

Yoga to UNHS: Presenting yoga to Children and Pregnant Women in East Nashville's Urban Low Income Communities

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Introduction

Yoga is a combination of physical movements and meditation that helps individuals attain a sense of peace and also provides many physiological benefits, as shown by numerous investigators and researchers. In an effort to bring these benefits to the communities of Nashville, an intervention was developed and implemented at United Neighborhood Health Services (UNHS), a network of community health clinics that provide health care to the people of Nashville.

Currently, sixteen UNHS clinics serve the city with a population of over 600,000 people. UNHS strives to not only treat patients with varying healthcare concerns, but to promote healthcare education and prevention through various outreach efforts. In recent years, leadership and providers at UNHS have seen very poor outcomes among pregnant women. In fact, in Nashville, the overall rate of pre-term birth is 11.1% with 14.9% among African American women. Also among African American women, 12.6% of all births are considered low birth weight. Finally, infant mortality in Nashville is a staggering 12.8%, whereas the overall rate in the United States is 5.9%. Because of these overwhelmingly negative statistics, UNHS has been granted funds to develop and implement the Strong Start Program, an initiative that provides counseling and health education, develops a care plan, and coordinates care by enrolling women in Women, Infants and Children (WIC), TennCare, Coverkids, and other state services. Yoga,

with its many health benefits that address some physiological conditions associated with poor birth outcomes, fits well into the mission and array of services provided by UNHS. As a result the team decided to implement a prenatal yoga class.

Childhood obesity is another chronic health problem in underserved communities. In Davidson County, 29% of adolescents are overweight. The obesity rate in Tennessee is greater than 35.1%, higher than most states. Through their outreach efforts, UNHS has established strong relationships with local schools and community centers, providing a perfect opportunity to address childhood obesity through the implementation of a Kids Yoga program.

Starting yoga classes at UNHS came out of the overall health of the community and need for prevention of negative birth outcomes and childhood obesity. With the support of Strong Start and the Health Promotions team at UNHS, a dual pronged yoga class was developed for pregnant women and youth.

Background

Yoga has been reported to benefit pregnant women with hypertension, gestational diabetes, intrauterine growth restriction and depression and women at risk, in general, for poor birth outcomes including pre-term birth and low birth weight. Field et al examined the benefits of yoga and pregnant women who were clinically depressed reporting that the yoga intervention group had longer gestational age and increased birth weight as compared to the control group receiving no yoga therapy (Field 204). Similarly, Narendran et al illustrated the effects of yoga in pregnant women, who were matched to controls. Pregnant women practiced yoga daily for one hour, for 20-22 weeks, while the control group walked twice daily for 30 minutes. The study

showed that in the group that practiced yoga, the incidence of preterm labor was statistically lower ($p < .0006$) and birth weight was higher ($p < .01$) (Narendran 237). Studying other types of complications, Rakshani et al showed that pregnant women who completed an one hour yoga classes, three times a week, from week 12 to 28 of gestation, showed reduced rates of pregnancy induced hypertension (PIH), preeclampsia, gestational diabetes, and intrauterine growth restriction ($p = 0.018, 0.042, 0.049, 0.05$ respectively) (Rakshani 333). Another compelling study by Martins et al showed that women with pregnancy-related lumbar and pelvic pain had reduced pain after a 10-week yoga intervention ($p < .0058$). The pain level was measured by a Visual Analog Scale and by pain provocation tests (Martins)

Research shows that yoga has various effects on the health outcomes of children. Investigators at Harvard Medical School conducted a randomized control trial as well as a qualitative assessment of the effects of yoga among high school students in the United States, who were part of a yoga program at their school. Using tools to examine mood, researchers found that mood disturbance improved in students practicing yoga. In the qualitative portion of the study, interviews showed that students had a “greater kinesthetic awareness, which some students associated with a greater respect for the body and improved self-image.” (Conboy 171) This study also found that high school students thought yoga reduced their stress, could reduce interest in drug use, and could increase social cohesion among friends and family. Seo et al investigated the effects of yoga on various metabolic parameters in obese male children. Volunteers with BMI greater than the 95th percentile were randomly placed in a group that practiced yoga or a control group that did not practice yoga for 8 weeks. After yoga training, BMI, fat mass, weight, and total cholesterol were significantly decreased ($p < .05, .05, .01,$

respectively) (Seo 175). These findings indicate that practicing yoga leads to positive health outcomes among children and adolescents.

