

**Novel Approaches to Physical
Activity and Life Skills
Promotion among New York
City Adolescents**
The Case of the American Youth Table Tennis
Organization (AYTTO)

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Introduction:

The health benefits of regular physical activity are well established and include lower rates of heart attacks, stroke, hypertension, diabetes, some cancer and depression/anxiety.¹ Conversely, the influence of a sedentary lifestyle contributes to the death of some 250,000 Americans annually.² In recent years, adolescent obesity and low physical activity have emerged as critical public health problems. Nationally, the prevalence of obese or overweight adolescents is 35.5% and in New York City, the prevalence is even higher at 39%.³ Within New York City, neighborhood socio-economic status has a powerful direct effect on physical activity levels. The New York City Department of Health Community Health Survey of 10,000 residents found that the proportion of Manhattan residents who walk or bicycle more than 10 blocks to routine destinations was 77% versus 66% for outer borough residents. Similarly, only 63% of residents with household incomes less than 200% of the national poverty level reported regular physical activity greater than 10 blocks compared to 73% of residents whose household income was greater than 200% of the national poverty level.⁴

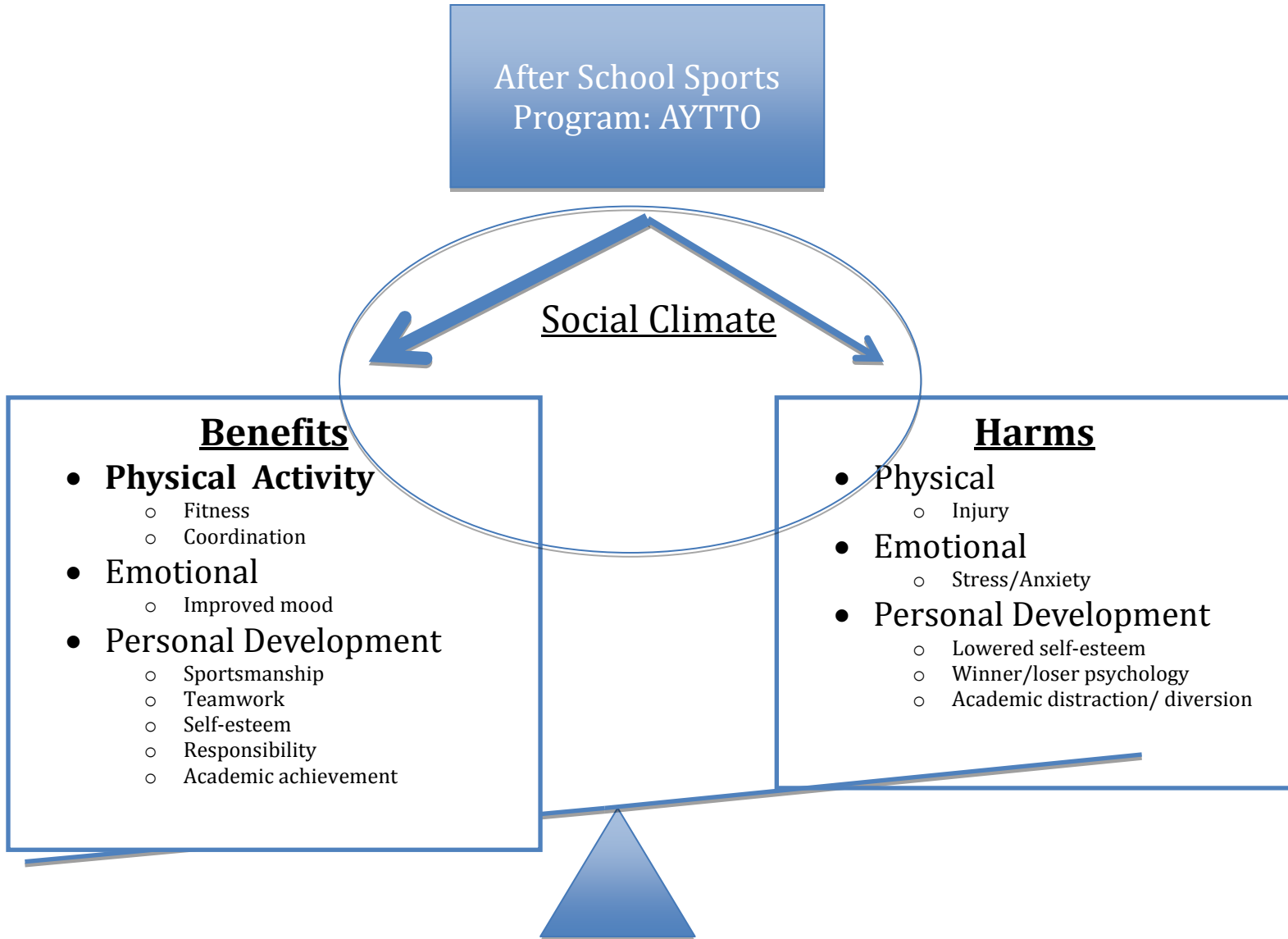
Efforts to promote adolescent physical activity through in-school physical education programs are necessary but seem to be insufficient in curbing the rising adolescent obesity problem. Disturbingly, a recent survey by the Centers for Disease Control found that 20.5% of New York City school's had no physical education curriculum.⁵ Furthermore, even if in-school physical education programs are successful, such programs may not translate into meaningful physical activity after school or promote long-term physical activity habits.⁶ For

