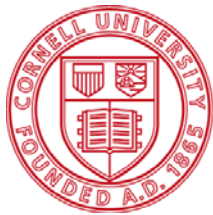


POSITIVE YOUTH DEVELOPMENT AND NUTRITION IN SPORTS

Study Report by:



Cornell University
Cooperative Extension
New York City

*Funding for this study was made possible through a generous grant from
The After School Project of the Robert Wood Johnson Foundation.*

2005

About Cornell University Cooperative Extension—NYC (CUCE-NYC)

The Cornell Cooperative Extension system enables people to improve their lives and communities through partnerships that link the research of Cornell University to the issues of our communities. The Cornell Cooperative Extension Program in New York City has been providing direct assistance to citizens in all the Boroughs for over fifty years with a staff in excess of sixty-five. The Manhattan Campus of Cornell University includes the Weill Medical College, Industrial Labor Relations Extension, Theory Center, and Cornell Cooperative Extension providing a broad array of education and research services.

The practices of CUCE-NYC programs and technical assistance are driven by the expressed needs of the communities of New York and reflect the best of what research has to offer. We work in collaborative partnerships with public and private organizations at the city, state and national levels.

CUCE-NYC has extensive experience in the areas of family and youth development, nutrition and health, and the urban environment. Currently, extension educators are providing education to thousands of residents of New York in topics including: AIDS Education, Parenting Skills, Personal Finance, Work Force Preparation, College Preparation, Food Security, Nutrition, Obesity, and more. CUCE-NYC is a close and valued partner among many of the most known and respected youth and family serving agencies in New York City.



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Girls Gender Equity In Sports
Harlem RBI
Harlem PAL
NY Jr. Tennis League
Long Island Trotters
MNI Sport
Police Athletic League (PAL)
South Jamaica PAL
Sports and Arts in Schools
Sport in Society
Team Up for Youth
The After School Corporation
Youth Sports Research Council
YMCA of Greater NYC
YMCA of Bedford Stuyvesant
YMCA of South Jamaica
YMCA of Staten Island

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(E. Ichinose)

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Executive Summary



(T. Briganti)



(E. Ichinose)

Why look at youth development and nutrition in sports?

Overweight and obesity of children have reached epidemic proportions, leading to unprecedented health consequences.^{1,2} Poor nutrition, insufficient physical activity, and excessive time spent in sedentary activities are some of the contributing factors to this problem.

Approximately forty million youth participate in various sports programs, with about 56% of 5-10 year-olds engaging in sports.³ Youth become involved in sports because they are interested in developing and demonstrating physical competence, gaining social acceptance and support, and having fun.⁴ Unfortunately, up to 70% of youth who play sports will stop by age 12, reportedly because they are no longer having fun, experience too much pressure, or do not like the coach.⁵ Yet, research shows that physical activity that continues into young adulthood is a preventive measure for obesity and poor health.⁶

Strategies are needed to encourage youth to stay involved in sports programs through adolescence into adulthood. Positive youth development principles and practices have effectively engaged young people in a variety of program settings. Incorporating these principles and practices within sports programs serve to improve the well-being of youth and may help retain them in sports activities. Once young people are engaged in sports programs, opportunities exist for introducing nutrition concepts and healthy eating practices.

An increasing number of researchers, practitioners and policy makers are recognizing that sports programs exist in a larger context and are looking at youth and sports in the context of families, schools, and the community. Through their knowledge and beliefs, modeling, shaping, and by making healthy foods and physical activity accessible, parents and families significantly affect their children's nutritional and physical activity practices.⁷ Similarly, the environment of the community can and does shape the family's opportunities to choose healthy foods and to lead an active lifestyle.^{8,9}

Sports programs are a logical venue to reinforce the well-being of young people. Since so many youth engage in these programs, improving youth development and nutrition practices in these settings can have wide-reaching and long-lasting consequences. Coaches are vital to the successful implementation of this approach, making it essential that they are trained to incorporate positive youth development, nutrition and hydration practices effectively into their work.

The purposes of this study are:

- to gain insight about the extent to which current youth sports programs in a variety of settings include positive youth development and nutrition information and practices; and
- to learn about the content of a select group of large-scale, established coach training programs and the gaps that exist in current training initiatives in relation to positive youth development and nutrition.

In this study, the term "positive youth development" describes an approach that focuses on youth's strengths, which are utilized as the basis for action. Youth development can also apply to an organized set of activities that facilitate a young person's capacity to grow.¹⁰ In this report, the terms "positive youth development" and "youth development" are used interchangeably. "Nutritional practices" are defined as maximizing healthy eating and hydration options.¹¹



(E. Ichinose)

About Cornell University Cooperative Extension—NYC

This study was conducted by Cornell University Cooperative Extension-New York City (CUCE-NYC). The mission of the Cooperative Extension System is to enable people to improve their lives and communities through partnerships that put experience and research knowledge to work. CUCE-NYC has extensive experience in the areas of both nutrition & health and family & youth development.

CUCE-NYC is uniquely situated in the neighborhoods of New York City. Through its Expanded Food and Nutrition Education Program (EFNEP), indigenous paraprofessionals are employed to provide practical nutrition education to limited resource audiences. Typically the paraprofessional educators are hired from the communities they serve and then are trained in nutrition content and educational techniques.¹² For over 40 years, the indigenous paraprofessional model has been used for program delivery in many human service programs. Indigenous paraprofessionals have more credibility with participants as role models and sources of practical information because they:

- share similar values,
- possess greater empathy and understanding, and
- have better rapport and communication.¹²

CUCE-NYC's Family and Youth Development programs support youth and families by providing opportunities for both youth and adults to reach their full potential. The Youth Development program is part of the national youth development network known as 4-H. In settings throughout New York City, such as afterschool programs, community agencies, classrooms, clubs, and youth councils, youth strengthen their leadership, citizenship and life skills through participation in hands-on, experiential activities. Emphasis is placed on preparing youth workers, volunteers, teachers and community agency leaders to work with youth. Through CUCE Family Development programs, workshops are offered to agency leaders and parent groups in order to strengthen parenting and communication skills.

CUCE-NYC is highly qualified to design and conduct research, and to disseminate the results of this study because of its:

- link to faculty and researchers at Cornell University,
- experience and collaborative relationships with NYC community leaders, and
- network of partners with county, state and national Extension offices.

How did we study youth development and nutrition in sports?

Data for this study were collected using multiple approaches:

1. Self-administered surveys were completed by directors, coaches, youth and parents at ten mega and seven large youth sports programs in New York City and Long Island. ("Mega" organizations are defined as nationally-affiliated agencies with a presence in most, if not all, of the five boroughs of New York City. "Large" organizations are defined as locally-affiliated programs that serve broad communities within at least one borough.)
2. Focus groups were held with directors and coaches of youth sports programs.
3. Informational interviews were conducted with leaders of national youth coach training organizations.
4. The coach training curricula of national organizations were analyzed according to the eight domains of the National Standards for Athletic Coaches (NSAC).

