthier. And not more junk food. —Participant P

Participants overwhelmingly described nutritional knowledge gained through their involvement with the program. Prior to joining the program, several participants would skip breakfast and eat sweets and nutrition-absent foods. Through activities—such as gardening, culinary cooking classes, and group discussion—participants chose to make modifications to their diet as a lifestyle change. Students also described learning how to understand nutritional labels and what to be aware of when making decisions about what to consume, such as the number of calories contained. A key word that recurred was "balance," as in how to eat a balanced diet.

And I also learned that I should keep my calories balanced and not go over what is supposed to be.... I reduced my junk food and I started thinking about what I should eat and keeping my calories in check. —Participant M

I learned to have a balanced meal. They also taught us that while I was at Ladybug... to always have...like not just a plate full of sweets and sugar...to always have a different like meats and vegetables and just have like a colorful plate is what they taught me. —Participant F

“I would describe my nutrition as... better because I’m balancing out the foods that I shouldn’t be eating like [spicy] foods you should not be eating [too much] because it will mess up your system inside your body and it could make you [go] in the hospital. —Participant Q2

I learned what foods are healthy for you and what foods weren’t. —Participant L

Ultimately, students attributed their shift to a healthier diet to the program. The data shows that participants not only learned about nutrition but learned how to apply the information. As children, the students are not typically responsible for the meal planning in their homes, however, participants requested healthier foods from their parents. The effects of nutritional learning go beyond the individual to influence entire households.

I didn't really eat a lot of vegetables or fruits like that. I would eat them some of the time but not like a lot. But like now, I love fruit like I will always ask my mom to buy

me a cup of fruit every single day so I can eat some fruit and vegetables...stuff like that...just in case I get hungry, instead of grabbing chips.... —Participant L

I feel like I ate more fruits and vegetables than I did before and I helped my mom cook a little more. I found that cooking was fun and I did not know that before the program. —Participant G

Increased Physical Activity

Physical activity is another pillar of the program and increased physical activity was noted among many participants. This included incorporating what was learned in the Ladybug for Girls yoga club. Students mentioned learning the recommended amount of time needed for good physical health.

“... I learned in the program it was important to have at least one hour of play time or exercise each day...” —Participant B

Participants transitioned from passive to active physical engagement. This active engagement often occurred outside.

Before I just liked to sit in front of the TV and watch TV or play on my phone, sleep and just be a couch potato all day... [after] I started being more physical. I played outside more. Exercised and I did more activities than I did before. Sometimes I played basketball with my brother and rode my bike around the neighborhood, jump on the trampoline. Me and my brother we did races. And we went on walks around the neighborhood...I joined gymnastics and I did more stretching. I got more flexible. —Participant M

Before I only went outside one time a day. Now I'm going out like 3 times a day. I get off the bus and I have to walk home so I feel that's a physical exercise too. I jump rope and I cheer. I run around. I play with my dog. —Participant P

The yoga club empowered students to work on their body positivity. It also allowed participants to channel their worries, frustrations, and stress in positive ways. It provided students with techniques to manage and deal with difficult situations.

I learned that it [yoga] was really relaxing. You don't have to be so flexible to do it. It's not that hard; it's kind of easy. And it's just like you can let loose so you can calm down and not feel stressed...so that you can do it before a test or after. After a long day of work or school or something like that. —Participant L

Students mentioned various activities that they played, sports that they ventured to try out, and even engaging their family members to participate in activities at home with them.

I wouldn't want to get into any actual sports besides dance at the time. But I actually ventured out and tried a sport, which was volleyball and tennis. And I actually loved it. I hated exercise. Through the program, they taught me that it's actually really good to do that. I could lead a longer life maintaining those sports each year. —Participant J

Participants' views and understandings of exercise were expanded. Typically, participants' idea of exercise involved a gym, exercise equipment, and daunting tasks. Their understanding of the importance of exercise shifted.

I'm working out more [than] before, I wasn't working out because I didn't really think we needed it but now I know that we need the exercise in our bodies. —Participant Q2

Their expanded view of physical activity involved active play, which was fun and enjoyable. Changing the narrative of exercise made it easier for participants to want to be more active. Some described it as “play time”.

