

Healthy Families

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Introduction

The Early Learning and Literacy Resource Center at Dunbar Elementary School (ELLRC) is a non-profit early childhood education center boasting a mission “to serve working families with high quality, affordable child care and education and comprehensive support services, as well as to provide professional development for early childhood educators and community outreach,” (“Atlanta Child Care,” 2005). This Sheltering Arms facility serves 91 families and 176 children; 99% of the families are provided with some form of financial assistance.

The ELLRC belongs to Neighborhood Planning Unit-V (NPU-V), found in Fulton County. NPU-V consists of the following communities: Mechanicsville, Peoplestown, Capitol Gateway, Pittsburgh, Adair Park, and Summerhill. Of the residents in NPU-V, 92.34% are of African American descent and 44.20% of the families have income below the poverty level. Regarding educational levels, 52.47% have at least a high school diploma or equivalent GED.

Following the completion of the needs assessments, three key community health issues were defined and workshops were designed accordingly. The workshops catered to the following topics: illness management, healthy eating, and career information. According to the needs assessments, 60% of parents were very interested in learning more about symptoms to look for when their child is becoming sick. The Illness Management workshops addressed this interest as well as provided parents with information concerning when to take their children to the emergency room versus the pediatrician’s office. The Healthy Eating workshops addressed the lack of parental involvement in their children’s health, education and overall well-being. According to a *Journal of Nutrition Education and Behavior* article (Burgess-Champoux et. al, 2009), “Family mealtime is one socioenvironmental influence on adolescent dietary intake

within the context of other influences (ie. other socioenvironmental factors, personal factors, and behavioral factors.” Finally, the Career Information workshops addressed two issues: loss of employment and educational levels. According to the 2009 State of Georgia data, 65.5% of parents/guardians had full-time jobs. Contrastingly, the Sheltering Arms needs assessment survey data revealed that 41% of parents/guardians had full-time jobs. Regarding education level, needs assessments data revealed that 30% and 20% of parents of Sheltering Arms had either high school diplomas or college degrees, respectively. Lack of education levels could have many implications in a community. For example, a study published in the journal of *Drug and Alcohol Dependence* showed that educational attainment was significantly related to adult drug use disorders. "Those who dropped out of high school were significantly more likely to report drug use disorders compared to those who obtained a college degree." (Fothergill, K.E. et al, 2008)

The workshops were designed to address health and social consequences based on various social determinants of health, which reflect social factors and physical conditions in the environment. According to Healthy People 2020, heart disease, diabetes mellitus, and cerebrovascular disease are among the leading causes of death in African Americans aged 25-34 years old (Healthy People 2020). All of these diseases can be prevented via health promotion interventions, similar to those aforementioned. Because our target community is composed of predominantly low-income African American families, the theme, “Healthy Families,” was derived. This theme encompassed many of the issues addressed in the needs assessments and community demographical data for NPU-V.

S.M.A.R.T. objectives were employed in describing the results the group aimed to achieve. These objectives were designed to be Specific, Measurable, Achievable, Realistic, and Time-Sensitive. The S.M.A.R.T. objectives are outlined in Table 1 below.

Illness Management Workshop	<ul style="list-style-type: none"> ○ By the end of our workshops on February 16, 2011 and March 16, 2011, attending parents will demonstrate an increase in knowledge on what action to take when their child displays certain symptoms by answering 100% of post-test questions correctly.
Healthy Eating Workshop	<ul style="list-style-type: none"> ○ By the end of our workshops on February 16, 2011 and March 16, 2011, participants will be able to identify four healthy home-cooked alternatives to popular fast food restaurants. ○ By the end of our workshops on February 16, 2011 and March 16, 2011, participants will be able to identify the recommended number of fruit and vegetable servings per day ○ By the end of our workshops on February 16, 2011 and March 16, 2011, participants will be able to identify healthy breakfast-food alternatives that can be prepared in less than 15 minutes. ○ By the end of our workshops on February 16, 2011 and March 16, 2011, participants will be able to identify healthy dinner/lunch-food alternatives that can be prepared in less than 45 minutes.
Career Information Workshop	<ul style="list-style-type: none"> ○ By the end of our workshop on April 6, 2011, 60% of attending parents will explore different career and educational options. ○ By the end of our workshop on April 6, 2011, 70% of parents interested in continuing education will enroll in a program (college or GED program). ○ By the end of our workshop on April 6, 2011, 50% of parents will gain information on resume writing, interview skills, and balancing school, work, and parenting.

Table 1

NPU-V has several services and businesses that can address the perceived community health issues: illness management, healthy eating, and career information. Pertaining to illness management, Southside Medical Center and Grady Memorial Hospital are local medical facilities that NPU-V residents frequent during medical crisis. Because of its location across I-75/85, Southside Medical Center is inaccessible for many residents. Libraries, community gardens, the Center for Black Women's Wellness, the Dunbar Neighborhood Facility, and locally owned grocery/corner stores can address options and information for healthy

eating/nutrition. When addressing career information, libraries, the Center for Black Women's Wellness, the Center for Working Families, nearby postsecondary institutions, and the Dunbar Neighborhood Facility can be resources. All of these community resources provide information and encouragement for parents/guardians to better understand their family's health.

Methods

There were six workshops conducted and one newsletter distributed over the course of four months. The workshops were advertised through flyers and informational posters at Sheltering Arms. Group 3 members recruited participants thirty minutes prior to each workshop by standing at the front entrance of Sheltering Arms. All of the participants were parents and teachers of the Sheltering Arms community and all were African American.

The Illness Management workshops took place on February 16, 2011 and March 16, 2011 at 2:30 and 4:30 p.m. respectively, in a Sheltering Arms conference room. Ten people participated. Attending parents were expected to demonstrate an increase in knowledge concerning the proper action to take based on their child's symptoms. The objective was for parents to answer 100% of the post-test questions correctly. Prior to the workshop, participants were given a pre-test consisting of four clinical vignettes (Table 2) describing children with various symptoms. Answer choices included whether the parents should take their children to the pediatrician, to the emergency room, to school, or keep them at home. Parents then participated in an interactive game of "four-corners" in which the clinical vignettes from the pre-test were presented one at a time. Parents demonstrated their opinion by briskly walking to one of the four corners of the room. Each corner of the room contained a sign displaying one of the aforementioned answer choices. A brief discussion ensued after each clinical vignette was presented and then a fifteen-minute comprehensive debriefing was held with a pediatrician and a

family medicine physician. Finally, parents completed a post-test consisting of questions identical to pre-test questions.