Surveys

Forty-two coaches and directors, 102 youth and 95 parents from New York City and Long Island youth sports programs participated in surveys. The programs were selected based on the number of young people served, type of sport offered, location

of the program, number of sites, age group of the participants, and national or local affiliation. The sports included in the study were basketball, football, boxing, baseball, gymnastics, softball, karate, swimming, tennis, soccer, and track and field.

The data collection tools were designed to assess the extent to which six categories of youth development were practiced in the program. These categories include:

- physical and psychological safety and well-being,
- supportive relationships between young people and staff,
- opportunities to belong,
- opportunities for skill building,
- support for efficacy and mattering, and
- opportunities for recognition.¹³

In addition, questions were asked about the type of foods provided for snacks and celebrations, and about nutrition education and hydration practices. Directors and coaches were asked about coach training.

Focus Groups

Nine directors and coaches participated in the focus groups. The categories of focus group questions included program goals, program impacts, coach recruitment and training, relationships with parents, awareness of nutrition and hydration practices of players, barriers to implementing positive youth development and nutrition practices, and recommendations.

Informational Interviews

Informational interviews were conducted with leaders of five models of national coach training programs. Questions included inquiries about the current practices of the programs, knowledge of national and local coaching practices, and visions for coach training.

Coach Training Curricula Review

Using the eight domains of knowledge and ability of

the NSAC, fourteen national coach education training programs were reviewed and analyzed to determine the extent to which the curricula include youth development, nutrition and hydration practices. The programs were selected based on the survey responses of directors and coaches, feedback from informational interviews, and peer referrals from coach education programs.

What did we learn and what does it mean?

- **Most youth and parents indicated that the youth “always” felt safe at their sports program. They also indicated that most youth felt as if they “always” fit in with their team, were able to make and keep friends, and received praise from their coach when they try and work hard.** This comfortable and trusting environment serves as a solid foundation for introducing youth and their families to additional information and practices related to health and well-being.
- **Most coach training curricula include limited information related to nutrition, hydration and the essentials for healthy youth development.** This is significant because coaches are important messengers and teachers who can reach youth and communicate positive messages for healthy development.
- **Many directors and coaches were not familiar with the language of positive youth development.** While they reported receiving training in youth development, the training they described focused on such topics as injury prevention, safety and child abuse. Although in most cases youth development practices were being used, the coaches and directors of the participating organizations did not have the shared language to identify and discuss their youth development practices. This may limit the ability of coaches to effectively utilize these practices in their sports programs and train colleagues.

- **Good coaching methods focus on the youth, in the context of the sport.** These methods engender physical and psychological safety and well-being, opportunities for youth to belong, opportunities for youth to build skills, support for youth efficacy and mattering and opportunities for youth recognition. Ensuring that coaches incorporate these practices into their programs will have long-range benefits for youth participants.
- **In order to retain more young people in physical activity beyond age twelve, sports programs need to consider shifting the focus from primarily offering competitive sports to promoting a life-long pleasure in engaging in physical activity.** Winning, which is inherent in competitive sports, does not need to be forfeited at the expense of a youth's sense of well-being.



(T. Briganti)

- Coaches were knowledgeable about hydration requirements of youth; however, they were less knowledgeable about the youth's hydration habits, as well as their nutritional needs and practices. Sports programs need to be more cognizant of and

focus more on the nutritional intake and hydration of young athletes. This implies the need for more nutrition education in coach training and perhaps expanded roles for coaches. Players who are not adequately nourished and hydrated are not able to maximize the advantages of engaging in physical activity.

- **Formal communication with parents regarding nutrition and hydration is limited.** Feedback from study participants revealed that limited information (e.g., letters, handouts, videos, workshops and newsletters) related to nutrition and hydration needs of their children are communicated to parents. This is significant because parents play a major role by modeling and encouraging their children to develop healthy lifestyles.

Recommendations

Recommendations of the study pertain to coach training, youth, parents and families, community, policy makers, and further research. They include:

Sports Programs/Coach Training

- Provide coach training that includes information about nutrition education, hydration and positive youth development.
- Provide incentives to expand coach training to incorporate youth development, nutrition, and hydration into the existing essential concepts of sports.
- Encourage coaches to integrate the teachings of healthy lifestyles, including proper nutrition and hydration practices, into sports education and parent communications for optimum health and sports performance.
- Create an organizational culture of wellness. Align policies, procedures and practices to reflect an environment of healthy eating, hydration and active lifestyle.

Youth

- Offer opportunities for young people to learn about the value of healthy eating and hydration, particularly as it relates to improving sports performance and healthy lifestyles. Include experiential strategies, such as cooking and community gardening to provide opportunities to learn about how food is provided and prepared.
- Find means to engage youth in sports beyond age 12 and into adolescence. Promote a life-long pleasure in engaging in physical activity, especially for those who are less athletic or competitive.
- Increase youth's understanding of the value of physical activity for health and wellness across the life cycle.

Parents and Families

- Provide information for parents, including onsite demonstrations and samples of healthy foods.
- Provide creative resource materials on healthy nutrition and youth development practices (e.g., refrigerator magnets, recipes, and portable reminders of healthy behaviors). Offer information on topics such as choosing healthy fast foods, supporting children in sports, and sportsmanship.
- Help parents develop an understanding of the value of active lifestyles, providing nourishment for effective performance, and role modeling good eating and physical activity.

Community

- Engage local businesses in promoting the message of positive youth development and nutrition in sports.
- Disseminate messages about positive youth development and nutrition in sports at community events and local venues (churches, schools, libraries, agencies, businesses).
- Advocate for food retailers to offer fruits, vegetables and other healthy food choices.
- Provide access to healthy foods, for example, by bringing farmers' markets to local communities and encouraging community gardening.

Policy Makers

- Support adequate funding for the promotion of sports programs as a vehicle for positive youth development and healthy lifestyles, including funding for research and evaluation of these efforts.
- Review and revise, if appropriate, the National Standards for Athletic Coaches (NSAC) to ensure inclusion of positive youth development, nutrition, and hydration standards.

Researchers

- Conduct evaluation studies on the impact of coach training programs on actual coach practices, and on existing programs that incorporate positive youth development and/or nutrition education.
- Study and recommend public policy practices and issues that determine the food offerings of local food retailers.
- Identify factors that would motivate coaches to include more youth development and nutrition practices in their programs.

Summary

Unprecedented numbers of young people are overweight and obese, leading to major health consequences. The causes of these conditions are rooted in complex, interrelated environmental factors. Youth sports programs are logical places to instill practices of positive youth development and nutrition. These practices serve to improve the well-being of youth and may also help to keep young people interested in sports activities. However, this study found that coaches have limited knowledge of positive youth development concepts, and even less regarding nutrition and hydration. A review of coach training curricula found limited coverage of these topics. In order to capitalize on the strengths of youth sports programs, coaches need to be knowledgeable about positive youth development, healthy eating and hydration practices. Parents and the community also need to be better informed, and become partners in addressing overweight and obesity through youth sports programs.

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(E. Ichinose)

Introduction



(T. Briganti)



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Within the past decade, nutrition and health related problems involving youth in the United States have reached epidemic proportions. Rapidly growing numbers of children are considered overweight, leading to unprecedented health consequences.^{1,2} Overweight children are at risk of developing heart disease, type II diabetes, high blood pressure and some forms of cancer as adults.³ At the same time, the nation is experiencing the deteriorating mental and behavioral health of children, as evidenced in increasing rates of depression, anxiety, attention deficit, conduct disorders and suicidal thoughts.⁴ The effects of some of these conditions can be ameliorated through the adoption of a healthful diet and active lifestyles.

