

# Danialle Karmanos' Work It Out

## Evaluation Report Winter/Spring 2013

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## Executive Summary

This evaluation of the Danialle Karmanos' Work It Out program aimed to establish a strong evidence base that clearly explains the effectiveness of the program as well as provide recommendations for program enhancement. The evaluation included four main parts: (1) student narrative evaluation, (2) student outcome evaluation, (3) content/curricular evaluation, and (4) instructor evaluation.

A total of 105 students were interviewed during the *student narrative evaluation*. Almost all students described the DKWIO program as fun, and an overwhelming majority of students provided positive descriptions about how it made them feel. Additionally, two-thirds of students reported that they used the breathing techniques learned in the DKWIO program to help them reduce stress in their everyday lives. Finally, most students expanded their practice and reported an increase in yoga participation outside of the school setting, naming parents and friends as people who most often joined them in practicing yoga.

The *student outcome evaluation* consisted of pre- and post-program questionnaires. Students reported feeling healthier, stronger, and more flexible because of what they had experienced in the DKWIO program. Additionally, students showed a significant positive change in yoga participation and knowledge, and an increase in nutrition knowledge. Furthermore, students reported a significant change in their ability to pay attention to their teachers (concentration in the classroom) and significantly decreased bullying behaviors.

The *curricular evaluation* of the DKWIO program included a review of the instructor training and the nutrition and yoga workbook. Overall, content experts commended the program for providing instructor training prior to the start of the program, and agreed that training is necessary. Key recommendations were made to help improve the pre-program training. Content experts felt that the materials within the student workbook were age-appropriate and suggestions were made to help enhance the layout and consistency of the workbook.

Throughout the *instructor evaluation* it was evident that volunteer instructors enjoyed being a part of the DKWIO program and thought that it was a great opportunity for students in the Detroit area. Some instructors found the *Facebook* page helpful and enjoyed the links to resources. Additionally, many reported that they personally gained insight from the program and looked forward to volunteering in the future.

The DKWIO program is currently providing inner city youth with the unique opportunity to learn about and practice yoga in school through volunteer efforts by local yoga instructors. There has been a positive impact on youth who complete the program. Students increase yoga participation, yoga and nutrition knowledge, improve concentration and show a reduction in bullying behaviors. In order to help improve the DKWIO program and students served, the following five recommendations are suggested: (1) create an instructor handbook that includes detailed lesson plans, activities for all yoga instructors and classroom management strategies, (2) restructure the student workbook to provide consistency among all ten lessons, including additional yoga flow postures for each lesson, (3) provide an expanded volunteer instructor training that covers in-depth the student and (new) instructor handbook, (4) establish an internal check for consistency to make sure volunteer instructors are implementing the program as intended, and (5) obtain additional funding to evaluate the revised program compared to a control group that does not receive the program. The goal of this evaluation is to help the DKWIO staff create a sustainable and enhanced program that has potential to grow beyond their current capacity to reach and positively impact inner-city youth.

### **Program Description**

The DKWIO program seeks to prevent childhood obesity by promoting a healthy mind, body, and spirit through yoga and nutrition programming. The purpose of DKWIO is to help children become healthier by reducing anxiety and increasing self-esteem through the calming and focused effects of yoga. Each week (10 weeks total) children are introduced to a unique one-hour formula that includes an introduction, nutritional information, yoga and activities, as well as relaxation and meditation exercises. The program is delivered by volunteer yoga instructors at urban elementary schools as part of students' existing physical education programming. By the end of the 10 weeks, the DKWIO program goals are that children will have a better understanding of and appreciation for yoga, healthy eating and physical activity, and that incorporating a practice of yoga will improve students' mental and physical health.

## Evaluation Overview

This evaluation of the DKWIO program aims to establish a strong evidence base that clearly explains the effectiveness of the program. To illustrate this, the evaluation includes four inter-connected forms of qualitative and quantitative data collection: (1) student narrative evaluation, (2) student outcome evaluation, (3) content/curricular evaluation, and (4) instructor evaluation. Each section is represented separately within the results.

- I. Student narrative evaluation: The student narrative evaluation examined the students' perceptions of curriculum and instruction, impact on the students' lives, and views of the process as a vehicle for health enhancement.
  - Measurement:
    - Individual student interviews (Basch, 1987)
    - Observations (Glesne, 2006)
  
- II. Student outcome evaluation: The primary purpose of the student outcome evaluation was to assess the impact of the curriculum in the areas of yoga and healthy eating knowledge, attitudes (multiple psycho-social variables) and behaviors.
  - Measurement;
    - Pre/post questionnaire (psycho-social variables, physical activity intentions, and physical activity and nutrition knowledge)
    - Observations (Glesne, 2006)
  
- III. Content evaluation: A content analysis was conducted to examine the written portion of the DKWIO ten-session program. Experts in the field of public health, education, and youth nutrition and physical activity (Noel Kulik, Erin Centeio, Nate McCaughtry, & Erica Thomas) conducted the evaluation. The purpose of the content evaluation was to assess the curriculum and training in the areas of clarity, organization, content alignment, scope and sequencing, cultural competence, and best practices.
  - Measurement:
    - Multiple expert reviews (Weber, 1990)
  
- IV. Instructor evaluation: The primary purpose of the instructor evaluation was to examine fidelity to treatment protocols, as well as determine instructors' experiences and perceptions of implementing the curricula with various youth populations and contexts.
  - Measurement:
    - Multiple observations (Glesne, 2006)
    - Questionnaires

# **Evaluation Results**

## Evaluation Results

### Demographics and Participation

#### *Students*

From March to June 2013, six schools (Maybury, Academy of Interantional Studies, Gompers, Marcus Garvey, John R. King, & Charles Wright) participated in the 10-week DKWIO program. Students were in the 3<sup>rd</sup>, 4<sup>th</sup> or 5<sup>th</sup> grade and ranged in age from 7-12 years ( $M = 9.78$ ,  $SD = 1.14$ ); 82.3% were African American, 7.6% Hispanic, and 11.4% reported other. Of the 138 students who completed the pre-program student questionnaire, 108 students ( $F = 59$ ; 78% of pre) completed both the post-program student questionnaire and interview. Students had an opportunity to participate in a total of ten DKWIO sessions, and 77.8% ( $n=84$ ) of students participated in at least 8 of the 10 sessions and completed both evaluation questionnaires and a student interview, as shown in Table 1, below.