Scenario A	Your little 5-year old daughter Katie has been having moderate diarrhea for the past 2 days. You have been administering an over the counter electrolyte solution to her, as recommended by the local pharmacist. The next morning you find that Katie has a fever of 102.5 ⁰ F and is irritable! What do you do?	Answer: Take the child to the pediatrician
Scenario B	4-year old Brian wakes up not wanting to go school. He says he is sick. His mother believes he is lying so she pulls him out of bed to get him ready for school. He throws up all over her work clothes and shoes. He has a fever of 100 ⁰ F. He doesn't want to eat or drink. She forces him to take liquid to rehydrate him. Fifteen minutes later, he throws up the fluid she just gave him all over her hair, three times within 15 minutes. She pauses not knowing what to do? What do you think?	Answer: Take the child to the ER
Scenario C	4-year old Libby's teacher from Sheltering Arms calls you at your job. She says that Libby's nose is <i>extremely</i> runny, but she noted that it is just clear liquid. She has been a little less active than normal and has been sneezing constantly. Her teacher feels it is best if she leaves school. Where do you take Libby from here?	Answer: Keep the child home
Scenario D	Your two-year old daughter, Sasha, comes home from day care and you notice she has a mild fever of 100 ⁰ F. She is sneezing continuously, and has lost her appetite. As the night goes on, the fever is still present (but has not gone up) and she is becoming irritable. What should you do?	Answer: Keep the child home

Table 2

The Healthy Eating workshops occurred on February 16, 2011 and March 16, 2011 at 4:30 and 2:30 p.m. respectively. Thirty people participated. The workshops were held in the Sheltering Arms atrium where seven stations were set up. Participants were led to the first station where they completed a pre-test and received a handout. The handout contained the following information: five healthy meal recipes, the daily recommended portions for fruits and vegetables as described by Centers for Disease Control and Prevention, and the American Dietetic Association's recommendation for preparing a balanced plate. The next five stations featured the

following meals: Breakfast Omelet, Turkey Tacos, Mapo Tofu, Garlic Chicken Pasta, and Sautéed Chicken. Participants were able to sample each meal, which was prepared by Community Health Group 3 members. Additionally, participants were provided with a handout containing preparation time, ingredients, preparation instructions, cost, and a local grocery store where all of the ingredients could be purchased. Finally, participants were guided to the seventh station where they completed a post-test composed of questions paralleling the pre-test.

The Career Information workshops occurred on April 6, 2011 at 2:30 and 4:30 p.m. Eight stations were set up in the Sheltering Arms atrium. Nine people participated. Participants were directed to the first station where they completed a pre-test. The following six stations provided information on varying career fields and educational opportunities including a certified nursing assistant, an aesthetician, and a medical assistant. Additionally, a representative from Atlanta Metropolitan College provided participants with informational brochures and the opportunity to enroll in college. The remaining two stations provided information on resume building, interview skills and balancing family, school and work. Lastly, participants were guided to the eighth station where they completed a post-test identical to the pre-test.

In an effort to begin a monthly, “Healthy Families Newsletter,” at Sheltering Arms, an influenza newsletter was disseminated to each family. On March 16, 2011, each child’s cubbyhole was filled with a newsletter. The newsletter contained general information about the influenza such as causes, symptoms, treatment, and prevention. Newsletter information was obtained from The American Academy of Pediatrics at healthychildren.org.

Data collected from the pre- and post-tests were analyzed by SPSS v15.0 for Windows using simple descriptive statistics. The following modifications were made to pre- and post-test data for the Healthy Eating workshops. Before the intervention, parents were asked how often

they dine outside the home on a scale of one to eleven or more days. This data was converted into nominal data where parents who responded “dining out” at least one day per week were coded as answering “Yes” and those who responded “not dining out” were coded as “No”. They were also asked to rank on a scale of one to five, food choices in terms of healthiness (five being the healthiest and one being the least healthy). This data was then converted to ordinal data where rankings of one and two were coded as “less healthy choices” and rankings of three, four, or five were coded as “more healthy choices”. The same modifications were made to the post-test data.

Results

Illness Management Workshop

The following plots illustrate the results from the Illness Management workshop. Figures 1-4 convey the responses of participants to each vignette presented during the workshop as mentioned in Table 2.

Figure (1) demonstrates responses to scenario-A. It illustrates that 7 out of 10 parents responded correctly.

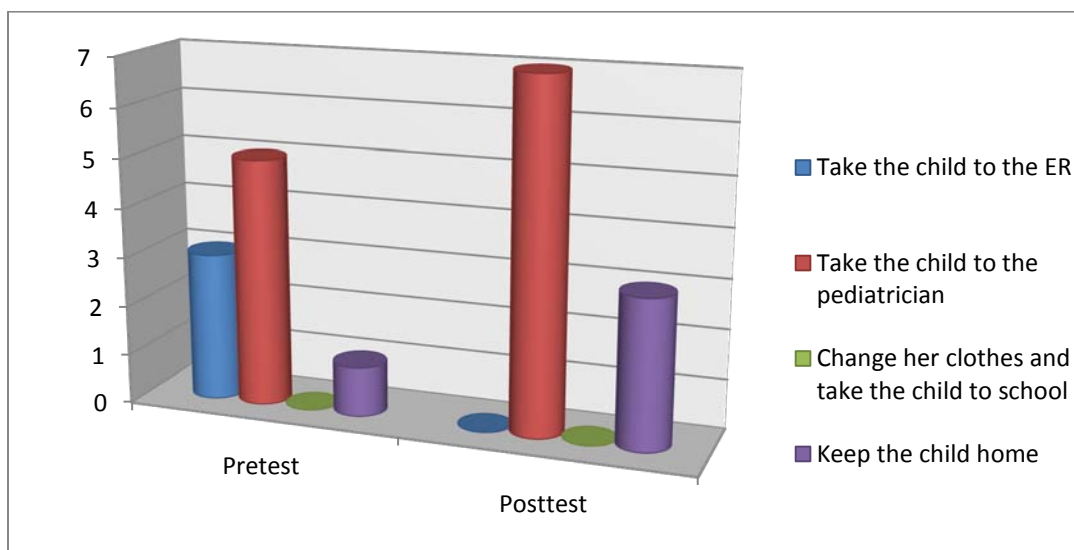


Figure 1: Responses to knowing if child should go to pediatrician

Figure (2) shows the responses to scenario-B. It illustrates that 100% of illness management participants chose the correct response following the workshop.