adolescents, the CDC recommends 60 minutes of physical activity per day, but only 18.4% of adolescents meet current national guidelines.⁷

After-school sports programs may be an important means to promote and sustain physical activity in adolescents. Over 7 million high school students participate in competitive sports.⁸ A recent survey published in the medical journal *Pediatrics* found of 1,718 New Hampshire and Vermont high school students, participation in team sports had the strongest and most consistent inverse association with obesity.⁹ In addition to increasing physical activity, participation in sports programs may carry additional benefits related to personal development including the adoption of values such as teamwork, sportsmanship and responsibility.¹⁰ However, after-school sports programs are not without controversy and unintended consequences.¹¹ Potential harmful consequences of such a program include physical injury, increased stress and anxiety and negative effects on personal development such as lowered self-esteem or encouraging a hyper-competitive winner/loser psychology. The relationship between participation in competitive sports and academic performance is an area of uncertainty. Some studies suggest a potential beneficial role on academic attainment while others are critical of a diversion of resources and time that could be otherwise spent on educational activities.¹² Figure 1 is a conceptual model illustrating the balance between the potential benefits and detriments of an after school sports programs. The program's social environment is likely a critical mediator in this balance and is determined by the coaches and/or instructor's teaching philosophy and skill in actively engaging students.

The goal of this paper to examine the American Youth Table Tennis Organization's (AYTTO) ability to promote physical activity among adolescent middle school students in New York City and to assess the organization's capacity to balance the potential benefits and harms of such an after school program. My hypothesis is that the AYTTO can positively affect both physical activity and life skills for participants through teaching the sport of table tennis and creating a positive social atmosphere for students to enjoy the sport and engage with other students of diverse backgrounds.

Figure 1: Conceptual Model Balancing the Potential Benefits and Harms of an After-School Sports Program



Needs Assessment Interview with Ben Nisbet, President and Founder of

AYTTO

Table tennis is one of the most popular sports worldwide, second only to soccer.¹³ In the United States, millions are familiar with the recreational game ping-pong, but not the Olympic sport of table tennis. Once introduced, however, the sport's challenging nature, the unique skillset, the excitement, the strategy and the amount of physical exercise required becomes readily apparent. Anecdotal evidence suggests that playing competitive table tennis carries both physical and mental health benefits and can sustain physical activity levels for all ages, from adolescents to senior citizens, and that the sport has an appeal that spans socio-economic and ethnic barriers. As the acclaimed British novelist Howard Jacobson pointed out in his beautiful essay for *The Independent* entitled "Note to disaffected youth...Pick up a table tennis bat and strike a blow for world peace."¹⁴ According to the CDC and American College of Sports Medicine, competitive table tennis constitutes a moderate level of physical activity, approximately 3.5-7 kcal/min.¹⁵ The unique mission of the American Youth Table Tennis Organization (AYTTO) is to "promote the psychological and physical well-being of inner-city youth through playing, learning and enjoying the international sport of table tennis."¹⁶

History

AYTTO was founded as a 501© (3) non-for-profit organization in 2001 by Ben Nisbet, a former program director at Sports and Arts for Schools Foundation,

and a former executive director of USA table tennis, the sport's national governing body and Virginia Sung, an attorney and national level player. Mr. Nisbet has led the organization since its inception as a single after school program at the Hoe Avenue Boys and Girls Club to its current involvement in 40 after-school and in-school programs reaching ~1,500 children per year. In particular, the organization aspires to introduce the sport to disadvantaged urban youth who would have little opportunity to play the sport otherwise. To this end, AYTTO has incorporated successful after-school table tennis programs into low-income areas such as the Lower East Side, the South Bronx, East New York, Red Hook, Harlem, Greenpoint, Chinatown and Bushwick.