...[B]eing active around the house since it's getting cold now—I just get active in the house and I start rolling around with my dog... I sometimes go up to my sister's house and play with my baby niece. She's almost two years now...and it's like really fun...it gets me to run, jump hop...and my sister has a crazy dog that runs around and chases me and stuff.” —Participant B

Exposure to New Things

Students acknowledged being exposed to new things, such as trying new foods, engaging in new sports and/or activities, and learning things they had not thought of trying before.

So there are vegetables that they haven't tried yet. I mean we just harvested radishes and it was so fun because radishes turned bright red and they stick out the ground...we washed it, cut it up, and they all tried some and said it was really spicy. And then the next week they wanted to try more radishes. —Participant I/Program Implementer

[My nutrition was] a lot different than [it is] now...then I wasn't willing to try new things. I wasn't really good at trying new vegetables and things like that. Now [I'm] very willing to try. —Participant Q

Students often had preconceptions about how “fun” an activity might be. Students were surprised by their enjoyment.

“I found that cooking was fun and I did not know that before the program.” —Participant G

Exposing students to new ideas, topics, and activities not only expands their perspectives but also allows them to gain insight into themselves. As facilitators of cultivating new interests among the students, program implementers encouraged students to place their own value on activities and find their own sense of purpose.

I think their awareness of eating better and tasting...you know they've been tasting the vegetables that they may not have otherwise tasted...and probably opening up on the variety of things that they would be interested in the future for their families and for them. —Program Sponsor

Students were captivated and invigorated when they were provided fun opportunities to think critically and make connections.

I learned how to take care of plants and how to see what soil is right, how to remove plants from the roots without hurting or killing some. I learned how to plant a plant... What I got out of it was like we shouldn't just like pull out plants or like cut down trees just because we feel like it. We need to actually think about the plants before we do or like remove properly so if we want to replant them, we can. —Participant M

This level of engagement not only promoted the personal development of each student but also helped her sustain motivation when trying new and/or challenging things.

Students described higher self-efficacy and self-awareness. The field trips provided by Ladybug for Girls enriched students' experiences by giving more depth to the programming.

[The golfing field trip] gave me like a sense of knowing that, like trying new things because I probably wouldn't have tried golf because it looks pretty boring but it's actually pretty fun to play. —Participant 1

This sense of self taught students to have more empathy towards their peers, increased awareness of options and pathways for their lives, and exposure to things that they had never experienced before.

Outgoing Personality

Several students characterize themselves as shy individuals with not many friends at school. After the program, they became more comfortable with one another, and spoke out more. This behavior continued outside of the program and even in the classroom. Higher participation in class activities and engagement with siblings and friends were just a few of the social behaviors participants noticed.

It made me be more social. Because before, I didn't like to talk to people, but now I have a lot more friends...ever since I joined the Ladybug club...I became more active and like I used to be shy and now I talk a lot...actually too much. —Participant M

I was very anti-social...so being in the program has made me social and I could say I struggled with it a little bit...but the program has really helped me open up to other kids...and I really love that. —Participant J

These personality transformations were heavily connected to the next theme of "New Friendships." Students described opening up more and becoming more vulnerable in order to build real lasting relationships with their peers. Program implementers and

sponsors noticed students were more sociable and communicative not only with one another but also with their teachers. Students who seemed to be more self-isolated were now connecting to others on a more personal level.

Social connectedness is more than just the relationship that individuals have with others; it also affects the relationship they have with themselves. Students describe positive personal changes and transformations.

New Friendships

Part of the social connectedness model that the Ladybug for Girls program incorporates is fostering new and lasting relationships and bonds among the students. Students have described forming a sort of "sisterhood" within the program. Friendships formed in elementary school have been maintained into high school. This connectivity and friendship has had positive effects on the students.