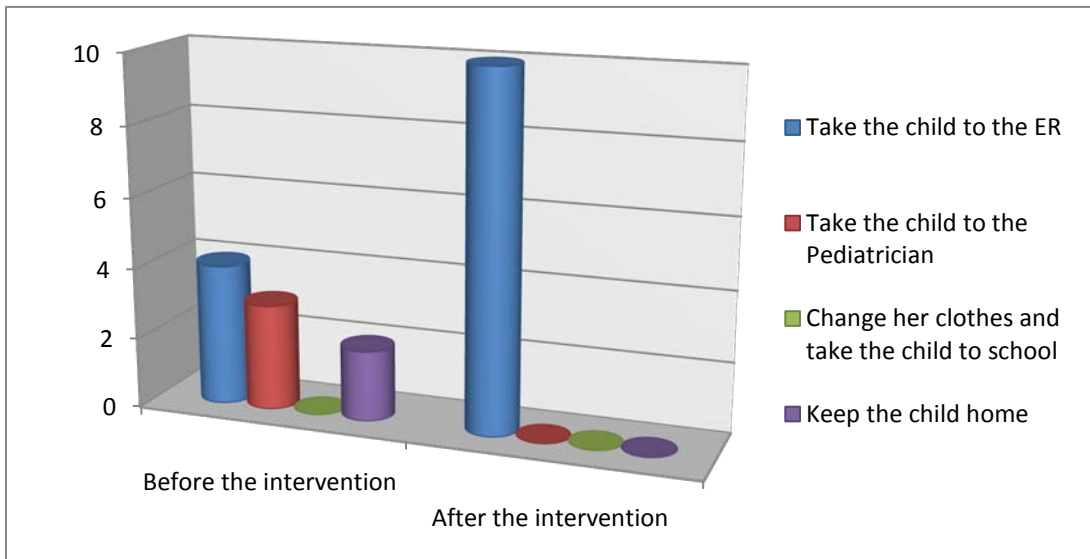
**Figure 2: Responses to knowing when to take child to the ER**

Figure (3) illustrates the responses to scenario-C. This shows that 100% of participants answered the scenario correctly following the workshop.

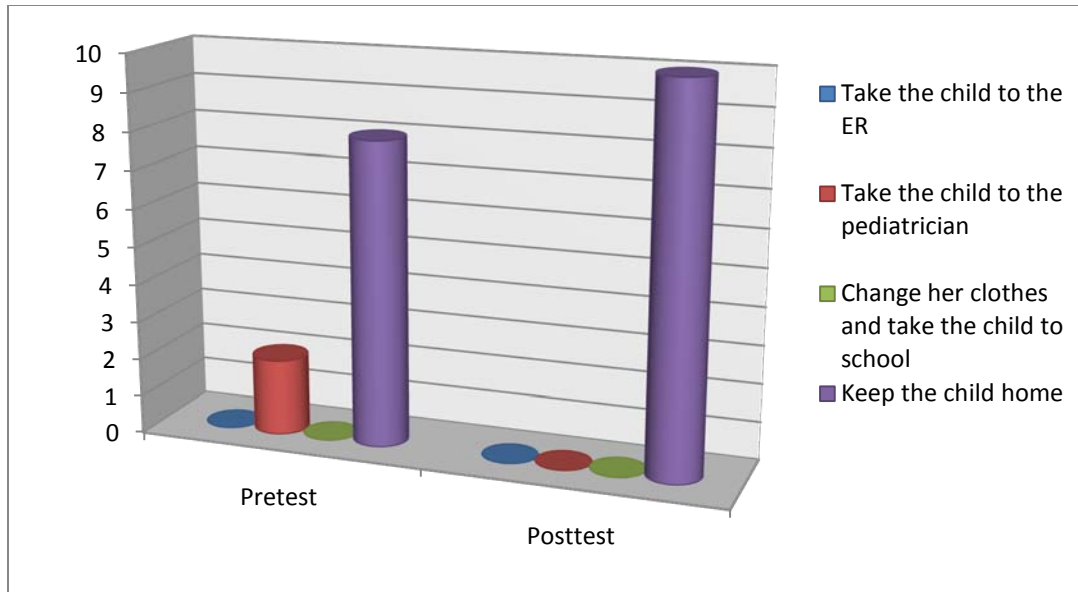


Figure 3: Responses to knowing when to keep child at home

Figure (4) demonstrates the responses to scenario-D. The figure shows that 3 out of 10 participants chose the correct response following the workshop.

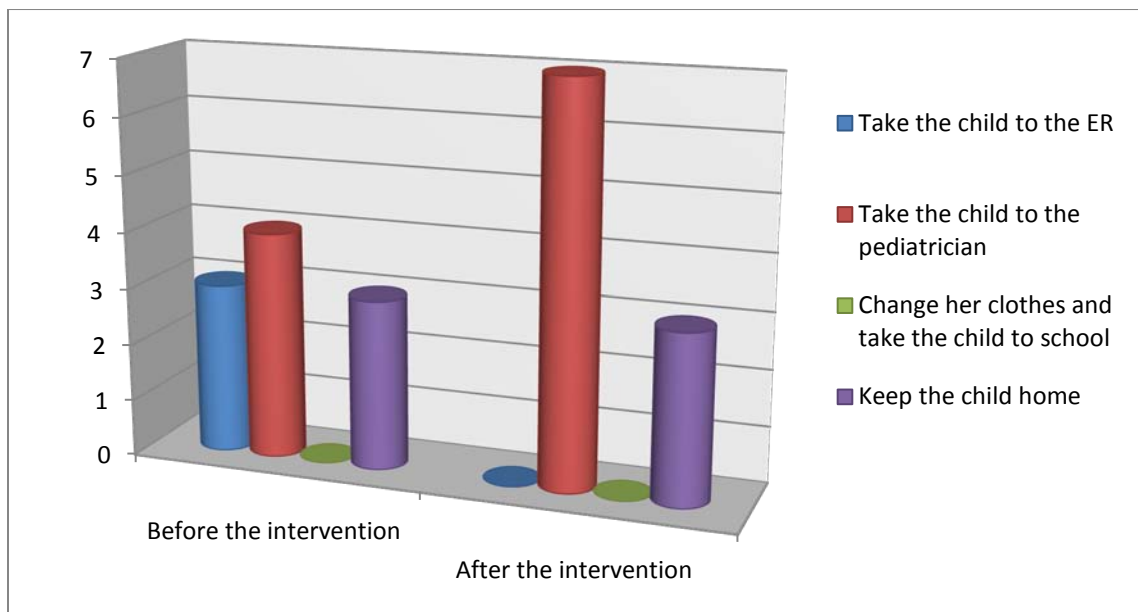


Figure 4: Responses to knowing when to keep child at home

Healthy Eating Workshop

This section presents the results from the healthy eating workshop. The following figures show participants responses to questions about their eating habits and choices. Prior to the workshop, 30 parents were asked to determine the number of times they eat at fast-food restaurants each week (mean $[\mu] = 2.6$ days, standard deviation $[\delta] = 2.175$) and how many times they cook at home each week ($\mu = 6.07$ days, $\delta = 3.162$). Figures 5 and 6 show only one

participant responded to eating out 11 or more times each week while 10 reported cooking at