Methodology

Recruitment

Setting up yoga classes for kids in the community involved holding meetings with the coordinator at the Kirkpatrick Community center to fit into an existing schedule of activities. Everyday eighty children attend the day-camp at the center ranging from ages 6-16. It was recommended by UNHS to work with this organization because of an established relationship, and primarily because the recruitment portion of the project would be feasible. Enrolling pregnant women in Prenatal Yoga was more challenging and involved various methods, which included advertising through flyers in UNHS clinics and community centers, calling women who were enrolled in the Strong Start program, and offering incentives such as a gift card and healthy refreshments. Though there was aggressive advertising for the prenatal yoga class, no women attended the class. The reasons for this can be speculated and will be described in the discussion section.

Informal Interviews

Informal discussion sessions were held at the Kirkpatrick community center to discuss the benefits of yoga; these sessions were recorded. Two sessions were held. The first 14 minute session was with a group of adolescents who participated in yoga the first week, but chose not to the second week. The second 5 minute session was held with children aged 6-8 who had attended a total of 6 weeks of yoga.

The first session was led by the yoga instructor, Barbara Burgess, and PCLP scholar, Rashida Merchant. Initially, a number of questions were asked to gain an understanding of yoga knowledge, followed by a short educational piece on the benefits of yoga. Below are the questions and paraphrased answers.

1. What do you think are the benefits of yoga?
 - a. Gets you loose
 - b. Relaxes your muscles
 - c. Calms you down
2. Why do you think exercise is important?
 - a. Helps you get in shape
 - b. You won't become overweight
 - c. Prevents health problems such as heart conditions
3. Why do you think we are here to talk to you today?
 - a. To create interest in yoga

In the educational component facilitators went over the general benefits of yoga found in the literature that were discussed in the background section. In addition, what makes yoga distinct was also discussed. The instructor talked about yoga as a “personal discipline” and the holistic effects of yoga, such as how it facilitates personal growth and improvement. At the end, the adolescents were able to ask questions, and inquired about the origins of yoga.

The second session was held with children ages six to eight. Similar to the structure of the first session, facilitators started with questions for the group and ended with a short educational component on the benefits of yoga.

1. How many of you like yoga?
 - a. 10 out of 13
2. Why do you like yoga?
 - a. Helps you concentrate
 - b. Enjoy specific poses
 - c. Helps you stretch
3. How does yoga make you feel after the class is over?
 - a. Strong
 - b. Good
4. Why do you think people practice yoga? What do you think are the benefits?
 - a. It is a form of exercise and helps you feel energized
 - b. Helps you relax
5. Why is the end of the class important, when you briefly meditate?
 - a. To be calm