Like all the people who were in the group, I still talk to them now. We became like a little sisterhood. It was really fun like I expected to come out there just to learn a few things like you know there to learn stuff and having a bunch of friends and new best friends. —Participant L

Very important to just drop your guard sometimes and just let others get to know you [and] just open up to others. So that's very important to form a good friendship.... Overall it was great. I had a lot of fun and people who were in the little group we're still friends to this day even though I've moved, some of them have moved we're still in the same area but we moved kind of but we're all still connected and we talk every now and then I feel that really left a mark on us and we've always kept each other close. And so I feel that was very important. And overall I've had fun and I still have the other girls and I'm glad. I was glad to be part of it. —Participant F

In relation to the social cognitive theory, social connectedness is the environmental factor that can affect one's own perception of one's well-being, which in turn leads to how one makes decisions about one's health. The negative effects of peer pressure are well

known, but what is often not analyzed are the positive effects that peer connection can have. With the innate human need of connection, social connectedness is heavily focused on interpersonal interactions. Program implementers described the role that these interpersonal interactions had on the students.

I was actually pretty amazed to see how interested they were in the topic and you can see bonds starting to form between the girls because not all of them know each other. So starting to see new friendships built, starting to see them being more comfortable in themselves, willing to speak in front of the class. I'm always trying to get them to present to each other and practice being good listeners and good audiences. — Program Implementer

[I] think they all kind of feed off of each other and they're becoming friends and growing closer.... So that social connection aspect is definitely there and they're learning and excited together. —Program Implementer

Ladybug for Girls provided an open space for girls to feel free and uninhibited. With the constant reminder of eating healthy and the importance of exercising regularly and loving yourself, students became accountability partners for one another.

It's an opportunity to make new friends and get closer to friends that you already have because it's like working with a group of people that you can encourage each other to get stuff done and help out. —Participant 1

Students describe telling their peers that they are "beautiful," engaging with their siblings at home more, and feeling, overall, more connected. After completion of the program, several students characterize themselves as role models who consequently must make the right, exemplary choices.

Soft Skills

Aside from the three programmatic pillars of the organization, the aims of the program include personal development. Students mentioned distinct characteristics that can be defined as soft skills, “personal attributes that enable someone to interact effectively

and harmoniously with other people” (Oxford Dictionary Online, 2019). Students note several soft skills, such as self-confidence, ability to work in teams, leadership and advocacy. Students described having the courage to speak up against bullies and stand up for those who cannot stand up for themselves.

Communication

Communication is key especially working with others and being in an environment like that you have to have a plan. We always go in with what we needed to do and how we are going to do it. And that was a really important factor that we need to consider while doing that. —Participant F

Teamwork

I learn[ed] about teamwork... Yeah it has helped me to stand up to bullies... some other people where they would call other people names like that...like really mean names I'd say how would you feel like if someone called you that? And so...so they stopped. —Participant B

When I'm doing like a lot of group projects or something, instead of getting frustrated with people who are not doing their work, I just like remember to stay calm...use teamwork don't like try to take charge and be bossy. Like being leader, don't be a follower... I learned that it's just good to be you. Relax, calm down. Don't freak out or don't rush...just stay calm and everything will go right. —Participant L

Leadership

I'd say I have definitely improved since I was in elementary school because not only do my friends notice it but my teachers notice it as well especially like during conferences or whatever. My teachers...they'll say... I realize that [I am] is a very good leader and she knows how to really work a crowd... I feel characteristics of being a leader is being humble and including others not just being so like 'it's all about me.' Include others and be willing to listen to others as well...that's very important and to be fair and just relatable. —Participant F

Assertiveness/ Advocacy

I learned that helping keep on helping other people is better than helping yourself first. Before I still did help other people but I help other people more as I used to do before. —Participant C

Improved Self-Confidence

...[S]elf-love and all that. I don't know it's like very vague in my mind but I remember we were like just dancing around with like some ribbons and I think they really talked about loving yourself and you know loving the way you work and all that stuff. And yeah I think it really made a big impact on my young self. —Participant D

Every student described their personal growth as something that would stay with them into adulthood. These are life skills that are taught experientially, not through a book or lecture. Through a variety of activities, games, and workshops, students were provided with a chance to collaborate and cooperate with their peers in a new way outside of the traditional classroom. Students mentioned that the prospect of gaining these skills was the reason why their parents wanted them to be involved with the program. The aim of the program is to equip students with the necessary skills to make lifestyle changes that will positively impact their future. This program worked on building up the whole student, physically, emotionally, and mentally.