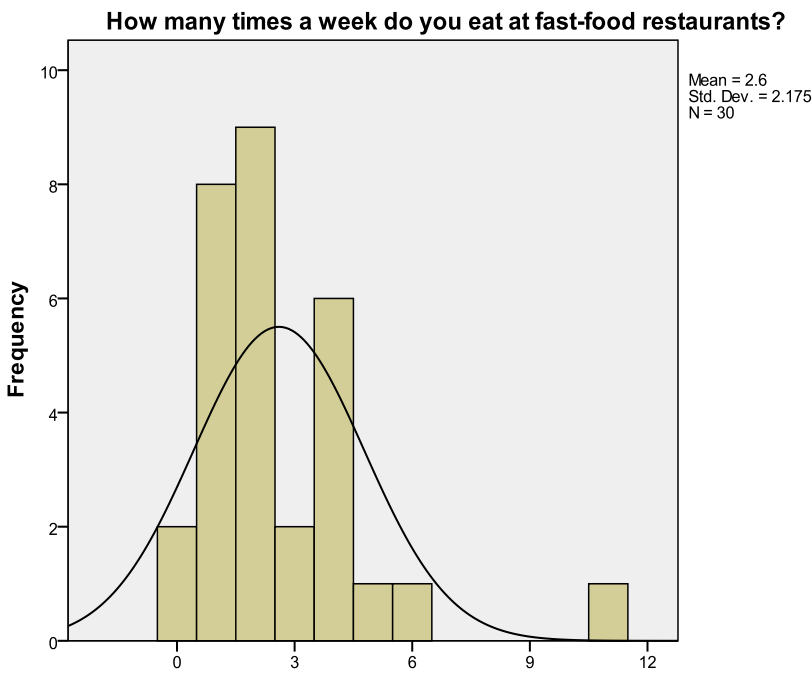


Figure 5: Parent responses to number of times eating at fast-food restaurants each week.

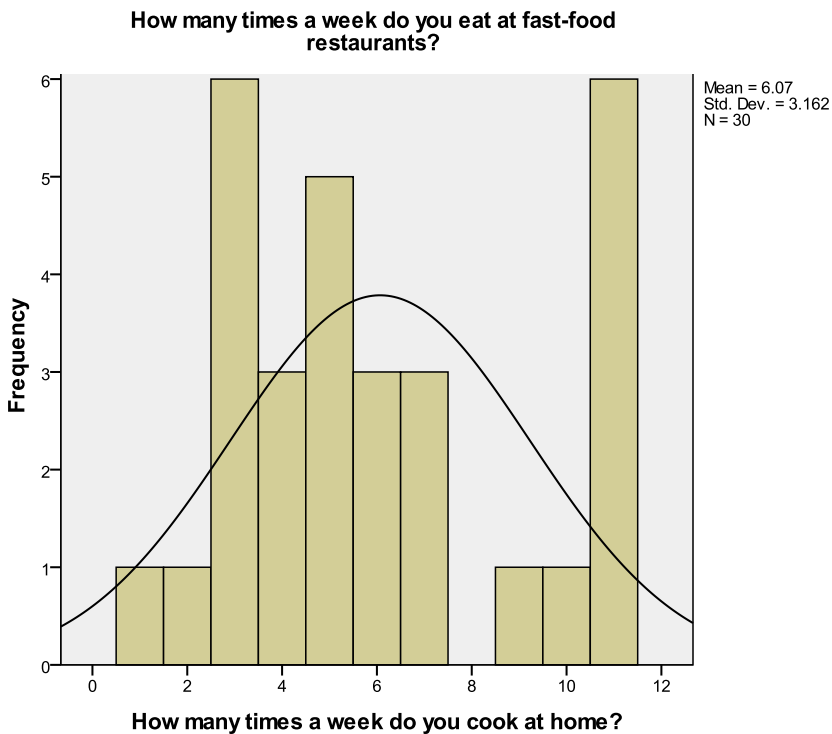


Figure 6: Parent responses to number of times cooking at home each week.

Figure(7) illustrates responses from participants when asked if they knew the number of servings of fruits or vegetables required in a day, parents reported an average of 3.9 servings per day ($\delta=2.07$).

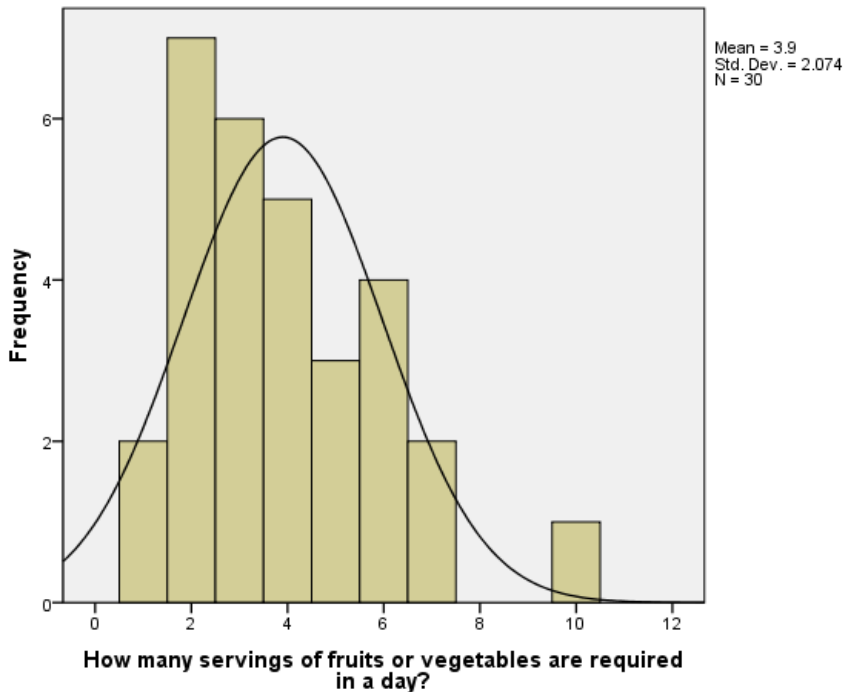


Figure 7 Parent responses to number of servings of fruits or vegetables required in a day

According to table 3, 25 parents (out of 30) eat outside of their home. Table 3 also indicates that a majority of parents have knowledge of healthier food options. Only 10 participants correctly identified that KFC grilled chicken was a healthier option.