Questionnaires

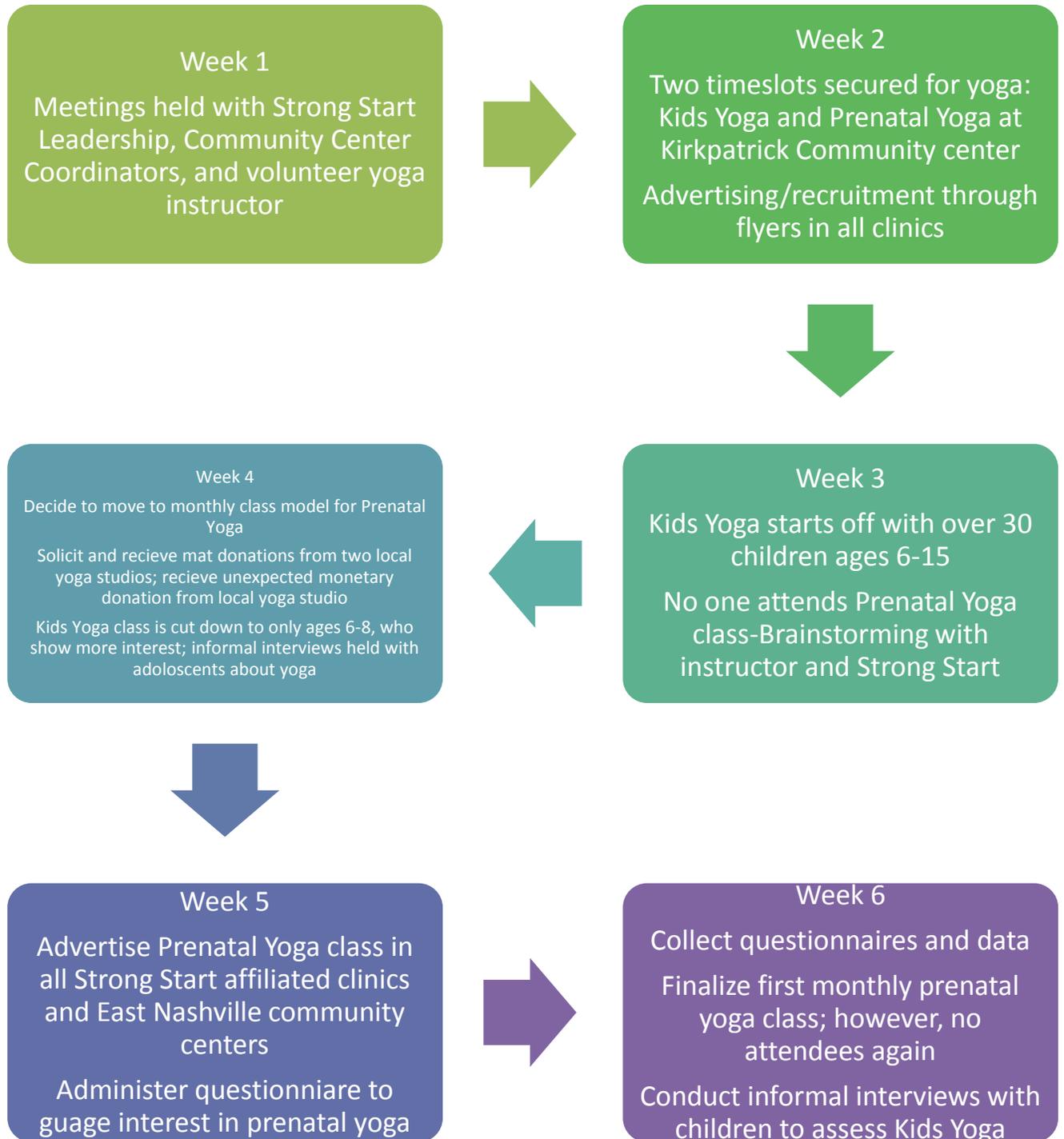
To gauge interest among pregnant women regarding prenatal yoga, a short questionnaire was developed and administered. A total of 7 questionnaires were filled out by Strong Start coordinators who contacted women in their program. All women participating indicated that they did not know the benefits of prenatal yoga and all women indicated that they wanted to know the benefits. Women were given the option to check off more than one type of education modality. Seventy percent of the women wanted information presented in person at a prenatal yoga class,

whereas the remaining 30% wanted it presented in a video or email newsletter. The questionnaire is in the appendix of this paper.

Interventions

Two yoga classes were offered to the community: Kids Yoga at the Kirkpatrick Community Center and Prenatal Yoga classes at the Kirkpatrick community center and at UNHS Main Street Clinic. Kids yoga was attended by children participating at the day camp once a week for thirty minutes, for a total of six classes in the summer of 2013. The number of children ranged from thirteen to well over 30. Despite aggressive advertising and recruitment efforts, there were no attendees at the Prenatal Yoga classes, which led to the development of various future recommendations.

Timeline- Below is a visual diagram that shows the order of events.



Results

Based on informal interviews, discussions, and observation, children attending Kids Yoga classes at Kirkpatrick Community Center enjoyed the class and have shown changes in behavior and attitude during the class. In addition, the instructor's previous experiences teaching yoga to children suggest that there will be increased interest every week, and the children will practice outside of the class together. The Kirkpatrick Community center now has a yoga instructor for future classes. Classes can be held for interested adolescents, adults, and staff in the future.

Despite the lack of attendance at the prenatal yoga classes, what resulted was a list of recommendations for the future. Though women indicated that a formal class would be the best way to learn about prenatal yoga, they were unable to attend to the class. Because this happened twice, new ideas on how to disseminate information were developed. The in kind and monetary donations from yoga studios will help UNHS in the future to bring prenatal yoga to communities.