Table 1. Attendance

| <b>Number of Sessions Attended</b> | <b>Number of Students</b> | <b>Percentage of Students Who Attended</b> |
|------------------------------------|---------------------------|--|
| 1-2                                | 8                         | 7.4%                                       |
| 3-4                                | 1                         | 1%   |
| 5-7                                | 15                        | 13.8%                                      |
| 8-10                               | 84                        | 77.8%                                      |
| <b>Total</b>                       | <b>108</b>                | <b>100%</b>                                |

#### *Volunteer Instructors*

In addition to the students, this formal evaluation process also gathered information from the volunteer yoga instructors. There were a total of nine yoga instructors who volunteered with DKWIO over the Winter/Spring 2013. Of the nine volunteer instructors, seven consented to be part of the evaluation process. Of those consenting instructors, six were female (45% African American, 55% Caucasian) with a mean age of 38. The average years of experience among the yoga instructors was 6.5 years.

# **I.**

# **Student Narrative Evaluation**



## I. Student Narrative Evaluation

Over the course of 10 weeks, individual students were interviewed (Basch, 1987) to examine their perceptions of the DKWIO curriculum and instruction, its impact on their lives, and views of the process as a vehicle for health enhancement. Questions were open-ended and students were encouraged to be as descriptive as possible using follow-up questions and probes. Interviews were approximately 5-10 minutes and held in a private area outside of the designated yoga space.

Of the 108 students who participated in the entire DKWIO program (pre through post) 105 students were interviewed about their participation in the program. There were three students who declined to participate in the interviews. The following results are representative of the 105 interviews that were conducted.

The following table was calculated by quantitatively tabulating student responses. Each statement was identified within the student responses and then a total percentage of student responses was totaled and calculated.

Table 2. Frequencies of student responses

| <b>Question or Statement Presented</b>   | <b>Percent of Students Who Agreed</b> |
|--|---------------------------------------|
| Because of students' experience in the DKWIO Program, they began to use yoga outside of the school setting | 53%                                   |
| Because of the DKWIO program, students changed their food choices or tried new healthy foods               | 69%                                   |
| Because of the DKWIO program, students used more breathing techniques to reduce stress                     | 72%                                   |
| Because of the DKWIO program, students used new skills to concentrate more in the classroom                | 60%                                   |
| Because of the DKWIO program, students learned skills to deal specifically with anger/aggression           | 36%                                   |
| Thought that the overall program was fun   | 98%                                   |
| Thought the yoga made them feel good   | 93%                                   |

Results in Table 2, show that almost all students (98%) thought that DKWIO was a fun program and provided positive descriptions (93%) about how it made them feel. Almost two-thirds of students (72%) reported that they used the breathing techniques that they learned in the DKWIO program to help them in their everyday lives. The majority of students reported changing their nutrition behaviors (69%) and practicing in more yoga (53%). Furthermore, 60% of students reported that because of techniques they learned during the DKWIO program, they were able to concentrate better in the classroom.

In addition to the frequency counts that were calculated from specific questions within the student interviews, the interview transcriptions were also coded for common themes among students. There were four key interview findings that emerged from the student interviews: (1) Students believed that the DKWIO program was fun, (2) Student believed that they used breathing techniques to help with their anger and aggression, (3) Students reported increased yoga participation outside of school, (4) Students believed that the DKWIO program had an impact on their eating habits and nutritional choices. Below will list each separate interview finding along with recurring quotes from children. Finally, at the end of this section, recommendations from students, as well as student testimonials are included.

#### Interview Findings:

1. Students believed that the DKWIO program was fun.
  - When asked if they enjoyed the program 98% of the students responded by answering yes, as mentioned above. Children really enjoyed learning new yoga poses and challenging their bodies. Many students voluntarily named at least one pose they liked best.
    - Examples:
      - “I like the tree pose because it is easy for me”
      - “I liked the poses. They were a little hard to balance but I got the hang of it.”
      - “My favorite pose is downdog.”
      - “I liked learning all different kinds of poses, like cat, tree, and downdog.”
      - “I liked the poses because they helped me relax”.
  
2. Student believed that they used breathing techniques to help with their anger and aggression.
  - Students reported using the breathing techniques that they learned during the DKWIO program to help them in stressful life situations, such as when they felt angry or anxious.
    - Examples:
      - When asked if they use breathing techniques that they learned in Yoga, one student responded “Sometimes when I am kind of scared or something. I have used them when I was home alone and got scared.”
      - One student described how they used yoga breathing from the program to help them control their aggression towards other students. “Cause at my old school I used to fight but at the new school I don’t fight, now I just say I am not going to pay no attention to you. I am just in my own bubble and just use the breaths I learned in Yoga.”
      - When asked if they use breathing techniques that they learned in Yoga, one student responded “Oh yeah. Before a test I kind of keep breathing if I am nervous. But if I didn’t (use breathing) it would be very hard to pass my test.”
  
3. Students reported increased yoga participation outside of school.
  - Data from the pre/post surveys (see results below) and the student interviews show that participating in yoga outside of school significantly increased. Most students reported that they participate outside of school, and often practice with a family member or by watching or attending a yoga class.
    - Examples:
      - “I do yoga with my sister to a yoga class they play on tv.”
      - “I do yoga with my mom and dad in the backyard.”
      - “I go to a yoga place with my aunt.”

4. Students believed that the DKWIO program had an impact on their eating habits and nutritional choices.
  - Students reported that the program instruction and curriculum encouraged them to try foods that they had never tried before. Many reported that they learned to eat healthier, and several students have improved their nutritional habits. They learned that this was better for their bodies.
    - Some examples:
      - “I changed from white to wheat bread.”
      - “I used to eat candy, chips and ice cream.”
      - “I used to eat chips now I eat bananas, fruits, yogurt.”
      - “I changed I used to eat fried chicken but now I eat baked chicken.”

Student Recommendations for DKWIO Program Enhancement

- Have food samples included in the program. Students felt that it would be fun to taste some of the recipes or new foods mentioned in the DKWIO program book.
  - “Bring in new food to try that makes your body healthy.”
  - “Like everyday when we go to Yoga we can try new healthy foods.”
- Consider revising the content of the lessons.
  - Utilize more yoga poses within the sessions
  - Include more meditation exercises
  - Provide easier alternatives to poses in the DKWIO program book for students who feel the poses are too challenging
  - Be sure the activities are age appropriate
    - Students reported wanting to be challenged more because activities were suited more towards younger children.
- Consider revising the procedures.
  - Implement the yoga program during classroom time instead of physical education
  - Allow students to keep their shoes on because of foot odor

Student Testimonials About the DKWIO Program:

- Nutrition/Eating:
  - “I changed the way I eat. I used to eat carelessly, like junk food mostly. Now I know what to eat.”
  - “When you pay attention to your food you will be able to run longer, play longer, and your meter doesn’t go very fast when you eat good foods.”
  - About not eating as much candy since the program started, “I feel healthier.”
  - “I like that we’re doing a lot of exercising and learning about what we should eat and what we shouldn’t eat.”
  