Table 3: Cross-Tabulation of parents that eat out and their responses to healthy and unhealthy food choices before the workshop

Figure-8 illustrates the breakdown of what participants identify as a healthy food option. The majority of participants identified the four healthiest meals provided: sautéed chicken (93%), turkey tacos (79%), omelets (86%), and Garlic Chicken (83%). A smaller percentage selected the less healthy food options: bacon, fries, and cheeseburger.

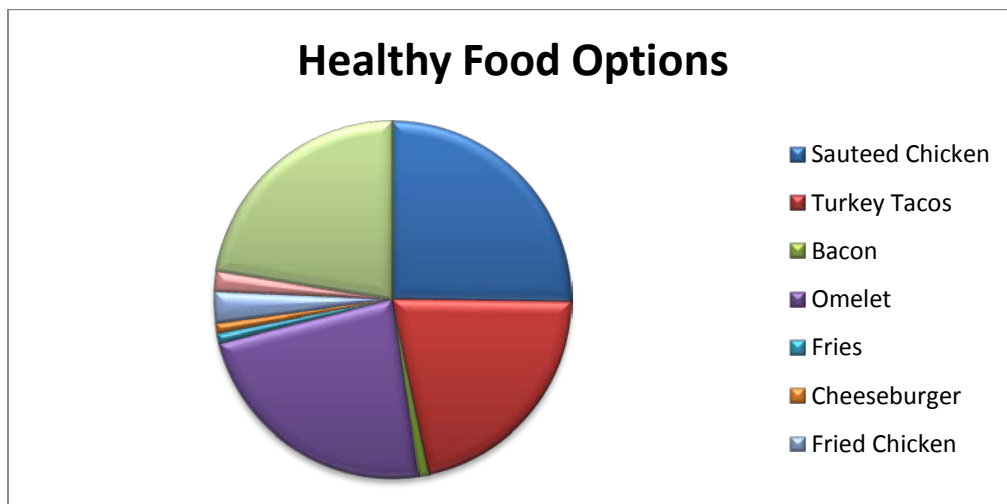
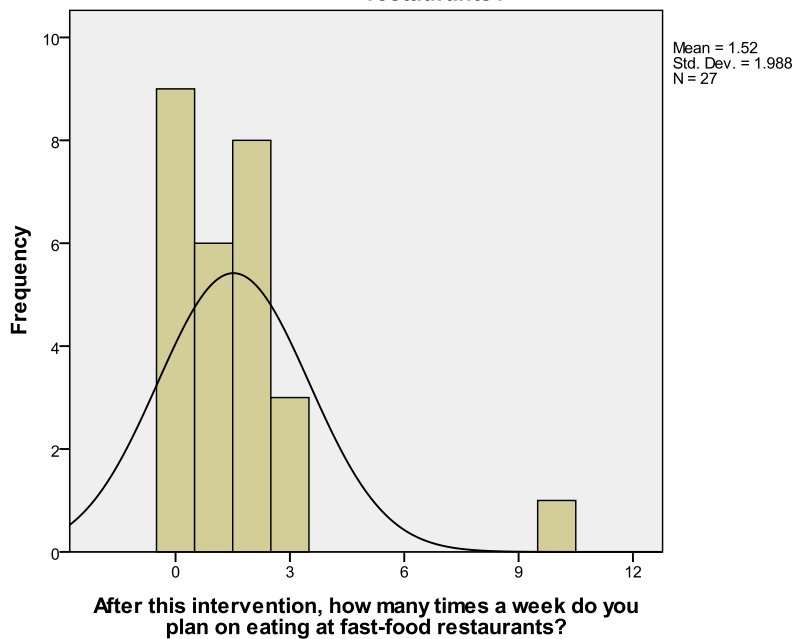


Figure 8: Responses from the Pre-test of parents of Sheltering Arms when asked to select four healthy meal options

After this intervention, how many times a week do you plan on eating at fast-food restaurants?



choice	Less healthy choice
	4
	20
	3
	19
	23
	2
	0
	15
	23

Figure 9: Number of parents responding to cook at home during the week after the workshop.

After this intervention, how many times a week do you plan on cooking at home?

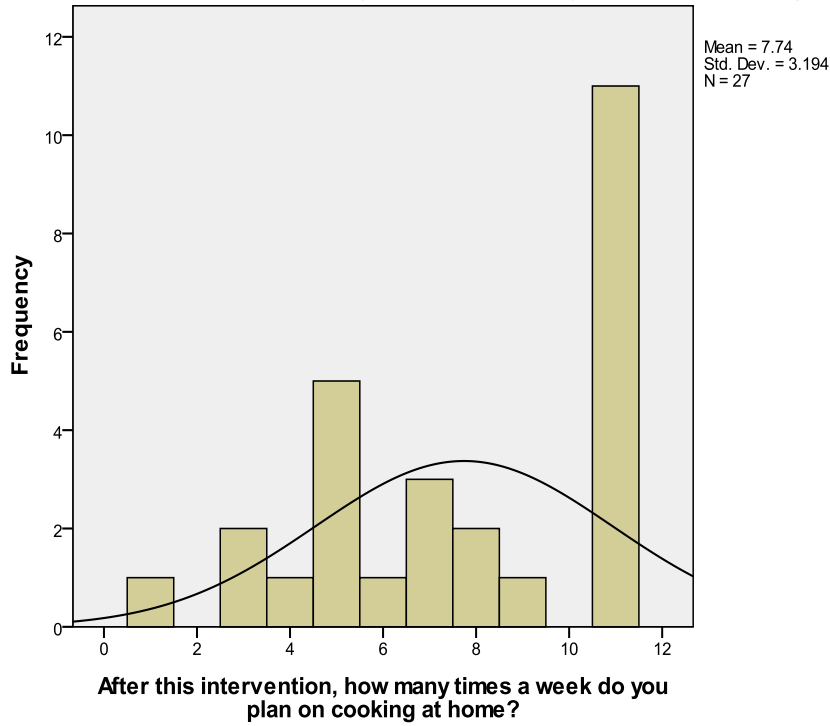


Figure 10: Number of parents responding to continue eating at fast-food restaurants after the intervention.