Improved Academics

With the personal growth that students have attained through participation in the Ladybug for Girls program, students and program sponsors have noticed academic improvements. Student discipline and focus have increased in the classroom as well. Along with prioritizing their health, students also prioritized academic success.

I've noticed that I haven't been getting in trouble at all. I've yet to get in trouble and I'm actually pretty proud of myself. My grades are pretty good. I'm pretty proud of my grades as well. —Participant L

During that time I was struggling a little bit [in school] because of my schedule...and certain subjects. And now I can really take away that they really taught me how to put things first. How to study and everything like that. —Participant J

Because sometimes I didn't have really good grades. But then when you do activities, sometimes we do activities, it helps you bring up your grades because you're more focused. —Participant C

Though not a direct goal, students and program sponsors observed improved academics and classroom behavior.

...[A]nd your grades do improve. Like the program like encourages you to try and get your grades good, try to turn in your homework on time, try to do everything that you need to do. —Participant L

Program Critiques

In order to identify programmatic modifications that participants desired and/or believed would strengthen the programs, they were asked to share their opinions on what they would modify about the program in order to improve it. Responses ranged from changes in program frequency to emphasis on particular topics.

Well I would just add more time to the program...like 30 more minutes because I feel like it goes by quick...I've enjoyed it so much that I don't even know what time it is. —Participant P

I would add more hands-on things. Maybe connected to science because that's one of my favorite studies. So I would add like science and art...I would like [it if] we could paint or find out [about]...like engineering and science...making things and putting things together. —Participant U

[M]aybe just put a bigger focus on the self-love part because I think that's the big problem that a lot of girls have and that even including like lifting each other up as a form of loving herself. So I think I'd be really great to teach the girls. —Participant D

Many of the suggestions were more on the session frequency. A majority of participants felt that sessions should be held weekly instead of biweekly. Additionally,

from a programming perspective, an earlier semester program start would provide more opportunity to for students to enhance their learning.

...[I]nstead of being the second and fourth week of every month, I was thinking if you can do it like every Friday, [because] on the first and third Fridays that we wouldn't go to the ladybug program, I feel empty because I really liked it and it would help me learn a lot. —Participant B

I would start earlier. We started...I mean it's tricky because just based on the school's schedule you have to start the garden club a little bit later. But I didn't have the first session until maybe early October. And at that time it's just a little bit too late to plant any fall crops. And so you're limited to just winter crops. —Participant I/Program Implementer

Increasing the program frequency would allow more time to embed concepts and ideas into the minds of students and give more time to address topics in greater detail.

Other suggestions were about the recruitment process. Currently, programs are by counselor referral and/or application based. Students love the program so much that they have shared and recommended it to others. However, not all students interested are selected to participate.

I would probably put more people or be able to add more people in there and not just like 12 girls I think...12 or 14. And make more people do more things that other people want to do to come and participate...because not all the girls there were very nice and so I wanted people that were nicer. —Participant N

Though students are unaware of the feasibility and staffing implications, it is important to recognize that there is a high demand for this program and that many others would like to join.

Discussion

Overall, the impact that the Ladybug for Girls program has had on adolescent girls who have participated in the program has been positive and well rounded. Although, subjective in nature, the results show that almost every aspect of students' health related social lives were impacted. Participants demonstrated an increase of health knowledge, attitude, and behavior. Although this evaluation was a small-scale project, it still yielded promising results. It would be worthwhile to expand these efforts into a large-scale project in order to clearly support the outcomes with statistically significant evidence. That said, there was clear evidence that students' knowledge about nutrition, physical activity, and gardening were enhanced. The implications that this knowledge has for young girls is a decreased risk of obesity and subsequent disease burdens and an increased ability to make healthy behavior choices that lead to a longer life expectancy and more autonomy and self-confidence.