- Body:
  - She liked the most, “It (Yoga) feels nice and feels like I am getting stronger and healthy.”
  - “It (Yoga) helps cause I play football. It helps me be more flexible.”
  - “It makes me feel better because now that I have more energy I can run, jog and ride my bike more longer if I start exercising”
  - “Yoga makes your body get stronger”
  - On Yoga, “I like that it keeps you healthy. It is exercise for you body.”
  - “This is a good program that we can get active, fit.”
  - “It is fun. It give me the exercise I need.”
  - She learned, “Yoga is good for your body and yoga can help you relax.”
  - “When I do yoga I have more energy.”
  - “I learned that your body can be flexible”.
  
- Mind/Peace/Focus:
  - “It was fun and very interesting and interactive”
  - “When I don’t do yoga I feel angry, I am different, like I changed.”
  - “Like when I be mad at home I get angry. I just calm down using my breath.”
  - About using the breathing techniques, “I feel like I just took all the anger out of my body.”
  - About the program, “It is fun and it helps my brain”
  - About doing yoga, “It makes me feel good about myself”
  - About the program, “It is good that they choose to do this because a lot of kids are unhealthy in schools in America period.”
  - “I usually want to talk to my friends and stuff but every Monday when we come to yoga and we go back to class I be calm and I don’t be talking to my friends I be focused on my work instead. That make me get good grades”
  - On yoga, “Well, it helps me pay attention to my work and my teacher to make sure I learn.”
  - “It is a good way for kids who have anger problems to express what they feel about it and they can talk to somebody. And it makes me feel like I can talk to people and I can breathe in and breathe out and walk away from things so I don’t get myself hurt or hurt anybody else”
  - “I think it is just awesome!”
  - “It calms your brain. You sometimes be hyper but when you get out of yoga you so calm”
  
- Mind/Peace/Focus (Cont.):
  - “Sometimes when we didn’t go to yoga I like getting off task and playing and stuff but when I start getting to yoga I start realizing I take school more seriously”
  - “I like how it helps you concentrate on what you are doing and it helps you relax your brain”

- “The breathing helps me concentrate”
- “Yoga can relax your brain and your body”
- “Another thing I learned is while you are doing yoga it can help you concentrate on your schoolwork”
- “I like that we are able to sit together and have fun with yoga”
- “Yoga makes me feel great, happy, and healthy!”
- “Every time I do yoga, it clears my mind so when I go upstairs to do my schoolwork I just know what I am already doing because my mind is clear and pushed everything else out of the way”
- “I get more strength and I am able to focus more”
- On how yoga makes him feel, “proud of myself”
- “I like relaxing and getting rid of my anger”
- On the DKWIO program, “It gives me energy and helps me relax”
- “Yoga is a fun class for me, a peaceful class”
- I like that you get to learn things about yoga and do poses that you never tried to do before
- “Yoga makes me feel happy”
- “I do sun salutation A when I am feeling frustrated or angry about something”
- “The breathing we learned calms me”.
- On how yoga makes her feel, “Very happy, very very very happy, and very excited!”
- “I use the breathing when I am doing my homework that I don’t understand”
- “Like when I have a test and I don’t know the answers and I get frustrated sometimes I just meditate”

# **II.**

# **Student Outcome Evaluation**

## II. Student Outcome Evaluation

Students were given a questionnaire at the beginning and the end of the DKWIO program to assess the impact of the curriculum in the areas of yoga and healthy eating knowledge, attitudes (multiple psychosocial variables) and behaviors. In addition to the pre/post questions, the questionnaires also included some questions that were post only. Students were read the questions out loud as a class, and if questions occurred they were answered among the whole class. The student outcome evaluation includes the significant findings from the student questionnaires. The following section breaks down the questionnaires into three parts: (1) Student perceptions of the DKWIO program impact (Post-test only), (2) Significant changes of individual survey items that took place among students, and (3) Significant changes of scaled variables.

Table 3. Student perceptions of the DKWIO program impact (Post-test only)

| Statement   | Percentage of Students in Agreement |
|---|-------------------------------------|
| Because of what I learned in the program, MY FRIENDS and I do yoga together | 47.2%                               |
| Because of what I learned in the program, MY FAMILY and I do yoga together  | 45.3%                               |
| Because of the yoga program, I feel STRONGER                                | 79.6%                               |
| Because of the yoga program, I feel MORE FLEXIBLE                           | 75%                                 |
| Because of the yoga program, I feel HEALTHIER                               | 78.7%                               |

As seen in Table 3, a majority of students reported feeling healthier (78.7%), stronger (79.6%), and more flexible (75%) because of what they had experienced in the DKWIO program. Additionally, students reported an increase in the social participation of yoga with friends (47.2%) and family (45.3%).



In order to determine the impact of the DKWIO program on students over the 10-week period, pre-post surveys were given to determine change over time. The following table indicates the difference between these individual questions as well as the scaled variables (a scaled variable represents a series of questions that have a pre-determined calculation to measure a particular construct. For example, aggression is measured through a series of 18 questions).

Table 4. Significant improvements in children's behaviors, enjoyment, and perceptions (Pre-Post)

| Statement   | Number of Students | Post Mean | Mean Difference | Standard Deviation | Level of Sig. | Interpretation   |
|---|--------------------|-----------|-----------------|--------------------|---------------|--|
|   |                    | Pre Mean  |                 |                    |               |  |
| In the last 3 days, how many times did you participate in Yoga?   | 107                | 2.80      | 1.48            | 1.3                | .01           | Students reported participating in a significant more amount of yoga in the last three days prior to the survey (note: there was no DKWIO yoga program the week of post-program data collection) |
|   |                    | 1.32      |                 |                    |               |  |
| I have trouble paying attention to my teachers  | 107                | 1.33      | -.13            | .55                | .02           | Students reported a significant increase in the ability to pay attention to their teachers.  |
|   |                    | 1.46      |                 |                    |               |  |
| I think I have the skills needed to perform yoga  | 108                | 4.07      | .21             | 1.1                | .04           | Students believed that they significantly increased the skills necessary to perform yoga.  |
|   |                    | 3.86      |                 |                    |               |  |
| Yesterday, how many times did you eat protein such as meat or beans such as pinto beans, baked beans, kidney beans, refried beans, or pork and beans? | 107                | 3.66      | .42             | 1.7                | .01           | Students reported a significant increase in the amount of protein intake from pre to post testing.   |
|   |                    | 3.23      |                 |                    |               |  |
| Nutrition Knowledge   | 106                | 3.21      | .29             | 1.26               | .02           | Students significantly increased their nutrition knowledge through out the 10 week program.  |
|   |                    | 2.91      |                 |                    |               |  |
| Yoga Pose Knowledge   | 99                 | 7.74      | 4.59            | 2.77               | .01           | Students significantly increased their knowledge about yoga poses in the DKWIO program.  |
|   |                    | 3.16      |                 |                    |               |  |