After the workshop, more parents responded that they would eat at fast-food restaurants less often during the week ($\mu=1.52$ days, $\delta=2$) and more parents reported that they would cook at home more often during the week ($\mu=7.74$ days, $\delta=3.2$).

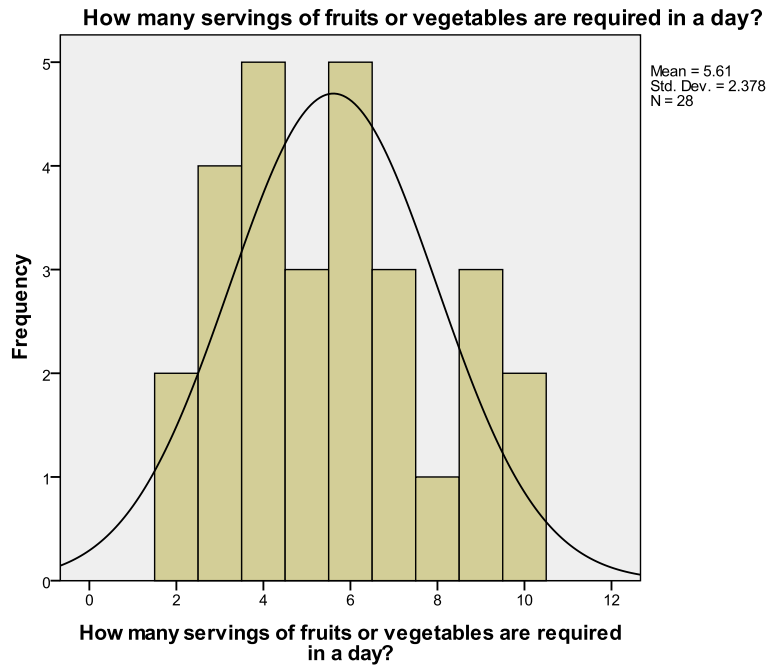


Figure 11: Participant responses to the amount of required servings of fruits or vegetables in a day

After the workshop, participants were closer to knowing the amount of required servings of fruit or vegetables in a day ($\mu=5.61$ days, $\delta=2.4$).

Table 4: Cross-Tabulation of parents who will continue to eat out and their responses to healthy and unhealthy food choices after the workshop

Food Item	No. of people eating out	More healthy choice	Less healthy choice
Omelet	18	18	0
McGriddle	16	2	14
Turkey Tacos	16	16	0
Taco Bell	16	4	12
Popeye’s 3-piece wing meal	16	2	14
Sauteed Chicken	17	17	0
Garlic Chicken Pasta	15	15	0
KFC Grilled Chicken	16	8	8
KFC Double Down	15	2	13

According to table 4, fewer parents reported that they would continue to eat out after their participation in the workshop. Of those who would continue to eat out, more were able to decide which food options were more or less healthy. One-hundred percent of responders chose the

omelet, turkey tacos, sautéed chicken and garlic chicken pasta as more healthy choices. While the KFC Double Down was ranked by two participants as a more healthy choice.

Following the workshop participants were asked to identify healthy food options and Figure 12 illustrates the results. It shows that 100% of the surveyors did not select the options Fat back, Fried Chicken, Cheeseburger, Fries, and Bacon as healthy options for meals, as depicted by the above graph. There was increase in the percentage of participants who correctly selected the four healthiest food options: Sautéed Chicken (96%), Turkey Tacos (100%), Omelets (96%), and Garlic Chicken Pasta (92%).

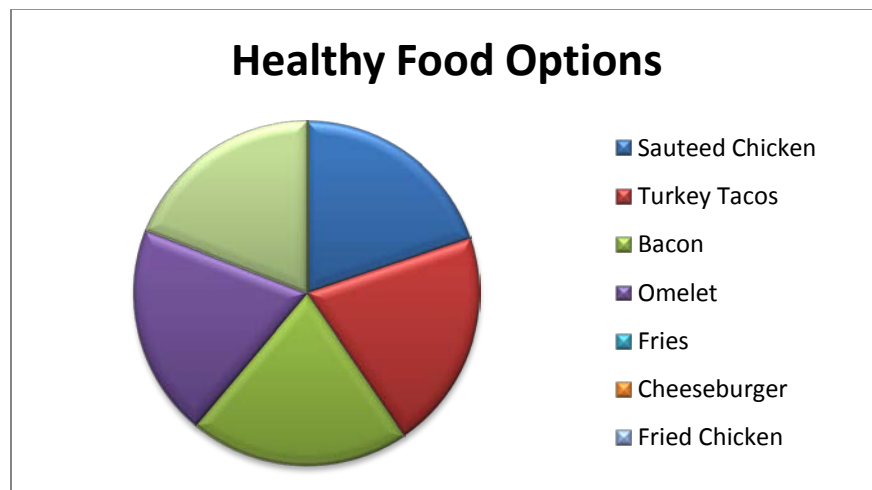


Figure 12: Responses from the Post-test of parents of Sheltering Arms when asked to select four healthy meal options

Career Information Workshop

The following section presents the results from the career information workshop. Figure-13 shows that 89% of participants were interested in furthering their education with the majority interested in pursuing a career in Community College, two-year programs, or Technical College.