Because large numbers of youth actively participate in sports, youth sports programs can serve as major vehicles for incorporating messages related to positive youth development and the adoption of both healthy eating and active lifestyle behaviors. However, coaches, parents, and youth must be adequately trained to accept and foster these ideas. Currently fewer than 8% of youth sport coaches enter coaching with a significant knowledge of instruction, skills development or other training.⁵ According to data from the National Center for Education Statistics of the U.S. Department of Education, over 33.7 million youth ages 5-17 participated in extracurricular sports programs in 1997. The largest groups of these youth (approximately 75%) participated in community-based sports programs.⁶ By 2002, it was estimated that approximately 40 million youth participate in various sport organizations and 56% of 5-10 year-olds play sports.⁵ This reflects an increase in participation by both males and females, and a growing audience with whom messages about healthy eating and active lifestyles could be shared.



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Research suggests that children and adolescents are motivated by three reasons to participate in physical activity: 1. developing and demonstrating physical competence; 2. gaining social acceptance and support; and 3. having fun as a result of participation in the activity.⁷ Further, there are three predictors of young adult participation in sports. These include participation in sports in childhood and adolescence; gender (i.e., young male adults are twice as likely to participate in sports than young female adults),⁸ and young adult education level. Compared to young adults with no formal education beyond high school, those with a college degrees are more than twice as likely to participate in physical fitness activities.⁸

Unfortunately, up to 70% of youth who play sports will stop by age 12. These youth report that they quit because they are no longer having fun, they

experience too much pressure, or they do not like the coach.⁹ Clearly, additional effort is needed to engage and retain youth in sports and physical activity in childhood, through adolescence, and into young adulthood because continuing physical activity levels into young adulthood serve as a preventive measure for obesity. Positive youth development emphasizes a youth-centered approach that engages young people based on their needs and interests. Thus, a strategy to engage and retain youth in sports and physical activity in childhood, and to promote healthy eating through adolescence and into young adulthood, is assuring that coaches include positive youth development and healthy nutritional practices in sports programs. This presumes the training for coaches in these areas, and the ability of coaches to participate in the trainings.

The purposes of this study are to gain insight into the extent to which current youth sports programs in a variety of settings include positive youth development and nutrition information and practices; and to learn about the content of a select group of large-scale, established coach training programs and the gaps that exist in current training initiatives in relation to positive youth development and nutrition. It was conducted by Cornell University Cooperative Extension-New York City (CUCENYC).

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- link to faculty and researchers at Cornell University,
- experience and collaborative relationships with NYC community leaders, and
- network of partners with county, state and national Extension offices.

This report will provide a summary of research conducted in the areas of child health and nutrition, youth development, youth development and sports, preparation of coaches, and ecological theory. It will present the findings of the study, which looked at the extent to which youth development and nutrition are included in youth sports programs and the nature of coach training. The report will also make recommendations to the field based on the research findings.

Endnotes:

1. Robert Wood Johnson Foundation. (2005). Child Obesity [Electronic version]. Retrieved May 19, 2005, from <http://www.ChildhoodObesityFraming Doc1.pdf>
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Review of Literature

Health and Nutrition

Children's Health

Sixteen percent of U.S. children ages 6-11 are overweight according to the Centers for Disease Control and Prevention's 1999-2002 data.¹ Using the same criteria, childhood obesity affects 24% of elementary school children in NYC, according to recent data collected by the New York City Department of Health and Mental Hygiene.² This study also indicates that obesity is a problem that exists throughout all racial and ethnic groups in NYC, with Mexican-American and Non-Hispanic Black children most strongly affected (see Table 1). Obesity in childhood places youth at risk for obesity continuing throughout life, leading to chronic diseases such as heart disease, diabetes, hypertension and some forms of cancer.³

Healthy lifestyles achieved through adequate physical activity and healthy eating behaviors can combat this daunting trend of obesity. The US Surgeon General recommends moderate amounts of daily physical activity for people of all ages, which youth can achieve through participation in organized sports.⁴

Benefits of healthy eating behaviors and physical activity for youth and adolescents include building and maintenance of healthy bones, muscles, and joints; weight control, building lean muscle, and reducing fat; preventing or delaying the development of high blood pressure; reducing blood pressure in some adolescents with hypertension; and promoting psychological well-being. Studies have found that participation in physical activity increases adolescents' self-esteem and reduces anxiety and stress.⁵

Table 1. Combined Percentage of Children and Teens Considered Overweight or at Risk for Being Overweight in the United States

| | Average for All Groups (%) | Non-Hispanic Whites (%) | Non-Hispanic Blacks (%) | Mexican-Americans (%) |
|--------------------|----------------------------|-------------------------|-------------------------|-----------------------|
| Males ages 2-5 | 23.0 | 21.7 | 20.9 | 27.6 |
| Females ages 2-5 | 22.3 | 20.0 | 25.6 | 25.0 |
| Males ages 6-11 | 32.5 | 29.3 | 29.7 | 43.9 |
| Females ages 6-11 | 29.9 | 27.7 | 37.9 | 33.8 |
| Males ages 12-19 | 31.2 | 29.2 | 32.1 | 41.9 |
| Females ages 12-19 | 30.5 | 26.5 | 41.9 | 39.3 |

Source: *A Nation at Risk: Obesity in the United States* (A Statistical Sourcebook) by the Robert Wood Johnson, Foundation. May 2005

Nutritional Needs

In this study, “nutrition practices” are defined as maximizing healthy eating and hydration options.⁶ Nutritional needs during childhood are demanding and specific to support growth at different stages of development. Engaging in physical activity increases the demand for quality nutrition for children. Childhood and adolescence are times when growth is occurring at a rapid rate, and bones, teeth, muscles and blood are developing. Young athletes, in particular, will require adequate energy and nutrients from their diet, including water. Therefore, it is important for youth to consume adequate vitamins and minerals, especially calcium, during this period of growth.⁴

In addition, children do not tolerate temperature extremes, sweat less, have lower cardiac output and acclimate to heat more slowly than young adults, which increases their risk for dehydration.⁷ It is critical for children to maintain adequate fluids to replace losses during exercise. Coaches and

parents need to be familiar with hydration needs, and symptoms and treatment of heat distress.



(T. Briganti)

Parents of children engaged in sports face the challenge of how to provide nutritious meals around sometimes hectic

practice schedules. When workouts interfere with home meals, families may rely more frequently on fast foods or on the child eating alone.⁷

Frequently, sports are associated with snack foods and sugar-filled drinks, which take the place of needed nutrients. Therefore, it is important to maximize healthy eating both on and off the field. Talking about and practicing healthy eating through sports is a way to engage youth, parents and coaches in maximizing nutrition and hydration options.⁶

Positive Youth Development

Background

In this study, the term “youth development” describes an approach that focuses on youth strengths, which are utilized as the basis for action. Youth development can also apply to an organized set of activities that facilitate a young person’s capacity to grow.⁸ In this report, the terms “positive youth development” and “youth development” are used interchangeably.