| Statement   | Number of Students | Post Mean | Mean Difference | Standard Deviation | Level of Sig. | Interpretation  |
|---|--------------------|-----------|-----------------|--------------------|---------------|---|
|   |                    | Pre Mean  |                 |                    |               |   |
| Bullying  | 102                | 5.75      | -.96            | 2.14               | .01           | Students reported bullying behaviors significantly decreased over the 10 week period  |
|   |                    | 6.71      |                 |                    |               |   |
| I enjoy eating healthy foods                              | 107                | 4.19      | -.28            | .96                | .01           | Although students enjoyment of eating healthy foods significantly decreased, this is explained by the increase of awareness of what healthy foods are.  |
|   |                    | 4.48      |                 |                    |               |   |
| I feel confident about eating healthy foods               | 108                | 4.31      | -.21            | .89                | .02           | Although students' confidence in eating healthy foods decreased, it is important to understand that this probably occurred because of an increase in the awareness of what healthy foods are. |
|   |                    | 4.51      |                 |                    |               |   |
| I enjoy participating in yoga                             | 108                | 4.10      | .12             | 1.19               | .30           | Although not significant due to ceiling effect* (little room for change), students reported a high level of enjoyment in relation to yoga participation                                       |
|   |                    | 3.97      |                 |                    |               |   |
| I enjoy participating in physical activity.               | 108                | 4.46      | -.11            | .89                | .20           | Although not significant due to ceiling effect*, students reported a high level of enjoyment participating in physical activity   |
|   |                    | 4.57      |                 |                    |               |   |
| I feel confident about performing physical activity       | 107                | 4.35      | -.08            | 1.09               | .48           | Although not significant due to ceiling effect*, students reported a high level of confidence in relation to physical activity  |
|   |                    | 4.43      |                 |                    |               |   |
| I think I have the skills needed to be physically active. | 104                | 4.22      | -.08            | .99                | .43           | Although not significant due to ceiling effect*, students reported a high level of confidence in having the skills needed to be physically active.  |
|   |                    | 4.30      |                 |                    |               |   |

\* A ceiling effect means that the students reported high scores at the post-intervention data collection, leaving little or no room for improvement from pre to post.