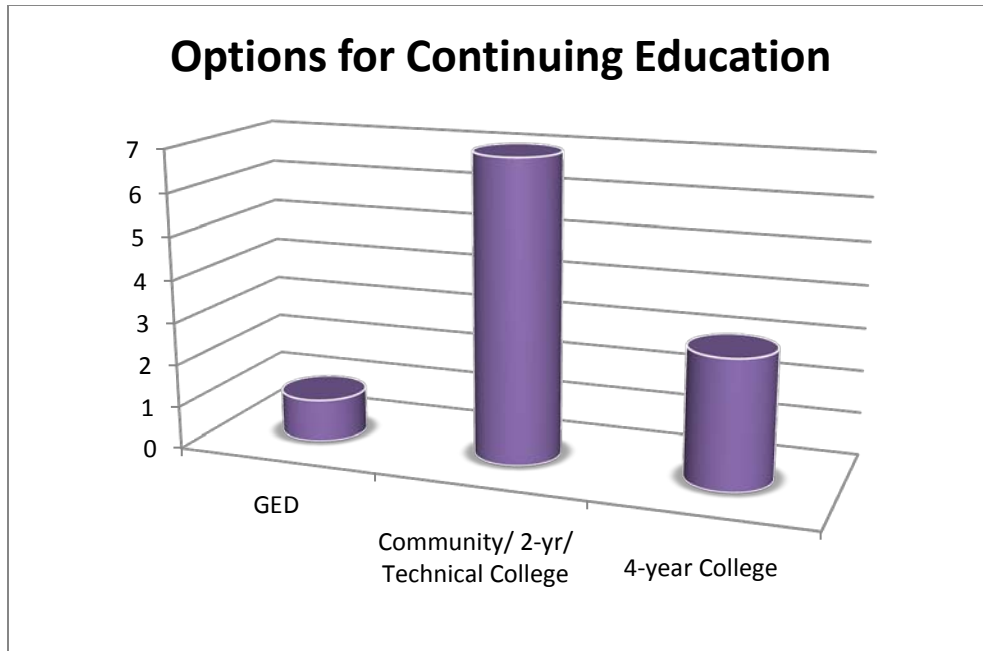


Figure 13: Responses to interest in Continuing Education of parents at Sheltering Arms

Figure-14 conveys that 78% of surveyors selected the only correct option for suitable resume' objectives: "I would like to be a part of your team" as correct. However, the same percentage of participants also selected the incorrect response, "I wanna find a job with benefits and a good income" as a suitable option for a resume' objective.

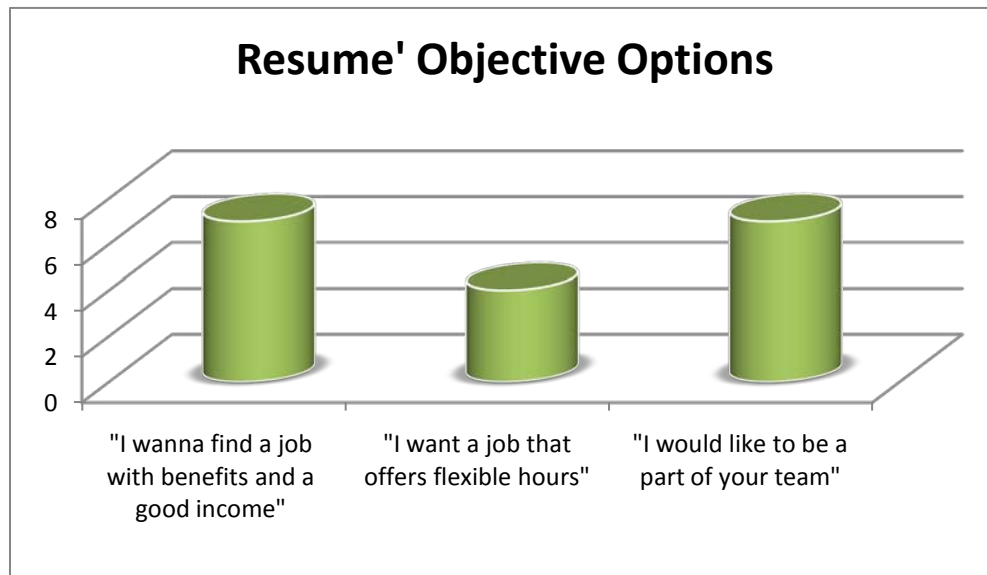


Figure 14: Perceptions of good resume' objectives as reported by parents of Sheltering Arms

Survey participants were provided with three potential interview responses in the survey. Figure-15 communicates that 33% of the surveyors selected the incorrect response, “I just need a job right now” as a suitable interview response. However, all of the participants selected the response, “One of my biggest weaknesses is sometimes I have trouble getting to work on time”, as an unsuitable response for an interview. Fifty-six percent of the participants selected the correct response as, “One of my biggest weaknesses is expecting things to be perfect”.

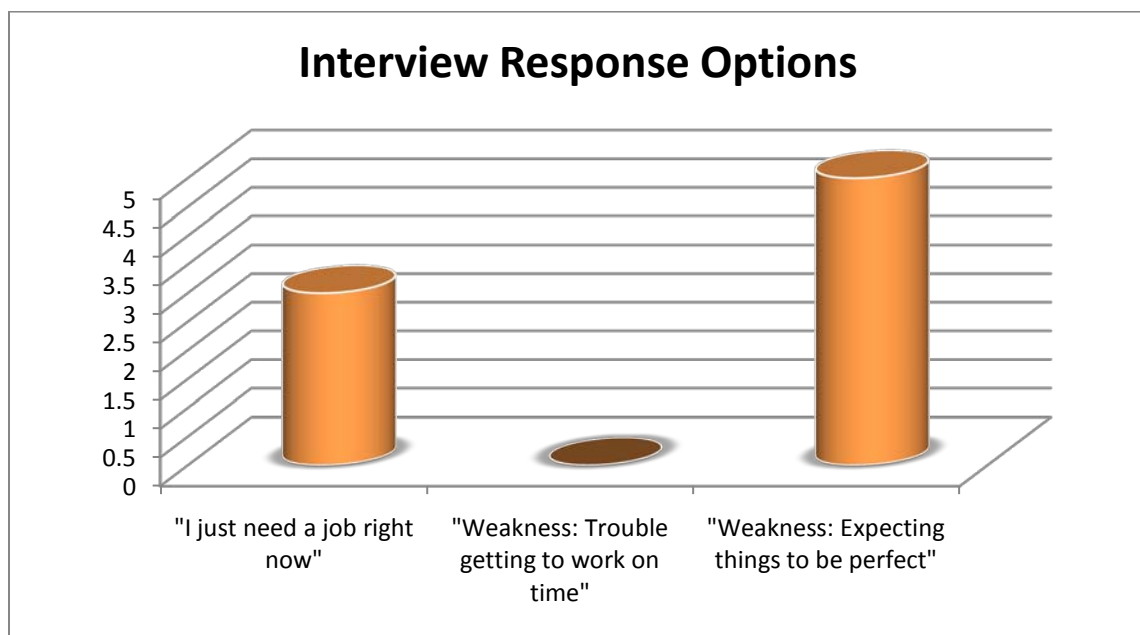


Figure 15: Perceptions of good interview responses as reported by parents of Sheltering Arms

Discussion

One of the issues faced at Sheltering Arms was recruiting parents for participation in the workshops. The workshops were planned out months in advance, which allowed coordination with the administration/staff. There was substantial outreach included putting up visually appealing posters and handing out flyers to encourage participation.