Konopka and Pittman identify the following essential elements needed for the healthy development of youth.⁹ They include that:

- Youth Feel Physically and Emotionally Safe,
- Youth Experience Belonging and Ownership,
- Youth Develop Self-Worth,
- Youth Discover Self
- Youth Develop Quality Relationships with Peers and Adults,
- Youth Discuss Conflicting Values and Form Their Own,
- Youth Feel the Pride and Accountability that Comes with Mastery, and
- Youth Expand Their Capacity to Enjoy Life and Know that Success Is Possible.

For young people, these translate to feelings and experiences related to security, belonging, acceptance, independence, relationships, values, achievement and recognition.

Afterschool Program Activities, Youth Development, and Sports

According to the October 2003 Afterschool Alliance Poll,¹⁰ nearly nine out of ten voters felt concerned about children being unsupervised afterschool with too much unstructured time and agreed that young people need some type of organized afterschool activity. In addition, voters do not believe that improving test scores should be the primary goal of afterschool programs. Instead, they wanted to see hands-on learning opportunities, recreation, community service and creative activities that inspire children to learn and grow.

A study conducted by the Public Agenda¹⁰ indicated that 57% of middle and high school students surveyed participate in out-of-school activities or programs almost daily. Of those youth, 66% reported that they participate in sports activities. Sports programs that include positive youth development and nutrition can help young children develop critical life skills, related to health and well-being.

There are several models for afterschool youth programs that incorporate youth development and sports currently in operation throughout the country. Some of these national, state, and local youth development sports programs are described in the Appendix.

Youth Development and Sports

Incorporating positive youth development in sports programs provides an opportunity to act on many of the key elements for the healthy development of young people. The youth development approach is rooted in a commitment to enable all young people to achieve their potential. It is characterized by a positive, asset-building orientation, building on strengths rather than categorizing youth according to their deficits. When guided by coaches utilizing a positive youth development approach, these principles can be ingrained in the person with whom they are working. Coaches are important influential role models that impart values and attitudes on the children.⁴ It is crucial that these individuals be able to incorporate strategies for positive youth development when working with children.

The Building Partnerships for Youth Project reviewed the youth development literature and identified 21 essential elements of positive youth development, which they included in their assessment tool to evaluate youth development practice. These essential elements include, among other factors, close relationships with caring adults, communication skills, community connection, peer relationships and friendship, respect for diversity, social justice/ethics, emotional health and well-being, physical health and well-being, sense of autonomy and independence, understanding and valuing oneself.¹² Perkins created an assessment tool to examine youth development practice in the context of sports. His

Spider Web Analysis includes such categories as physical and psychological safety and well-being, supportive relationships, opportunities to belong, opportunities for skill building, support for efficacy and mattering, and opportunities for recognition. These tools are useful for program directors, coaches, parents and youth to implement sports programs that will attract and retain youth.¹³

The US Surgeon General's Report urges parents, professionals and others involved in youth sports to "create opportunities for physical activities that are enjoyable, that promote adolescents' and young adults' confidence in their ability to be physically active, and that involve friends, peers, and parents." Parents, school administrators, teachers, coaches and the general public all have a role in supporting these programs.⁴ Trainings that support coaches, agency leaders, parents and youth in promoting positive youth development and nutrition reinforce these recommendations.

Preparation of Coaches

Need

In 2002, there were approximately 3.1 million coaches working in all levels of youth sports, of whom about 500,000 were in high schools.¹⁴ Yet, there appear to be no national standards for certification of coaches. In fact, fewer than 8% of youth sport coaches entering the field have specific knowledge regarding instruction, skill development or other formal training.¹⁴ Although certification and training programs exist, such as those administered by the National Alliance for Youth Sports, US Youth Soccer (National Youth License), USA Track and Field, Pop Warner, and YMCA Youth Super Sports, they are not always a requirement for coaches.¹⁵ This is especially true in cases where parents volunteer to coach the local sports team to which their child belongs.

A report from the President's Council on Physical Fitness and Sports estimates that 2.5 million adults, primarily parents, annually volunteer their time as coaches of youth sports teams. This report states

that this volunteer base of coaches lack sufficient knowledge or skills to supervise and manage youth appropriately. Ninety percent of these “coaches” have no formal education in coaching techniques, first aid, injury prevention or emergency care.⁴

Research also shows that physical education teachers and coaches, on a professional level, have insufficient education and knowledge of nutrition.¹⁶ At the same time, today’s active youth have little time to obtain adequate fluids or calories for a pre-game meal. Youth who are in school all day and then practice sports after school often arrive at the playing field hungry and dehydrated. In addition, for those sports where aesthetics are judged (e.g., gymnastics and swimming), many young athletes restrict their food and fluid intakes in order to improve their competition scores.¹⁷ This demonstrates the need for their coaches to be educated in nutrition and hydration and to incorporate effective practices into their work.



(T. Briganti)

Existing Programs for Coaches

A number of existing alliances and organizations address the issues of youth development and/or nutrition in recreational youth sports. Investigations of community-based organizations that offer recreational youth sports programs confirm that resources available to coaches are varied. It appears that volunteer coaches or paid staff who are linked to larger organizations have the potential for more access to training programs for their specialization than do those in local, community-based, organized sports. However, it is not clear that

coaches always receive the training available through national affiliation. Thus, it appears that large numbers of coaches are untrained in the areas of positive youth development and optimal nutrition for youth.

While research indicates that formal coaching education positively impacts a coach’s ability to affect the athlete’s learning and performance, these programs are rarely required and reach a small minority of the nation’s youth sport coaches.¹⁴ Further, according to The American Sport Education Program (ASEP), different states have varying educational expectations for coaches. Thirty-six states require coach education for non-teaching coaches; 15 states require coach education for all coaches; and 15 states require no formal coaching education.¹⁴ Some states’ minimum qualifications for high school and youth coaches include a bachelors degree in teaching with a current teaching certificate, while others have no educational requirement and only mandate a minimum age of 19.¹⁴

The mission of the National Council for Accreditation of Coaching Education (NCACE) is to support coaches through programs that provide quality-coaching education. The NCACE reviews the caliber of coaching education programs and encourages continuous learning. The National Standards for Athletic Coaches (NSAC) was developed by over 140 sport organizations that agreed on a core set of competencies and knowledge, which coaches could be expected to acquire at various levels of experience. The NSAC document includes eight domains:¹⁴

- I. Injury Prevention, Care and Management,
- II. Risk Management,
- III. Growth, Development and Learning,
- IV. Training, Conditioning and Nutrition,
- V. Social/Psychological Aspects,
- VI. Skill, Tactics and Strategies,
- VII. Teaching and Administration, and
- VIII. Professional Preparation and Development.

Further research is needed to determine the extent to which core competencies are actually included in training for coaches.