The findings in this evaluation are concurrent with current literature and what other researchers in this fast-evolving approach suggest. In 2014, Ohri-Vachaspati et al. examined how the layers of the social ecological model could be used to explain and provide reasons contributing to a child's increased weight. Children's weight status was influenced by more than just the individual factor. Results showed that "parental perceptions of their neighborhoods, parent demographics and neighborhood characteristics made the strongest contributions to predicting whether a child was overweight or obese" (Ohri-Vachaspati et al., 2014). These delineations relate to the interpersonal and community level factors. Evidence has shown that targeting these levels

of influence in conjunction with health education has direct correlation to reducing the incidence of obesity. Programs like the Ladybug for Girls are effecting change in such areas. With the disparities of obesity across genders, female-enrichment programs have become even more important. In 2010, Singh et. al., researchers from the Health Resources and Service Administration concluded that in the United States, the percentage increase of obese girls had more than doubled that of obese boys. Secondly, the prevalence of overweight and obese children was higher in the southern states (Singh et. al, 2010). Geographic disparities were explained by various social determinants such as: social economic status, television viewing time, promotion of unhealthy foods, and access to recreation facilities and sidewalks (Singh et. al, 2010). The social cognitive theory provided a framework to understanding the linkage between social-connectedness and the impact on healthy behavior choices. The perceptions that students initially had of their own health evolved when they engaged in their expanded social circle of the after-school program. Students were influenced to make changes to their food choices, physical activity engagement, and behaviors and/or attitudes about personal health and well-being. The Ladybug for Girls program fills a gap that has been missing for school-based girl-focused health interventions. As far as the economic burden of disease, prevention programming is more cost effective in the long run. According to a report published by the Milken Institute "America's Obesity Crisis: The Health and Economic Costs of Excess Weight," over a trillion dollars are spent to cover the direct and indirect cost of obesity. In Table 1 below, the Milken Institute provides a breakdown of cost by chronic diseases.

TABLE 1**Total Costs of Obesity and Overweight, 2016**

Condition	Costs (in \$ Millions)		
	Direct	Indirect	Total
Alzheimer's and Vascular Dementia	\$73,572	\$32,606	\$106,178
Asthma and COPD	\$10,564	\$16,234	\$26,798
Breast Cancer	\$5,900	\$3,669	\$9,569
Chronic Back Pain	\$38,476	\$217,291	\$255,768
Colorectal Cancer	\$6,151	\$5,425	\$11,576
Congestive Heart Failure	\$5,201	\$2,039	\$7,239
Coronary Heart Disease	\$22,700	\$39,315	\$62,015
Diabetes (Type 2)	\$120,707	\$214,500	\$335,208
Dyslipidemia	\$28,619	†	\$28,619
End Stage Renal Disease	\$3,716	††	\$3,716
Endometrial Cancer	\$189	\$158	\$347
Esophageal Adenocarcinoma	\$970	\$92	\$1,061
Gallbladder Cancer	\$22	\$17	\$39
Gallbladder Disease	\$26,863	\$27,401	\$54,264
Gastric Cardia Adenocarcinoma	\$1,433	\$136	\$1,568
Hypertension	\$29,323	\$432,230	\$461,553
Liver Cancer	\$87	\$67	\$154
Osteoarthritis	\$86,480	\$215,303	\$301,783
Ovarian Cancer	\$1,152	\$152	\$1,304
Pancreatic Cancer	\$146	\$738	\$884
Prostate Cancer	\$1,983	\$13,411	\$15,393
Renal Cancer	\$2,254	\$559	\$2,813
Stroke	\$14,148	\$14,527	\$28,674
	\$480,655	\$1,235,869	\$1,716,523

† Included in heart disease, diabetes, and stroke.¹

†† Included in diabetes and hypertension.

Source: Milken Institute.