Structure

The organization consists of 10-14 individuals that include a voluntary director, a voluntary 5 member board of directors (consisting of table tennis enthusiasts/prominent local business leaders), a voluntary accountant, and 4-6 part-time salaried coaches. The organization has partnered with the CHAMPS (**C**ooperative, **H**ealthy, **A**ctive, **M**otivated, and **P**ositive **S**tudents) program, a New York City Department of Education initiative to provide middle schools with resources to offer sports and fitness programs outside of school. The primary program AYTTO offers are instructional after-school classes. The classes are 2-hour sessions structured around 3 activity stations. The stations consist of 2 tables which are divided into a "coaching table" where the focus is on skill building and a "game table" where students have the opportunity to practice their new skills in matches. The third station is a physical activity station that

incorporates exercise such as jump roping. Class size is between 10-30. The coaches and instructors try to focus the students on skill building and fostering a social non-competitive environment that encourages sportsmanship and mutual respect.

Additional programs include summer camps, instruction/certification training for school physical education teachers and a Sunday academy that offers more advanced instruction to interested students. Roughly 70% of the organization's funding is generated from philanthropy while the remaining funding is derived from the participating schools' budget for after school programs, primarily via federal support from Title 1 programs. For example, a PS 125 in Queens has combined an after-school table tennis class with an English as Second Language (ESL) class to attract as many students as possible.

In 2011, AYTTO received a major financial endorsement from actress Susan Sarandon who donated \$100,000 to AYTTO to assist the organization's efforts in promoting the sport in New York City schools. The contribution forged a partnership with Department of Education CHAMPS program and greatly expanded the scope of the interscholastic middle school league. In an interview for Forbes, Sarandon remarked the sport is "perfect (for) any urban place where the kids are underserved. It's a great answer to attention deficit and to get physical activity. It cuts across gender, age, and physical body type. That's what I love about it." ¹⁷

Goals

The organization has a number of goals which include:

- 1) To introduce and teach the **life-long** sport of table tennis to inner city youth
- 2) To assist NYC adolescents in meeting national physical activity guidelines.
- 3) To mentor urban school children so that they can make better life decisions.
- 4) To demonstrate that an after school table tennis program can improve hand-eye coordination, self-confidence, outlook, academic achievement and build character

Strengths

The organization has a number of clear strengths. The game is inherently fun, engaging, enjoyable and relaxing. However, students quickly learn after seeing demonstrations from the professional coaches that the sport is not easy and there is more to it than they initially expected. The quality of the coaches is one of the major strengths of the organization. Beginning students have the opportunity to learn the sport from top level coaches and players many of who have competed in international tournaments and represented their respective countries. In addition to the US, coaches hail from Guyana, Poland, Egypt, Israel and Pakistan. These coaches can serve as mentors and role models for students reinforcing the importance of education, offering support and guidance if the student is experiencing difficult times or facing tough choices in addition to teaching basic table tennis skills.

Second, table tennis is an Ideal urban sport. The only requirement is a table and paddles; gym space or an outdoor playing field are not necessary. The tables are readily mobile and can easily be set up in a school cafeteria.

Third, the organization engages children who may be disenfranchised or

shied away from other more popular competitive sports such as baseball, basketball or football, or soccer. This is in line with CDC policy regarding promoting extracurricular physical activity programs that meet the needs and interests of *all* students.¹⁸

Weaknesses/Needs:

AYTTO faces a number of important challenges and limitations. First, funding remains a major limitation to further expansion of the program. To this end, the organization believes it must better communicate the program's significant successes and achievements as doing so could potentially allow it to compete for grant support in the future. Furthermore, there is a need to develop a framework for outcome assessment. Potential outcome measures could include the effect of the program on improving concentration, hand/eye coordination, teamwork, goal setting, confidence/self-esteem and academic performance. An innovative idea is to work with science/math teachers on integrating basic mathematics and physics concepts into the table tennis program. Another goal is to further expand on the success of the interscholastic middle school program into high schools. Although table tennis can be a lifelong activity, many students stop playing upon entering high school because the programs have only been incorporated into city middle schools. Developing programs beyond middle school and into high schools will be critical for encouraging the sport as an avenue for maintaining lifelong physical activity.

In terms of improvements to the class structure, a major challenge is integrating activities that can incorporate the wide array of skill level among the

students. The organization is working on developing a referee program where students can learn how to officiate so that interest is maintained even while students are not directly participating in a match.

Examples of Program Impact

Perhaps, the best example of the program's impact can be derived from the students themselves. Excerpts from an essay contest on the theme "Why I Like Table Tennis" are highlighted below.