Community Support of Sports

The causes of overweight, obesity and sedentary behavior are rooted in complex, interrelated environmental factors. The work of Bronfenbrenner and other ecological systems theorists would suggest that the key to understanding and finding solutions to this major health problem requires the consideration of the context in which the youth lives (i.e., family, school, afterschool activities, and community).^{15,18}



(T. Briganti)

Ecological Models

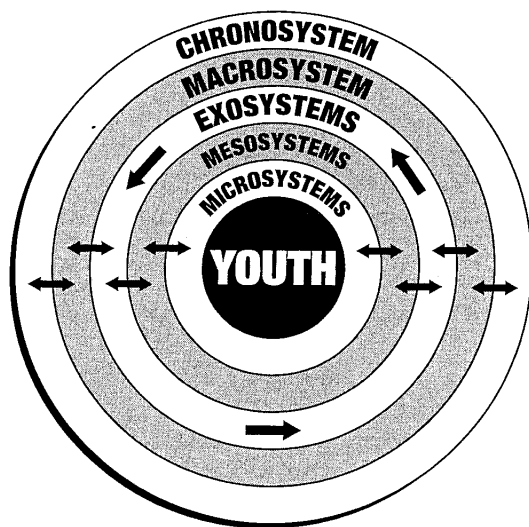
Bronfenbrenner's Theory

Daniels and Perkins point out that youth and youth sports do not exist in a vacuum.¹⁵ The ecological model developed by Bronfenbrenner is grounded in the concept that humans develop within a context, or ecology. According to Bronfenbrenner's theory, child development must be viewed not only through the child and his/her immediate environment, but also by looking at the interaction of the larger environment.¹⁸ The Bronfenbrenner model describes the interdependence of the individual with the increasingly complex systems in which he/she interacts. The levels are depicted as the individual in the center, surrounded by a series of concentric circles (see Figure 1).

The circles, starting with those immediately surrounding the youth, are the Microsystems, the Mesosystems, the Exosystems, the Macrosystem and the Chronosystem. Microsystems refer to the immediate day-to-day setting of the individual. In the case of youth, this could apply to the family, school, sport program, and neighborhood. Mesosystems refer to the connecting of different structures of the individual's Microsystems, for example, the parent and the young person's sports event, the school and neighborhood. The more positive, strong and diverse the links between the settings, the more beneficial and powerful the influence will be on young people's development.¹⁵

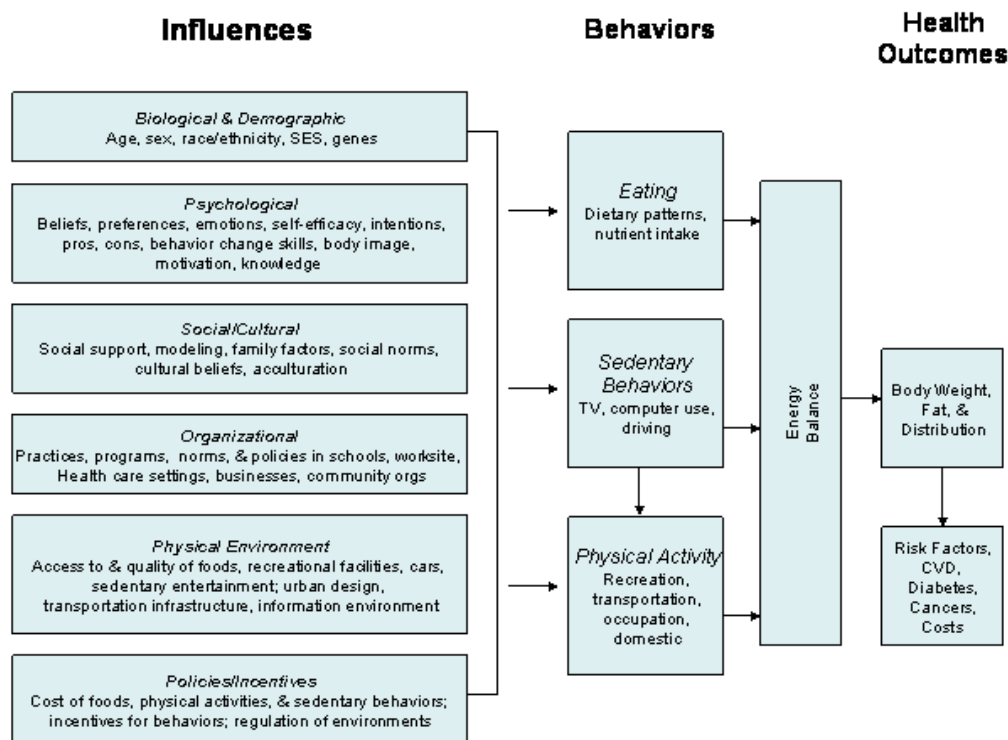
The Exosystems define the larger social systems (e.g., community, parent workplace, or sports organization) in which the Microsystems are grounded. These structures influence the individual although he or she may or may not be directly involved with them. The Macrosystem is the culture in which other systems operate, for example government, laws, economic conditions, cultural values and beliefs. The Chronosystem includes the dimension of time. It relates to the developments inside all of the other levels that occur over time. These would include anticipated and unanticipated life transitions. The ecological model provides a useful lens to examine the impact of sports on young people.

Figure 1. The Ecological Model



Source: Daniels, A.M., & Perkins, D.F. (2003). *Putting Youth Back Into Sports*. South Dakota: South Dakota State University.

Figure 2: An Ecological Model of Diet, Physical Activity, and Obesity



Developed for the NHLBI Workshop on Predictors of Obesity, Weight Gain, Diet, and Physical Activity; August 4-5, 2004, Bethesda MD

National Heart, Lung, and Blood Institute (NHBLI) Model

The NHBLI developed an ecological model of factors possibly influencing weight gain or the adoption of relevant lifestyle behaviors (see Figure 2).^{19,20} The model captures levels of factors, such as demographic, intra-personal, socio-cultural, organizational, physical environment (both natural and built), and policies on behavior.

While it may be tempting to point to one or two factors as causes of sedentary behavior, lack of adequate physical activity or insufficient nutrient intake, the model illustrates the intricacy of these influencing factors on youth and adult behaviors. This could be useful in framing recommendations for youth sports programs and coach training.

Community Youth Development and Sports

The Search Institute's Developmental Assets for Children provides substantial grounding for the

development of family, school, neighborhood and community external asset-building to support youth development in sports programs.¹⁵ In the model, 20 internal assets and 20 external assets are identified as positive experiences and qualities that serve as building blocks to help youth build life skills. Perkins builds on the Developmental Assets theory to design the Community Youth Development Spider Web assessment tool,¹³ which assesses youth development practices in Sports Programs.

Focusing on the importance of community youth development, Daniels and Perkins developed a sports model called the Athletic Square, placing young people, parents, coaches and community, respectively, in each of the four corners (see Figure 3, page 20).¹⁵ In doing so, the researchers emphasize not only the importance of parents and coaches in promoting positive youth development, but also the role of the community. In this model, media, businesses, service organizations and government agencies are encouraged to foster a positive sports environment.

The New York State Strategic Plan for Overweight and Obesity Prevention²¹ reinforces the ecological perspective, emphasizing that ending the obesity epidemic will require input, skills and perseverance of a wide array of individuals, organizations and groups. This will include medical, educational, non-profit and business communities, academia and government. The plan anticipates the need for population-focused prevention efforts, requiring a decrease in environmental barriers and support of healthy food choices and physically active lifestyles. The ecological approach, which incorporates partnerships and collaborations on a grander scheme, is a powerful strategy for approaching solutions to reduce child obesity as a public health threat.