In broader terms, this evaluation serves as a tool to promote the program to prospective donors. In the 11 years that the program has been running, this is the first impact evaluation that has been conducted. This data shows what students are gaining from this type of programming and the need for expansion. Currently, the program is being implemented at two schools and a community center within DeKalb, Fulton, and Gwinnett counties. In the time that the program has been running, the Ladybug for Girls program has reached over 600 girls. As the founder of the organization, Trinita Ervin has personally spent between \$80,000-\$90,000 in order to fund the program. Over the years, the organization has worked diligently to foster partnerships with local organizations, such as

the Center for Civic Innovation, Emory University School of Medicine and School of Public Health, Georgia Organics, the Junior League of Atlanta, and Food Well Alliance, among others.

Moving forward, more data is required to fully assess the trajectory of health decisions adolescents make into adulthood. In order to analyze the long-term effects of after-school programming, more evidence-based longitudinal studies would need to be conducted. These studies would provide ongoing insight into the decision-making processes that lead individuals to have beneficial health outcomes.

Recommendations

As a required special studies project section, recommendations were informed by compiling a synthesis of the findings and scholarly literature. The recommendations are designed to match the organization's aims to be stronger, more efficient, and expand its reach. The evaluation team has created several recommendations. Feasibility for some recommendations may be low but were included at the request of the organization's founder. Recommendations fall into six major categories.

Increase in Program Frequency

Currently the program runs biweekly, but it is suggested that the program consider changing to weekly sessions. Not only is there a high demand for more sessions but also this modification would allow for more time to be spent on important concepts. Increasing the frequency and duration of the program would provide students with more learning opportunities.

Several sources cite direct linkages between frequency and duration of afterschool programming to positive student impact. “A Summary of Formal Evaluations of Afterschool Programs’ Impact on Academics, Behavior, Safety and Family Life,” a report conducted by Afterschool Alliance in March 2015, compiles these sources. According to an evaluation conducted of the Boys & Girls Clubs of America, “[Y]outh who attended the Club with greater frequency were more likely to report an increase in school effort and academic confidence and a decrease in the number of times skipping school” (Afterschool Alliance, 2015). Similarly, the American Institutes for Research observed “students participating in the program for 30 days or more saw a 6 percent decrease in their disciplinary incidents, compared to their non-participating peers. Students participating in the program for 60 days or more saw a decrease in disciplinary incidents of 11 percent” (Afterschool Alliance, 2015). Between the available literature and the findings from this project, increasing the program frequency will have an added impact for program participants.

Hiring of Full-Time Staff

The goal of expansion means more sites, participants, and time required. In order for these requirements to be met, additional full-time staff members are needed. Currently, program implementation staff consists of graduate and medical students. This is a large strength of the organization because many of the students are volunteers.

However, there needs to be a dedicated staff member to handle volunteer coordination, create a training-of-trainers program for all new incoming staff/volunteers, and run the daily operations. Through this dedicated volunteer coordinator, more volunteer roles can be created and managed. With current partnerships with Emory University, American Red Cross Metro Atlanta Chapter, Junior League of Atlanta, and

Spelman College, the Ladybug for Girls Foundation has a wealth of knowledgeable volunteers and potential new volunteers to draw from. There should be dedicated volunteers focused on grant identification and grant writing, monitoring and evaluation with data analysis, and donation and partnership coordination. Hiring additional staff will create more time for the founder to charter the program at other schools, standardize the curriculum, and expand on the program's global reach.

Earlier Program Start

For the 2018-2019 school year, the program had a delayed start and began in October. With school beginning in August, this left over a month of time unutilized. In order to maximize on the limited time that students have to engage with the program, coordination with the schools must be prioritized in order for the program to start earlier.

If the current application/referral process remains, one suggestion is for this selection to be completed at the end of the school year so that students are selected prior to the new school year starting. A drawback to this suggestion is that new students will miss out on opportunities to join until the following school year.

Expanding Recruitment Options

Currently the student recruitment process is by counselor referral and/or application based depending on the program and site. In order to expand the program's reach, there should be an option for students to self-refer and/or be referred by a program participant. Though there are staffing implications, there is a demand for increasing the number of participants that is in-line with the organization's expansion goals. A flaw of the counselor-referred process is the risk of selection bias. The unstandardized criteria set by

each counselor at program sites results in interested students being excluded from the opportunity of participating in the program. Re-strategizing the recruitment process should include creating a standardized selection criterion and referral process to increase the cohort size.