Discussion

The success of Kids Yoga can be attributed to a number of factors, which include a strong, established relationship between Kirkpatrick Community Center and UNHS, a creative, certified, and enthusiastic yoga instructor, and a preexisting scheduled day-camp that had time and space to accommodate a yoga class. The kid's enjoyment and satisfaction is a result of the type of yoga they were taught, which included poses with animal names and other poses that were challenging and exciting. If the class continues into the school year, the instructor anticipates marked increase in interest, concentration, and overall attitude. In addition, research

suggests that the children will have reduced stress, anxiety, and perhaps a positive change in metabolic factors.

The lack of attendees at the prenatal Yoga class may not be a sign of lack of interest. In fact, the administered questionnaires suggest there is interest. Challenges may include lack of transportation to the class, prior commitments such as work, need for childcare, and fear of not knowing any risks associated with prenatal yoga. New ideas and methods to disseminate information on prenatal yoga and how to practice will be discussed in the *Recommendations* section. Research shows the importance of prenatal yoga, specifically among women who are at risk for complications, therefore, to distribute information that can affect pregnancy outcomes so dramatically is critical. In addition, for Strong Start to reach its goals, it is very important for pregnant women to receive information on prenatal yoga.

Recommendations

If Kids Yoga continues throughout the school year and/or next summer, conducting a study that examines stress and anxiety levels can show the greater effects of yoga. In order to look at this, investigators can examine the change in cortisol levels and administer questionnaires that assess stress levels. In addition, other interventions can become linked to the yoga classes such as nutrition education and mental health education activities.

There is interest in the benefits of prenatal yoga, as demonstrated by the questionnaire. In order to disseminate knowledge about prenatal yoga, multiple methods can be utilized. Primarily, sustaining a monthly class at one of the clinics that is taught by a certified prenatal yoga instructor is a way that ensures interaction with patients, and provides a space and opportunity

for patients to ask questions and become more educated about yoga and healthy pregnancies. Additionally, distributing a detailed, yet clear handout on key yoga poses with illustrations to women during counseling sessions with Strong Start coordinators and monthly classes can ensure that pregnant women have material to refer to and use while practicing at home. Another way to present how to do prenatal yoga would entail working with a certified yoga instructor to create a video that demonstrates poses and presenting it to women during counseling sessions, or in the clinic waiting rooms.

Conclusion

The idea to introduce yoga classes to the UNHS community of children and pregnant women came about after meetings with leaders at UNHS. The decision to work with these two populations was based on a number of factors. With the start of the Strong Start program, as a result of staggering premature delivery and infant mortality rates in Nashville, it was already determined by UNHS that pregnant women were an at-risk group and interventions were needed. In addition, with childhood obesity rates on the rise and providers increasingly counseling parents on the effects of poor nutrition and lack of activity, another apparent group to work with was children in the Nashville community.

In conclusion, yoga was met with enthusiasm among the children, and it seems that it will continue to be successful and show results with a passionate and committed instructor. Developing and implementing prenatal yoga classes proved to be very difficult, due to a number of challenges. It was determined; however, that developing multimodal methods to distribute information is important and necessary in order to tackle the challenge of markedly high rates of infant mortality and preterm births in Nashville.

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Appendix

Questionnaire

Are you pregnant? Please fill out this short survey!

UNHS is hoping to bring free prenatal yoga to you. By filling out this small survey, you will help us with that goal!

1. Do you know what the health benefits of prenatal yoga are?	<input type="checkbox"/> YES <input type="checkbox"/> NO
2. Do you want more information about prenatal yoga?	<input type="checkbox"/> YES <input type="checkbox"/> NO
3. If yes, how do you want to receive this information? You can check more than one answer.	<input type="checkbox"/> Monthly Newsletter that is emailed to me <input type="checkbox"/> Videos and a Website that show me poses and give me information <input type="checkbox"/> Monthly in person classes that I can attend

Please leave your contact information below if you would like to learn more about Pre-Natal Yoga!

First Name _____ Last Name _____

Phone Number _____

Address _____

Email Address _____

Questions or Comments:

Interview Questions

Adolescents:

1. What do you think are the benefits of yoga?
2. Why do you think exercise is important?
3. Why do you think we are here to talk to you today?

Young Children:

1. How many of you like yoga?
2. Why do you like yoga?
3. How does yoga make you feel after the class is over?
4. Why do you think people practice yoga? What do you think are the benefits?
5. Why is the end of the class important, when you briefly meditate?