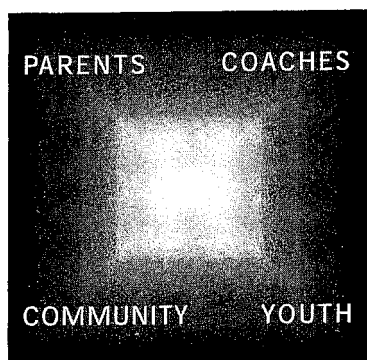
In summary, an unprecedented number of children and adolescents are considered to be overweight and obese, leading to catastrophically poor health consequences. The causes of these conditions are rooted in complex, interrelated environmental factors. The work of ecological systems theorists suggests that understanding and finding solutions to this major health problem requires factoring in the context in which the youth lives (i.e., family, school, afterschool activities, and community). Youth sports programs provide one venue in which approximately 40 million youth participate. Because these young people are already engaged in physical activity, youth sports programs are logical places to instill practices of positive youth development and

nutrition. These practices serve to improve the well-being of young people and may also help to retain them in sports activities. Since most youth leave sports by age 12,¹⁵ and activity in adolescence is a predictor for young adult activity,²² their retention in physical activity is an additional challenge. This study examines the extent to which positive youth development and nutrition practices occur in youth sports programs and the degree to which these concepts are incorporated into coach training.

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Figure 3: The Athletic Square



Source: Daniels, A.M., & Perkins, D.F. (2003). *Putting Youth Back Into Sports*. South Dakota: South Dakota State University.

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Findings

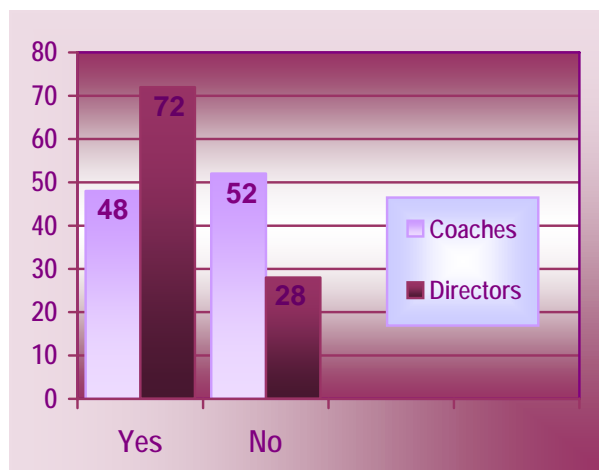
Introduction

Data for this descriptive study were obtained through four means: 1. surveys, 2. focus groups, 3. informational interviews, and 4. a review of coach training curricula. Two hundred forty-five directors, coaches, youth and parents from a total of 22 programs participated in surveys, focus groups and informational interviews. These included Asphalt Green, Bronx-Webster PAL, Brooklyn Pitt Bulls Youth Football, Inc., Catalpa YMCA, Church Avenue Merchants Block Association, Co-op City Cowboys, Elmont Youth Soccer Club, Girls Gender Equity in Sports, Harlem RBI, Harlem PAL, NY Junior Tennis League, Long Island Trotters, MNI Sport, Police Athletic League (PAL) South Jamaica PAL, Sports and Arts in Schools, Sport in Society, Team Up for Youth, Youth Sports Research Council, YMCA of Bedford Stuyvesant, YMCA of South Jamaica, and YMCA of Staten Island.

The afterschool youth sports programs invited to participate in the study were selected based on number of young people the program served, types of sports offered, location of the program, number of sites at which the activities are offered, age group of the participants, and national or local affiliations. The programs, located in all five boroughs and Nassau County (Long Island), primarily serve inner-city youth, the majority of whom are of low socioeconomic status. Youth participating in the study included 5-13 year olds.

Programs were categorized as “mega” or “large” organizations. “Mega” organizations are defined as nationally-affiliated and having a presence in most, if not all, of the five boroughs of New York City. “Large” organizations are defined as locally-affiliated programs that serve broad communities within at least one borough. The sports included in the study were basket ball, football, boxing, baseball, gymnastics, softball, karate, swimming, tennis, soccer, and track and field.

Figure 4. Coaches and Directors Who Reported Whether or Not They Were Trained in Youth Development (shown in percentages)



Note: In this case, coaches' and directors' definitions of and perceptions of youth development vary.

I. Surveys

An independent sample T-test was used to determine that mega and large organizations, when coaches and directors were grouped as such, had no statistically significant differences with a p-value less than 0.05. Responses given by coaches and directors, regardless of organization membership according to size and national and/or local affiliation, were analyzed jointly for each domain of youth development and nutrition/hydration. Coaches' and directors' responses were each analyzed with regard to training and certification for each, youth development and nutrition.

Youth Development

Most of the program directors (72% of director respondents) and less than half (48%) of the coaches indicated that they have completed some youth development training (see Figure 4). Yet, when asked to specify and describe the types of youth development training, many cited trainings generic to working with youth (i.e., behavior management, child abuse, and various workshops in education), as opposed to targeted positive youth development training. To understand

Table 2. Youth Development Responses by Coaches and Directors *

| Does Your Sports Program Provide: | N | Minimum | Maximum | Mean | Std. Deviation |
|--|----|---------|---------|------|----------------|
| Physical and Psychological Safety and Well-being | 42 | 1.0 | 4.0 | 1.33 | 0.638 |
| Supportive Relationships | 41 | 1.0 | 4.0 | 1.27 | 0.546 |
| Opportunities to Belong | 42 | 1.0 | 4.0 | 1.63 | 0.672 |
| Opportunities for Skill Building | 42 | 1.0 | 4.0 | 1.35 | 0.540 |
| Support for Efficacy | 42 | 1.0 | 4.0 | 1.49 | 0.667 |
| Opportunities for Recognition | 42 | 1.0 | 4.0 | 1.40 | 0.617 |

* Note: 1 = Strongly Agree, 4 = Not At All

more about youth development training and practice within the program/organization, coaches and directors answered a series of questions that related to six domains of youth development.