Graphic Representation of Significant Changes

Figure 1. Yoga Participation

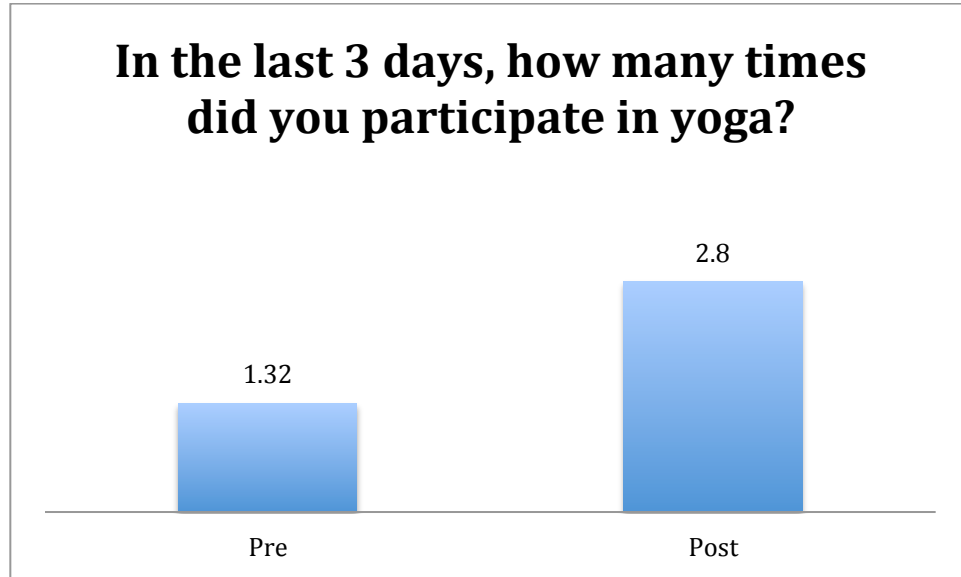


Figure 2. Concentration

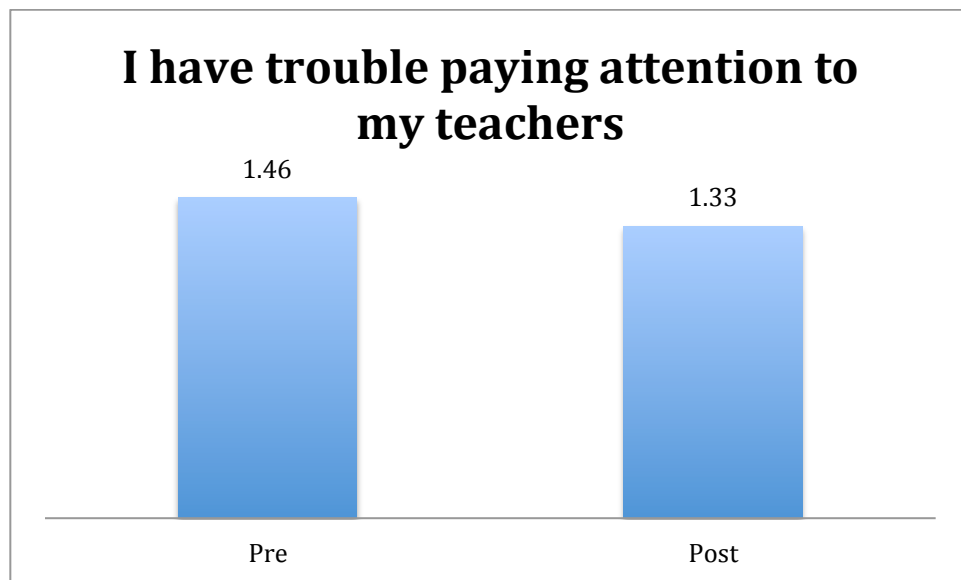


Figure 3. Skills needed to perform yoga

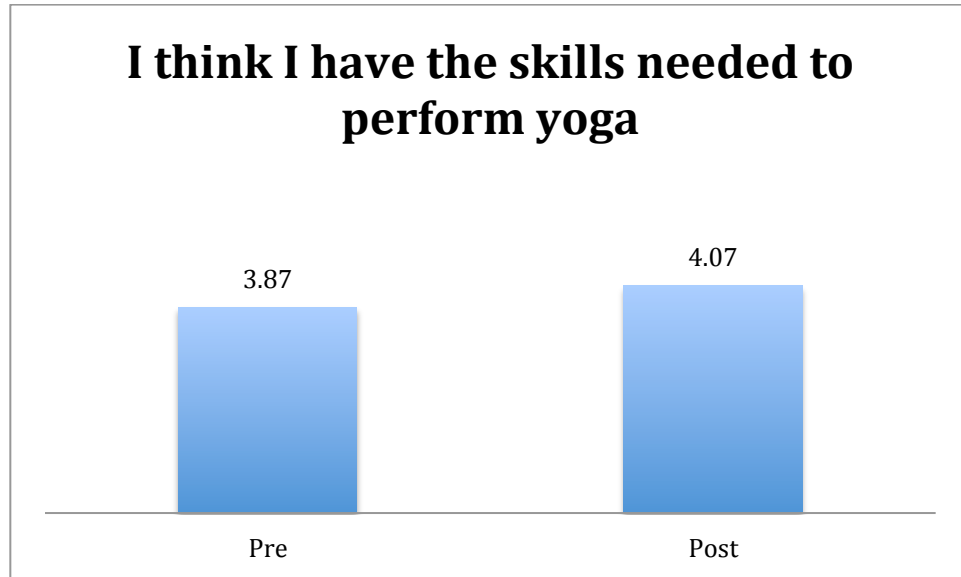


Figure 4. Nutrition knowledge

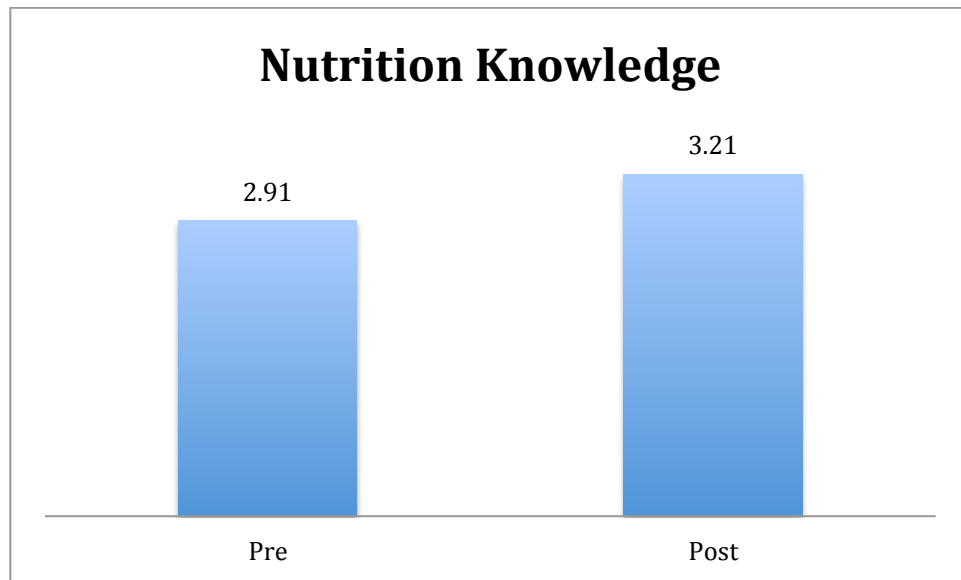


Figure 5. Yoga pose knowledge

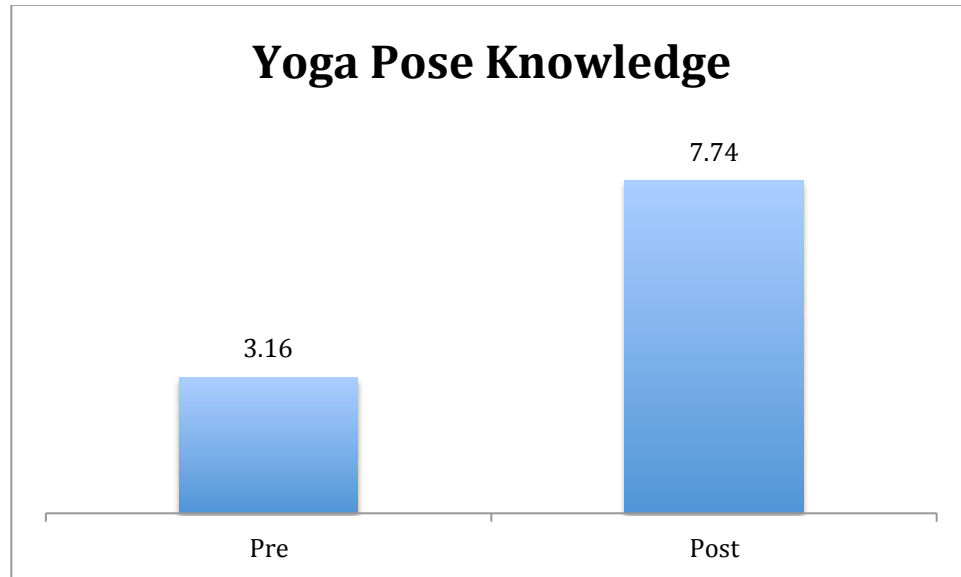
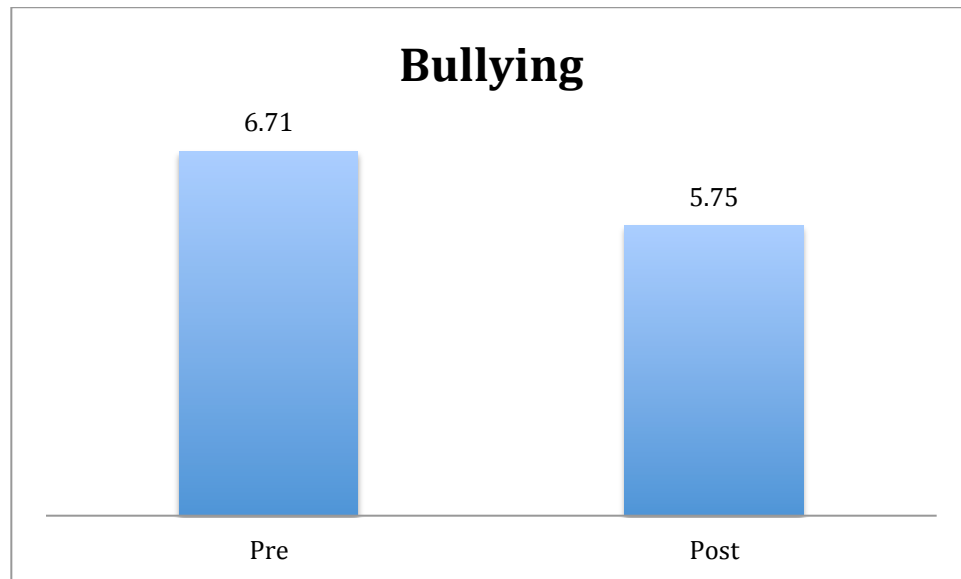