Several participants discussed their experiences with organization's piloted program, *Camp Strong for Life*. Making this an annual event would open recruitment up to not only all of Georgia but also the entire United States. This would extend the program's reach and provide fun, educational, and engaging summer opportunities for students who otherwise may be sedentarily at home.

Additionally, there was a past participant who is currently now home-schooled and wished that there was a way for students like her to still be able to engage with the program. Standardizing the curriculum and providing it as a program kit to parents can be another way to indirectly expand student recruitment. This kit could include lesson and activity plans for a variety of topics.

Embedding Monitoring & Evaluation (M&E) Into the System

As an organization, the program conducts pre- and post-assessments that are administered to the students. Currently these assessments consist of knowledge-based questions. To understand the impact program participation has on students in greater detail, behavioral questions need to be added. Along with pre- and post-assessments, a midline assessment should also be included. If issues and/or better practices are identified in these midline assessments, they can be implemented across the program sooner. In addition, more M&E needs to be interwoven into the system. This M&E would include

conducting surveys and/or focus groups among parents, program implementers, program sponsors, and teachers. This would provide a more holistic view of the effectiveness of the program.

M&E is essential to program success because it allows for pertinent information to be shared with program implementers and stakeholders. It provides insight into program strengths and areas for improvement and can be used to demonstrate accountability and measure fidelity to program goals. Evaluations serve as a functional marketing tool that allows for organizations to illustrate the impact of the program and its activities in order to secure additional funding and build an argument for capacity building and sustainability.

Expanding the Gardening Program

At one of the program sites, the gardening club is an application-based program that runs on a first-come, first-serve basis. With current staffing, only 15 students are selected to participate per school year. This selection only makes up a small percentage of how many students apply and want to join. There is a need to expand the program to accommodate additional students. Furthermore, with the obesity epidemic, nutritional programming and access to fresh food is in high demand. Expanding the scope of the gardening program widens the opportunity of not just teaching students about gardens but providing the resources for them to create their own at home. It is understood that not all families may have the capabilities and logistical resources to have a traditional outside garden, however other creative techniques may be utilized. For example, one option could be to teach students how to create an at-home egg-carton herb garden. This option uses very few supplies and is easy and inexpensive.

Expanding the gardening program has the potential to not only expand the knowledge for participants but also create accessible tools that they can take home and share with their communities.

Limitations

There were limitations identified through this evaluation process. Though it did not seem to impact the quality of the data or limit the data collection, the evaluation team thought it would still be important to address. Due to the nature of the research, participants were asked to recall information from their past. For some participants, this was a matter of recalling things from a few weeks prior, but for others it was a few years. Recall bias was an unavoidable limitation.

With twenty-four total interviews conducted, this was a small sample size, however, from the contact list provided of past and current program participants, there were only 44 potential student interviewees (27 past, 17 current). 18 of which, either did not respond via email and/or phone or declined to participate, leaving 26 available to be interviewed. 65% of participants could be interviewed. Due to time constraints, all available participants could not be interviewed.

The nature of phone interviews also posed some unavoidable limitations. Some participants seemed distracted and/or were busy and not able to commit to the entire allocated time of the interview, therefore information collected was not as in-depth as the evaluation team would have liked. In addition, some parents remained in the background of the interview. This may have impacted students' comfortability in sharing particular aspects of their experiences. Some parents also interjected during participants' responses.

Again, with the nature of qualitative research, the information gathered is not generalizable, however, still provides insight on the types of impact that had by after-school program participants.

Conclusions

This evaluation was conducted to determine the impact of the Ladybug for Girls program and assess the effectiveness of their social-connectedness programming model. Through the results and recommendations of this evaluation, the hope is that this information will be utilized and serve as starting point for further evaluations. The goal for the organization is to expand the reach of the program and to connect with more students in the metro-Atlanta area.

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