Scales were created for six domains of youth development: physical and psychological safety and well-being, supportive relationships, opportunities to belong, opportunities for skill building, support for efficacy and mattering, and opportunities for recognition. Questions detailing practices under each domain were grouped together. The mean scores ranged from 1 to 4 (the minimum = 1 and the maximum = 4) and were based on the averages of coaches' and directors' answer choices for the collective questions under each domain. The score of 1 indicated that the coaches and directors "strongly agreed" that their program provided that particular aspect of youth development. Inversely, the score of 4 suggested that the program does "not at all" practice the particular aspect of positive youth development in question (see Table 2). The

standard deviation ranged from 0.540 in the "opportunities for skill building" category to 0.672 in the "opportunities for belonging" category, suggesting that the average variation was not very large. **Thus, the majority of coaches and directors strongly felt that their program allowed for positive youth development practices, despite the extent and disparities in types of training they considered as "youth development".**

The responses of youth and parents reinforced the mean scores of coaches and directors with regard to specific youth development questions that corresponded to categories asked in the coach/director surveys. **Most youth (90% of respondents) "always" felt safe at their sports program; 75% felt as if they "always" fit in with their team, 76% stated that their sports program "always" helped them to make and keep friends, and 79% stated that their coach "always" praises them when they try and work hard (see Table 3, page 24).** Parent responses to parallel questions with regard to youth

Table 3. Youth Development Responses by Youth and Parents

| Category of Youth Development Practice in Sports Programs | Always | | Sometimes | | Never | |
|---|--------|---------|-----------|---------|-------|---------|
| | Youth | Parents | Youth | Parents | Youth | Parents |
| Youth feel safe at their sports program (Safety and well-being) | 90% | 89% | 9% | 10% | 1% | 0% |
| Youth feel like they fit in with their team (Supportive relationships) | 75% | 74% | 23% | 25% | 2% | 0% |
| Youth feel like their sports program has helped them to make and keep friends (Opportunities to belong) | 76% | 62% | 18% | 31% | 6% | 2% |
| Youth get praised by their coach when they try and work hard (Opportunities for recognition) | 79% | 77% | 19% | 18% | 2% | 1% |

development were similar to youth responses. The majority of the parents (almost 90% of the respondents) stated that their child “always” felt safe at his/her sports program, nearly 75% stated that their child “always” felt like he/she fits in with the team, 62% felt that the sports program “always” helped their child to make and keep friends, and 77% stated that the coach “always” praises their child when he/she tries and works hard.

When asked questions with regard to the youth development categories, trends observed of the youth and parent responses were similar to trends observed in the coach and director responses.

Nutrition

Findings indicate that most coaches and sports program directors in the study have not had training in nutrition. Sixty-three percent of coaches and 58% of directors reported that they have not received nutrition training (see Figure 5). In addition, coaches are generally unaware of whether or not their players have eaten breakfast or lunch prior to practice and games. In general, sports

programs do not address the nutritional needs of their young players. Furthermore, games, celebrations and events, by and large, do not officially include food of any sort.

Scales concerning nutrition were also devised in the same manner as the youth development domain scales. Based on the questions addressing nutrition, six scales were created to measure the following: positive indicators of nutrition practices; negative indicators of nutrition practices; whether the program

Figure 5. Coaches and Directors Who Reported Whether or Not They Have Received Training in Nutrition (shown in percentages)

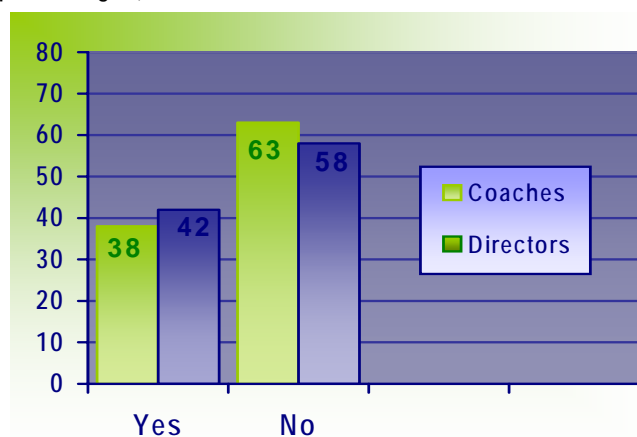


Table 4. Nutrition, Eating, and Hydration Practices: Reported by Coaches and Directors *

| Scales of Nutritional Practice within the Sports Program | N | Minimum | Maximum | Mean | Std. Deviation |
|--|----|---------|---------|------|----------------|
| Indicators of Positive Eating Practices | 42 | 1.0 | 4.0 | 2.99 | 0.621 |
| Indicators of Negative Eating Practices | 37 | 1.0 | 4.0 | 2.93 | 0.723 |
| Meals Provided (Breakfast, Lunch or Dinner) | 42 | 1.0 | 4.0 | 3.45 | 0.877 |
| Nutrition Education Components Provided | 42 | 1.0 | 4.0 | 2.78 | 0.870 |
| Healthy Foods/Snacks Provided | 42 | 1.0 | 4.0 | 3.07 | 0.754 |
| Less Healthy Foods/Snacks Provided | 42 | 1.0 | 4.0 | 2.93 | 0.723 |
| Indicators of Adequate Hydration | 42 | 1.0 | 4.0 | 1.35 | 0.410 |

* Note: 1 = Strongly Agree, 4 = Not At All

provides meals (breakfast, lunch or dinner); whether the program provides nutrition education components in the form of workshops, videos, handouts, parent newsletters and other means; whether the program provides more nutritiously desirable foods and/or snacks; and whether the program provides less nutritiously desirable foods and/or snacks. The scales' value scores range between 1 and 4. The minimum score of 1 indicated that the practice in question occurs frequently, while maximum score of 4 indicated that the particular practice is absent from the program. Mean scores for the scales were between 2.78 and 3.45, which reveal that **many of the nutritional practices in question, whether positive or negative indicators, tend to be absent from the program** (see Table 4). Standard deviations for these means ranged between 0.621 and 0.877, indicating that the amount of average variation that exists between the means is

small. The specific foods and snacks offered during celebrations and practices were listed. During the analysis stage, so as not to bias responses, each food and snack was placed into one of two categories: "more nutritiously desirable" or "less nutritiously desirable".



(E. Ichinose)

Similarly, a scale synthesizing questions regarding hydration practices were created to measure the extent to which hydration is addressed in the program (see Table 4). The following five topics, with frequency choices as responses, were combined to construct the scale: whether consumption of water is encouraged before, during or after activity; whether youth are encouraged to bring their own water; whether the program provides water; whether the program provided sports drinks; and whether timeouts are allowed for the youth to drink water.

Scores ranged from 1 to 4 (with a minimum score of 1 indicating “frequently”, and maximum score of 4 indicating “not at all”). A mean score that was closer to the minimum indicated that the hydration practice in question “frequently occurs”, while a mean score closer to the maximum indicated that the hydration practice “rarely takes place” or “not at all”. The mean score for all coaches and directors combined was 1.35 (SD = 0.410), revealing that the participating sports programs more frequently performed the hydration practices in question than not, according to coaches and directors. Of all coaches and directors, the following were found: 81% reported that they frequently encouraged their youth to drink water before, during, and after activity; 62% reported that they frequently encouraged youth to bring their own water to drink; 79% reported that they provide water for their youth frequently; and 27% report that they frequently provided sports drinks. **A high percentage of coaches and directors indicated that their program frequently provided water for their youth, and encouraged their players to consume water adequately and bring their own water. However, youth and parent responses reflect less certainty regarding water consumption.**

With regard to eating and hydration practices, youth findings suggest similar trends as those seen in coach and director responses. Of all the youth respondents, 39% reported that their sports program “always” teaches them about healthy eating, while 36% and 25% reported that it “sometimes” or “never”, respectively, teaches them about healthy eating. It was investigated whether coaches encouraged fluid consumption before, during, and after activities. The results were as follows: 51% of youth reported that their coach “always” wants them to drink water before practice and games, 62% during practice and games, and 71% after practice and games. Additionally, 60% reported that their sports program “always” provides them with water.