Figure 6. Bullying



# **III.**

# **Content Evaluation**

### **III. Content Evaluation**

The “content” of the DKWIO program includes two main components: (1) instructor training and (2) the nutrition and yoga workbook for both instructors and students. The training and workbook content were assessed for clarity, organization, content alignment, scope and sequencing, cultural competence and best practices.

#### **Part 1. Yoga Volunteer Instructor Training**

The Yoga Instructor Training is open to all yoga instructors in the program. Instructors are encouraged to attend the 3-hour training held in the Compuware Building in downtown Detroit. However it is not a mandatory training. During the training, prospective instructors were provided program forms to complete, a DKWIO t-shirt and program materials (workbook, handouts for students). The training is led by program staff and provides an overview of the workbook curriculum, including a review of yoga postures and suggestions for engaging youth. WSU Center for School Health staff attended the training and participated in the yoga portion of the instruction.

#### ***Strengths***

The training was engaging and very high energy. About 90% of potential instructors attended the training, including both new and experienced instructors. Using previous experience as an example, the DKWIO staff presented several scenarios and suggestions to instructors. These examples went above and beyond the written curriculum, and included such topics as extending the yoga lessons and ways to maintain student interest and focus.

#### ***Suggestions for Improvement***

While the training was engaging, there are several strategies that can improve the fidelity of the training and the overall program to ensure consistency among instructors and across field sites.

1. Provide an outline/agenda for training – To ensure that yoga instructors know the expectations of the training, an agenda with important key concepts can help to keep the training on task and organized. The Yoga Instructor Manual can serve as a starting point for organization.
2. Create a Yoga Instructor Manual – A manual strictly for instructors that includes detailed lesson plans for each session can help to ensure that the program is implemented consistently across school sites. The manual can include lesson plans for each session (including session objectives) and sections on extended yoga postures, nutrition, classroom management, child-friendly talking points for instructors, activities to build on previous lessons, and helpful hints for new yoga instructors.

#### **Part 2. DKWIO Student Workbook**

Each volunteer yoga instructor and student in the program receives the same DKWIO yoga workbook that consists of written materials for ten sessions and sections on vocabulary words, resources and nutrition information (MyPyramid and MyPlate). Each themed session includes 1) a cover page with a quote, 2) a healthy eating strategy or recipe, 3) a yoga pose or poses, and 4) a notes page or an activity. Students also receive a handout at 9 of the 10 sessions. Handouts focus on dietary guidelines (MyPyramid and MyPlate) and strategies for eating healthy (“Eat Right – Power Up with Breakfast”).

#### ***Strengths***

The DKWIO workbook is very colorful and graphically appealing. It is spiral-bound with a plastic cover to protect the front and back pages. The yoga poses are illustrated with cartoon characters of varying racial/ethnic identities demonstrating cultural competence throughout the images. The nutrition section of each session has a red apple graphic and the yoga section has a dark purple graphic so that students easily identify specific content. There are lined notes pages for students to record thoughts, hints, reminders or extensions to the lessons provided by the yoga instructors. The text readability level is acceptable.

### ***Suggestions for Improvement***

Overall, it is recommended that each lesson within the workbook be expanded from 4 to 6 pages and standardized so that each session includes the following:

Page 1: the existing title page with relevant quote

Page 2: nutritional information, a recipe, and a strategy related to MyPlate

Page 3: yoga pose(s) for the session

Page 4: a flow of yoga (see below)

Page 5: an activity that can be done at home and that reinforces the yoga or healthy eating message

Page 6: a notes page

Including both a strategy and recipe in each session will provide consistency and reinforce each other (i.e., importance of eating breakfast daily and recipe for egg sandwich).

Additionally, because the DKWIO yoga program replaces the standard physical education lesson for youth in schools, the physical activity portion of the program should include optional ways to be active while doing yoga (such as moving through several postures in a flow). This will not only provide more activity for the students during the sessions, but will give them more material that they can use to perform yoga in their home environment.

It would also be helpful that with the expansion of the student workbook, that the amount of text *decrease*. Use of bullet points instead would help students quickly identify important information and ‘take home messages’ instead of getting bogged down in paragraphs that they might have a hard time reading on their own. Providing useful information in short bouts is key.

### ***Workbook Suggestions Specific to Yoga and Nutrition***

As stated previously, it is suggested that the workbook for students and the workbook for the yoga instructors be two separate workbooks. The instructors workbook should not only include everything that the students workbook covers, but should also contain detailed lesson plans of all of the activities and instructions that take place during each lesson. The following are changes that would be made in both the instructor and the student handbook.

#### 1. Nutrition Content Suggestions

- Remove the MyPyramid materials – This method of understanding dietary intake is no longer used by the USDA, and in June 2011, MyPlate replaced MyPyramid as the government's primary food group symbol.