After one year of joining the Table Tennis Club and attending lessons at American Youth Table Tennis (AYTTO), I learned a lot and getting to like to play Table Tennis more and more. So far Table Tennis has been one of my favorite sports. As many of you may not know Table Tennis is one of the toughest sports to play. You have to be both mentally and physically strong. Playing a match is like taking a test while working out at a gym at the same time. You need to stay focus at all time when playing the game and you need to think, plan, and strategize. Also Table Tennis is good for your health as it is great to getting you a sweat and getting the heart rate up. The final reason I like Table Tennis is of course it is fun. One of the most important things I learned while playing Table Tennis matches is that winning is good but it is also okay to lose and the game is not just about winning or losing and what is good sportsmanship. At first, I was having difficulty coping with losing matches but after several loses and with the help of coach's support and teaching, I have learned that you do not always win every times and it is okay to lose. Learning to cope with losing is very important and just not for Table Tennis but also help me in life as I will be facing many loses throughout my life. Overall from when I started until the present, I really like to play Table Tennis. I think Table Tennis is a good sport and I'm going to continue to play it throughout my life.

Is there one sport that a whole variety of shapes and sizes could play? One that doesn't give an advantage to height or strength? Table tennis is one of those sports. You could be old or young, king or queen to play this exhilarating mind boggling game. The fast paced action and the sheer awesomeness is what makes table tennis enjoyable on both sides, for the players and the spectators. These are the 3 things that make table tennis so fascinating for me. The first thing that makes table tennis a spectacle is its quick play action. Balls fly as players try to hit the ball to outdo the opposition. This requires quick play decision and timing as you could lose a point if you miss any of these key factors. At the high levels this transaction could be very difficult and it is these struggles that makes table tennis so appealing. Even at the not so high levels plays could get sharp as players try to turn the opponent to rubble and dust. Quick action play is and was always a very exciting game play and is one of the reasons I love table tennis. The second reason why table tennis is so popular is because the gut feeling you gets from playing the sport. When the ball travels to your side of the net you have the instinct to hit it. You sort of develop a sort of bond between you and the ball. You can think about it as if your instincts were like birds instincts knowing where to go and what time. The ball is not moving at a slow speed, close to sixty to ninety miles per hour. When you hit the ball a wow factor comes

in, and you think to yourself “how did I get that ball which was moving so fast”. It is this feeling that propels people to not quit as soon as they miss the speeding mass of a ball.

The third and final reason I love table tennis because the sharp thinking you get from playing it. This thinking really helps you in your analytical skills which will in turn help you in anything you do. It could be schoolwork, homework, class work anything you can think of have analytical skills. When you move and hit the ball in any way via with spin, slam, drop shot, or just a regular hit, your brain is processing millions of information to access the hit. As you practice your brain intuition gets better and more powerful. Your brain suddenly figures out things faster than it ever had. This is one of the reasons I could juggle school work, chess, and table tennis. This is why I love table tennis.

In addition to the essays above, one student was so inspired by the table tennis classes that he devoted a science fair project to studying the impact of paddle surface on the momentum of the table tennis ball as measured by the height of the ball’s bounce off the paddle. He learned basic principles involving the scientific method such as hypothesis testing, data collection and drawing inferences. These examples demonstrate how when adolescents are given the opportunity to discover hobbies that they feel passionate about, it can have a positive impact on multiple dimensions of their life.

Conclusions and Implications:

In conclusion, AYTTO epitomizes the Centers for Disease Control’s goal for school and community programs to “establish policies that promote enjoyable, lifelong physical activity among young people, provide extracurricular physical activity programs that meet the needs of and interests of all students, and provide a range of community sports and recreation programs that are attractive to all young people.”¹⁸ Beyond the physical activity benefits, the sport fosters the mental health attitudes, including goal-setting, determination and developing a mindset for success, which can encourage productive and healthy lifestyle choices for many disadvantaged youth. Several policy recommendations follow

from this case study. On a federal level, programs such as Title 1 funding are critical in helping to resolve health disparities and improve educational attainment among impoverished youth and ensure equal opportunity and access to beneficial recreational programs for all students. On a local level, City Department of Education initiatives such as CHAMPS are essential to creating a vibrant, dynamic after school environment where kids are empowered to engage in healthy and enjoyable activities. Table tennis is but one example of such a recreational activity but similar programs that introduce disenfranchised students to an array of activities could be expected to offer similar developmental rewards. Table tennis offers the unique benefit of mixing a healthy physical activity with engaging social interaction and has ideal space requirements for an urban environment. Unfortunately, there is no a magic bullet health solution on the horizon for adolescent obesity or physical inactivity, however, financial investment in well-run, structured recreational programs, such as the AYTTO, is an important step towards promoting life-long physical activity and mental health for New York City adolescents, particularly underprivileged youth.

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