Two main issues hindered the workshops at Sheltering Arms. The dates and times of our assessments produced schedule conflicts for potential contributors. Given the first-year MD

students' schedule and the dates for the other two interventions, scheduling was an issue; the Career Information workshop was held during the spring break for the Pre-K students. It was an unfortunate coincidence but in the future, the time needed to plan, prepare, and execute the other workshops needs to be better organized. The second issue was marketing. Although time was spent in the Sheltering Arms classrooms every Wednesday, it was never over thirty minutes, thus, there were not many opportunities to connect with the parents. Thusly, not enough marketing was done to recruit participation that accurately represented the community. These conflicts limited the data to a small sample size and decreased the accuracy of the data collected from the community.

The results of the various workshops led us to several key findings. Results from the Illness Management workshop imply that the majority of the participants gained more knowledge about managing their child's illness. However, only 30% of the participants correctly answered a child with a fever of 102.5 degrees and diarrhea should be taken to a pediatrician while a fever of 100 degrees warranted only bed rest. These mistakes are most likely a result of miscommunication between the instructors and the participants because of the long discussion held about the guidelines used to care for a child with a fever.

Illness Management workshop pre-test data revealed that people in the Sheltering Arms community were not confident about when they should go to emergency room as opposed to other options. This trend takes place on a national scale. In 2010, the Centers for Disease Control and Prevention stated that one in five people in the United States visits the emergency room at least once a year. When comparing insured versus non-insured patients, no difference was shown. In 2008, the New England Health Institute reported that a quarter of visits to the emergency room were non-urgent. Moreover, a primary care physician could have handled

another quarter of emergency room visits. Non-urgent emergency room costs included about 21-billion dollars. Findings such as these illustrate that a similar Illness Management workshop might increase the public awareness on proper emergency room use.

The results of the Healthy Eating workshop illustrated that participants, post-intervention, were less interested in eating out, more interested in cooking at home, and had a better understanding of healthier food choices when eating out. Finally, the participants had a better understanding of the nine required daily servings of fruits and vegetables. The Career Information workshop data demonstrated that almost 90% of the participants wanted to continue their education. About 80% of the participants showed a working knowledge of suitable resume objectives and interview responses.

In general, the parents of Sheltering Arms benefited from the workshops. There was an overwhelmingly positive response from the community concerning the Healthy Eating workshops. In regards to the issue of community educational strategies, it is proposed that Sheltering Arms hold programs similar to the Healthy Eating Workshops. These workshops would highlight various healthy cuisines to continue to expose the community to this helpful information. Alternatively, in lieu of Sheltering Arms hosting this program itself, another resource could continue to do the same type of program for the families at Sheltering Arms. It is imperative, however, that this group be reliable and have a positive reputation with the community. These same ideas and attitudes towards perpetuity of the community's education can be applied to the other interventions as well.

When compared to other studies, the workshop findings show similar results and obstacles when eating healthy is discussed. In the study titled "Challenges to parent nutrition education: a qualitative study of parents of urban children attending low-income schools,"

parents in Los Angeles Unified School Districts faced the same obstacles as the parents in NPU-V concerning healthy eating choices. The authors concluded that it was because there is a perception that eating fast food is a cheaper and faster option, and that it is difficult to get children to eat healthier foods (Slusser, 2010).

A recent Education and Economy online survey conducted for Kaplan by Harris Interactive concluded that 89% of the participants were interested in continuing their education. The survey confirmed that a faltering economy drives people back into the classroom. Also, according to the survey, 91% of participants felt that finishing a degree, seeking a higher degree, or continuing education makes someone more attractive to employers.

Furthermore, changes can be made in healthcare delivery that can address the aforementioned issues of this community. For example, concerning the issue of misuse of the emergency room, it could be mandatory that a patient contact their primary care physician before arriving. Their primary care physician would know their medical history, and thus be able to better direct them about proceeding to the emergency room. Theoretically, this could decrease the confusion about when to use the emergency room and it would help cut down on excessive spending caused by misuse of emergency rooms. Not only would there be an immediate benefit for the patient, but there would be substantial profit for the community as well.

The evaluation data illustrates that face-to-face conversations are still affective, in addition to using mass media, in reaching a community. It also implies that there is an overwhelming need for a policy directed towards people in impoverished communities. One specific policy change that can be made is to provide county schools with healthy lunch options along with re-introducing recess time. Funding for the healthy food should come from a combination of state and national government funds, public funds, and private donations.

Specific sources of support include organizations such as Michelle Obama's Let's Move Campaign and NFL's Play 60. The studies done by Jiang J et.al (2007) in Beijing, China illustrate that with an intervention focused on nutrition, education and physical activity, the prevalence of overweight and obese children can be reduced.

A health policy change concerning career or educational opportunities for the community is important in providing educational guidance to adults seeking to continue their education. A policy change to address this issue could be the establishment of a program promoting local and state colleges and businesses to form outreach programs to provide local communities with easy access and advice on careers and education. This would provide a great source of information, boost education, and increase employment.

It is natural to consider a health care delivery strategy that is interdisciplinary since one's health is the result of the combination of other environmental factors. For example, asthma is a leading cause of excessive emergency room visits. Thus, having a community worker, who works in conjunction with a healthcare provider, inspect homes for things that exacerbate the patient's condition would prove to be an effective interdisciplinary strategy to improve healthcare (MC, Carter et al. 2001). Another example is exemplified by the organization, Not One More Life (NOML). Their mission is to provide asthma education to help reduce the impact of the disease among African Americans. To achieve this goal, NOML employs a team that includes traditional healthcare providers such as doctors and nurses, and non-traditional providers such as respiratory therapists and local centers of faith. This interdisciplinary healthcare strategy addresses health issues by using a holistic approach that takes the psychosocial health of the patient into account. Lastly, the Career Information workshop can serve as another

interdisciplinary healthcare strategy that healthcare teams can use to positively influence a patient's social determinants of health.

Many resources are available for the community of Sheltering Arms, including external supporters such as Atlanta Metropolitan College and the Annie Casey Foundation. There are also social services provided by Sheltering Arms such as iMOM, Centers for Working Families, the local community garden, and the recreation center. These resources can help with healthy food choices, education, and job opportunities. All of these tie into the idea of making the community healthier by reaching out to individuals using different means.

Further needs assessments are important in reinforcing the objects of the intervention. Any attempt to change community behaviors requires constant emphasis and repetition. Continued evaluations help build the relationship between MSM and the community, creating greater trust and credibility. With a closer relationship, there will be more community involvement and better results. Eventually, the community can take ownership and organize health programs with less direct guidance from MSM.

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