- Slightly revise recipes to be culturally responsive and relevant – Many of the recipes include ingredients or tools that may not be readily available to the population of youth served by the program. For example, access to a blender to make smoothies (p 40), or fresh dill or basil in the Veggie Dip recipe (p 24), yellow or orange peppers in the Whole Wheat Protein-power Pasta Salad (p 32), dried cranberries, sliced peaches, low-fat Swiss cheese, or almond butter in the Power Up with Breakfast handout, chai tea, smoked turkey, Dijon mustard, mint, angel food cake, crushed pecans, or coffee-flavored yogurt in the 33 Tasty Snack Ideas handout. It is a recommendation that the recipes be revised to include more options that are easy and relatively inexpensive to obtain in urban areas, as well as list alternatives should specialty or fresh foods be unavailable (i.e., Greek yogurt and fresh dill or basil can be replaced with lowfat ranch salad dressing).
- Match photos to the recipes – The photos on each page next to the recipe do not match the ingredient list. For example, popcorn, whole grain cereal, and pretzels are included in the recipe but missing from the photo of the Mighty Michigan Energy Boosting Trail Mix photo (p 8). Blueberries are included in the photo but not in the recipe. Kiwi and black beans are not shown in the Fruit Salsa photo (p 20). Finally, the pasta in the Whole Wheat Protein-power Pasta Salad photo is not whole wheat.
- Replace the portion size graphic with one that is easier to understand (p 28) – This graphic is confusing in that the die looks very large compared to the teaspoon of oil, for example, and it is unclear that the two colored boxes represent one pair. A box around the entire pair may help to clarify.
- Connect the strategy and recipe to the MyPlate graphic – Keeping in alignment with the USDA nutritional guidelines and MyPlate recommendation, it would be helpful to have the MyPlate image with the sections of the plate highlighted for each recipe. For example, the Yogi Yogurt Sundae Bar would include the MyPlate graphic with the Dairy, Grains and Fruits sections highlighted.

## 2. Yoga Content Suggestions

- Include more poses per session that create a flow and build on previous sessions – Currently there are one (S1-S7, S9, S10) or two (S8) yoga poses per session. While this may be enough for the first few sessions, students may benefit from pairing the poses together to create a flow that would incorporate several muscle groups and balance techniques. Lesson plans for instructors could provide suggestions for sequencing of poses. This will also allow students to begin learning how to sequence yoga poses into a flow and might encourage them to participate in yoga outside of the school setting for a longer period of time.
- Have short PA break then yoga – Physical activity breaks can help children focus and get ready for their nutrition and yoga lesson. Because the U.S. Department of Health and Human Services recommends that children participate in 60 minutes (1 hour) or more of physical activity daily, starting the session off with an activity that gets students' heart rates elevated can help activate their brain and improve on-task behavior in the subsequent yoga session.

# **IV.**

# **Instructor Evaluation**

## **IV. Instructor Evaluation**

The instructor evaluation consists of two major components: (1) observation of the DKWIO sessions, and (2) instructor perceptions about the program through questionnaires.

### **Part 1. Observation of Sessions**

Over the 10-week period, each school site was visited three times for site observations. During the site observation, the evaluation team examined program fidelity, instructor teaching styles, and student behaviors. The term “fidelity” denotes how closely the program was implemented as intended across the school sites. For example, did students at Maybury receive the same experience and program as the students at AIS? Understanding the fidelity of the DKWIO program is important when examining student outcomes. If School A received an “enhanced” DKWIO program and School B received a truncated or varied program, student outcomes may be different for School A than School B. Ensuring consistency in the program is essential as the program plans for expansion and replicability.

As mentioned previously, the DKWIO provides two items to increase fidelity within their program: (1) instructor training, and (2) instructor/student workbook. In previous sections changes have been suggested to help improve both of these items in order to increase program fidelity. The following section discusses the strengths and suggestions for improvement of four findings that were observed over the ten-week period.

#### 1. There was a large variety of instruction:

##### ***Strengths:***

Each instructor had a different teaching style and experience with young people, which contributed to making each session unique. In general, the students seemed interested and engaged during most of the instructors’ teaching.

##### ***Suggestions for Improvement:***

Each instructor taught their sessions completely different from the other instructors. A lot of the instructors were simply not following the lesson plan as it was laid out, or were not given instruction on how to implement worksheets, games and other activities into the lesson. When looking at program fidelity this could cause some room for concern because each child (depending on the instructor) is receiving a different experience. The evaluation team suggests that the curriculum be developed to contain more detail for the instructors. A separate instructor guide book should be created that not only contains a detailed lesson plan informing the instructors what activities and content should be taught, but also contains time periods for how long each portion of the session should take. For example, if a session included 15 minutes of a nutrition topic, 15 minutes of a lesson, and 15-30 minutes of yoga, then each of these segments should be detailed for the instructor so they know what to convey to the students. This information could be given in a packet before the instructor training, so the training could be reserved to show the instructors how to convey this information to the students. Also, making sure that the “one hour formula” is adjusted if a school only has 45 minutes is very important. This will help the yoga instructors to be consistent to where they are cutting the time.

Creating a detailed curriculum that all instructors are required to follow will help with the implementation, fidelity, and ultimately the validity of the program. All instructors should know how to teach yoga, nutrition, and all of the lesson plans included in the DKWIO program to children (specifically). Also, each lesson plan should be detailed so that instructors are not ad-libbing or deleting details. A lot of the instructors were simply not following the lesson plan as it was laid out, or were not given instruction on how to implement worksheets, games and other activities into the lesson.

2. Classroom management:

***Strengths:***

Some of the instructors have great rapport with the children and the children were very receptive to the program and their instructors. They were attentive and instructors were respectful, and just had fun with it.

***Suggestions for Improvement:***

On some occasions, poor classroom management became an issue with students. Often times, the issue of classroom management took time away from yoga and nutrition content. It is an understanding of the evaluation team that the PE teacher is supposed to be there at all times assisting with discipline. However, it is important that the volunteers are equipped with some basic skills to help them deal with classroom management issues, just in case the teacher does not assist. It is a suggestion of the evaluation team to include a classroom management portion to the instructor training and maybe a tip sheet in the instructor booklet. There was a definite difference in quality of lessons being taught between classrooms where discipline was an issue for the yoga instructor, and classrooms where the yoga instructor felt comfortable dealing with discipline issues.

3. Designated time for physical activity:

***Strengths:***

The unique one-hour formula sets time apart for each area, making sure the yoga instructor hits every component every time.

***Suggestions for Improvement:***

There were some sessions where the actual yoga/movement duration was less than 10 minutes, and only one or two yoga poses were performed. This is problematic when using this program as a way to increase youth activity, particularly when it is replacing the children's PE time.

The evaluation team suggests that more time be spent learning yoga sequencing during the one-hour formula, ultimately increasing the amount of physical activity that is taking place during each session. Making sure that a time is designated and labeled for each component of the one-hour formula would help ensure that time is being spent appropriately. This can be detailed in the instructors lesson plans, but it will not only help with the amount of physical gains that children receive from the program but it will also contribute to the classroom

management skills of the instructors. By keeping children occupied and moving with sequences and flow, it will allow them less time to talk to their neighbors and participate in other off-task behaviors. Given that the DKWIO program takes the place of physical education, maximizing the amount of physical activity and muscular strengthening exercises that children perform is important in the fight against obesity.

#### 4. The use of yoga flow within each lesson

##### ***Strengths:***

Some instructors did really well with sun salutations or yoga flows. Instruction was detailed and slow enough for the students to follow and by the end of the program the children were performing the flows all by themselves.

##### ***Suggestions for Improvement:***

Making sure that all instructors understand how to teach a flow sequence to children is extremely important. With some instructors, the yoga flow was fast and complicated. Many students had a hard time keeping up, and this was expressed, in one-on-one interviews with the students, as an area that needed improvement. The flow seems like a great way to get them active and a way to remember the yoga poses. Including this in the lesson plans for the instructors and touching on it in the instructor training would be helpful and hopefully improve the effectiveness of teaching the flows to children.

## Part 2. Instructor Perceptions

At the end of the program the volunteer yoga instructors were asked to fill out a questionnaire. The questionnaire contained questions that focused on their thoughts and perceptions of the DKWIO program and its effects on the students they taught. It also asked them for suggestions for improving the DKWIO program. The results are organized in six categories below: (1) summative feedback, (2) appealing aspects of the program, (3) personal gains from the program, (4) changes they saw in their students over the 10 weeks, (5) suggestions for program improvement, and (6) testimonials about the program.

### 1. Summative Feedback

- The instructors really like the program and think that it is a great experience for both the volunteers and the students.
- Most instructors felt underprepared to teach the lessons and suggested more guidance, ideas, and instruction on how and what to teach.
- Some instructors did all 10 lessons and some did not. Of those that did them all, they deviated from how they were written in the student handbook.

### 2. Appealing Aspects of the Program

- “I found the most helpful training came from my one-on-one intro to the program and workbook that I had with Kristina. She had good advice from her own experiences and had useful suggestions about activities and timing.”
- “I found the facebook group helpful, especially some of the links to resources.”

- “I thought it was very well put together! I even learned and was reminded of some things!” :-)
- “I think the lessons were very well prepared and organized, and easy to follow.”

### 3. Personal Gains from the Program

- “Learning to teach young people yoga.”
- “I have learned many ways to explain the same posture, which has been helpful in my classes outside of DKWIO. “
- “They have shown me that yoga doesn’t have to be so serious. You can smile, laugh, even dance during a flow if that is what you need to express.”
- “A deep respect for the students’ intelligence and enthusiasm, as well as the sensitivity that some of the students showed (several of them really seemed to savor the “meditation moments” and they all clearly loved the yogic breathing).”

### 4. Changes in Students

- “They leave with more awareness of eating habits and their bodies.”
- “They have fun, and some have told me they continue to practice after.”
- “I have seen shy students gain more confidence.”
- “They learned a lot about yoga, exercise and breathing; they really took to the poses!”
- “I saw them really warm to and welcome and enjoy the yoga breathing.”
- “I saw them become comfortable with me (a white face).”
- I think the program offered the children another tool for living a healthy and positive lifestyle, which they may or may not implement right away, but that they can refer to when and if they feel the need.
- I believe they are better off, rather than not, from having the experience.
- One session, the boy that was the most disruptive and who said, “I don’t want to do yoga” talked about it the most once the session was over.
- The ones who were noisy are a bit more quiet after practice and more focused on their work (the nutritional piece).
- The students who really like it improve their postures and attention to their breathing.
- For those that wanted to be “rebellious”, it helped them to be more creative and in touch and to take the pose or what we were saying and make it their own.
- I do think the “disruptive” students, the ones who did not want to sit quietly or who were silly and wild with the yoga, really seemed to become more involved and attentive.
- The “good”, engaged, eager students grew in number (more and more of them wanted to read in class and were anxious to participate in demonstrating poses and even sharing how those poses made them feel).

### 5. Suggestions Improving the Program

- Providing materials in Spanish for those schools who have some of the children and children’s parents that do not read English.
- Make the nutrition portion more culturally relevant so that it matches the population that is being served.
- Try to provide a small stipend to help compensate the Yoga instructors.
- Correspondence between the school and DKWIO staff could be improved.

- More suggestions for interactive activities with the kids pertaining to the nutrition portion of instruction.
- More suggestions about how to help the kids really enjoy and partake of the quiet of savasana.
- Maybe offer workshops on teaching children Yoga in schools, or something like that.
- Make the session longer than 10 weeks
- Keep number of students to under 30.
- For first time instructors to children, it might be nice for them to observe an actual class with children being taught.
- I would have liked more activity ideas.

6. Instructor Testimonials

- I love working with young people and I love teaching yoga in the DKWIO program!
- Yoga has transformed my life. I am from Detroit and endeavor to share the gifts I've received from this practice with the inner city children.
- I grew up in Detroit and wanted to connect with the students and offer the gifts of yoga to young students in the hope that it can help them connect with the goodness inside themselves. I wanted to help them understand the value in caring for themselves and others. I wanted them to find self-confidence that comes from connecting with their own strengths. I wanted to empower them to make good choices for themselves.
- I love being a part of the movement to improve the lives of inner city youth through the practice of yoga. I think all of our children can benefit from the lifestyle and philosophy that yoga offers, and can serve them throughout their lives.

## References

- Basch, C., & Basch, C. (1987). Focus group interview: An underutilized research technique for improving theory and practice in health education. *Health Education Quarterly*, 14, 411-448.
- Bosworth, K., & Espelage, D. (1995). Teen conflict survey. Bloomington, IN: Center for Adolescent Studies, Indiana University. Items were published in Dahlberg, L.L., Toal, S.B., Behrens, C.B., (1998). *Measuring Violence-Related Attitudes, Beliefs, and Behaviors Among Youths: A Compendium of Assessment Tools*. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Available online: <http://www.cdc.gov/ncipc/pub-res/measure.htm>
- Glesne, C. (2006). *Becoming qualitative researchers: An introduction (3rd ed.)*. Boston, MA: Pearson.
- Osika, W., Friberg, P., & Wahrborg, P. (2007). A New Short Self-Rating Questionnaire to Assess Stress in Children. *International Journal of Behavioral Medicine*, 14, 2, 108-117.
- Weber R.P. (1990) *Basic Content Analysis*. Sage Publications, Newbury Park, CA.
- Weinberger, D.A., & Schwartz, G.E. (1990). Distress and restraint as superordinate dimensions of adjustment: a typological perspective. *Journal of Personality*, 58(2), 381-417.