Findings from parent surveys suggest that greater communication with parents on healthy eating and hydration practices in the sports program is needed. Of all parents surveyed, 23% reported that their child’s sports program “never” teaches their youth about healthy eating, while 25% were unsure. With regard to whether the sports program gives their youth water, 53% of the parents

reported that the sports program “always” gives their youth water, while a combined 30% (15% each) reported that they either “never” do or were “not sure” about it. With regard to coaches encouraging their youth to drink water before, during, and after practice and games, the following were found: 44% of the parents reported that water consumption before practice and games is “always” encouraged, while 30% were unsure; 45% reported that water consumption is “always” encouraged by the coaches during practice and games, while 25% reported “sometimes” and 25% were “not sure”; and lastly, 60% reported that the program “always” encourages water consumption after practice and games, while 15% were unsure.

In summary, coaches and directors reported that their sports program implemented aspects of positive youth development and good hydration practices, while healthy eating was not addressed to a great extent. Youth and parents reported similarly. One particularly strong finding was that coaches, youth and parents overwhelmingly agreed that their sports programs provide a safe environment. However, it was revealed that some parents were not aware of their child’s eating and hydration practices in the context of the sports program. Additionally, youth were less certain than coaches about whether their coaches wanted them to hydrate before, during, and after practice and games.

II. Focus Groups

Participants

Two focus groups were conducted in order to obtain qualitative data to inform the findings. Participating in the focus group were a 10-year coach of track and field, a 10-year aquatics director/coach, a husband and wife director/coach team, a 14-year general sports director, a new director/coach of youth basketball (with college basketball coaching experience), a one-year director of athletic leagues for girls, and a newly hired program director of a teen program that combines baseball/softball with communication skills and conflict resolution. Also present was a program director of two youth sports programs, one that combines work readiness and

baseball/softball coaching for teens, and the other program, a camp for 9-12 year olds that combines baseball/softball with literacy and character education.

The themes that emerged from the findings of the focus groups were organized according to the following categories: program goals, program impact, coach recruitment and training, relationship with parents, and nutrition and hydration. The focus group attendees made recommendations for improving youth sports programs in the areas of youth development and nutrition. The following is a presentation of the key findings from the focus groups, organized by the categories.

What Directors and Coaches Said in the Focus Groups:

A coach ...

"... is not just a coach. He cares about the kids..."

"... sets an example..."

"... is a psychologist, teacher, parent and someone to talk to."

"... needs to know them (the youth) individually. Treat them from where they are..."

Program Goals

The goals of the programs represented indicated a wide range of expectations. These ranged from introductions to sports to teaching fundamental techniques of a particular sport. One organization identified their goal as "bringing order to the lives of ... kids (who are)...out late running the streets". Another said their program is about "staying in school, staying focused on work", especially in the absence of recess and lunch. This director stated his belief that "physical activity balances life". Another commented that schools are not offering athletic programs, especially for girls. Their program offers sports training and workshops in self-esteem, lifestyles, fitness and nutrition. One coach stated, "A kid... wants relief from stress through sports." Another director shared, "Our program is about youth development. Sports are the hook. We have social, academic, emotional, and physical goals. We want work-ready children."

Program Impact

Several themes related to program impact emerged from the focus groups, such as relationships of youth with teammates and coaches, feeling safe, and having fun. Several directors/coaches spoke of creating an emotionally and physically safe environment. Some do this by "mothering" and others by encouraging fun, effort, respect, sportsmanship and teamwork. Sportsmanship was defined by one coach as being a good citizen and knowing how to meet adversity, hardships and competition. Several coaches acknowledged the strong impact they felt they have on the youth with whom they work.

Coach Recruitment and Training

Most of the sports programs represented use volunteer coaches. Some include teens, some college students, corporate employees, and parents. Pop Warner coaches undergo background checks and attend coaching clinics offered in conjunction with the parent organization at centralized locations. Another organization holds a 12-hour training over a 3 to 4 week period for its parent volunteer coaches. One organization trains its parent volunteer coaches "informally", as it occurs on the job.

Of the organizations who responded, only a few monetarily compensate their coaches. However, coaches who work in aquatics and track are required to complete specific safety classes, such as American Red Cross Water Safety Instruction, CPR, First Aid, AED competitive swimming, NCAA courses, and child abuse training. These competencies are generally attained at the coach's expense prior to hire and many of these coaches are compensated. One organization also offers a 3-week training for their paid youth summer coaches.

Relationship with Parents

"Official" roles for parents other than volunteer coaches ranged from chaperones for track events to team mothers, fathers, and grounds crew. Minimally, organizations encouraged parents to get involved by attending games or watching practices.

In terms of printed materials provided for parents, there was across-the-board consensus of those participating that no materials related to the sports program were prepared for parents. One organization distributes a youth code of conduct and a youth sports philosophy to coaches, but not to parents.

Eating and Hydration

When sports program directors and coaches were questioned whether they typically know if youth have eaten breakfast or lunch prior to practice or games, three responded that they do not know. One coach shared that he “can see the kids who get weak immediately”. They subsequently go to the store and get them a snack.

In asking about the availability of water before, during, and after practice, most responding said that they used a school or other facility that had water fountains available. Those without a water fountain said that youth bring their own water. In some cases, the coaches, parents, or host team may provide water. However, it was mentioned how mostly-filled water bottles were collected after each game, indicating that while water may be present, it was not consumed in quantity.

What Directors and Coaches in the Focus Groups Said About Nutrition:

- “Kids need to acquire a taste for water from very a young age – not crackers, cupcakes and soda.”
- “Households can only afford some foods. Parents don’t cook or can’t cook.”
- “Community-based nutrition education is missing (from the program). The kids want it. But what is the accessibility of healthy and affordable foods in the community?”

“The kids bring water. They take a sip and it goes in the garbage. We need to tell them, ‘This is what your body needs. This is your reality’. How can we make the change?” - Focus group participant

In discussing how to encourage more water and healthy eating, coaches and directors shared that they do not generally include food at games or as part of celebrations. Opportunities for modeling healthy eating are limited. However, one poignant theme emerged: the need for community-based nutrition education, including youth.

Several issues emerged as critical to implementing youth development and nutrition in sports. Comments included the following:

- Sports is the lure, the carrot. Focus on healthy eating and training. For example, have an early morning program and serve a nutritious breakfast. Bring healthy food examples to practices and games. Create awareness.
- Girls especially need to be aware of health as related to sports. Considering the choices available in the community, they need to learn to read labels. Give the message: be active; feel strong.
- Use athletes as models.
- Talk about steroids.
- Do not emphasize weight programs.
- Add a parent component.

Other issues spilled over into the area of family and environments with which the youth interact. One coach said,

“Kids are not used to running. They have poor coordination. This is from sitting inside with video games and TV. In the 80’s, parents took kids in to protect them from crack, [drugs and violence]. They’re still inside.”

- Focus Group Participant

Another coach commented that parents incorrectly use sports as a reward or punishment for kids. Most participants felt that parents, especially mothers, need support.

In discussing nutrition, one coach expressed that youth and their families need access to healthy food

options. They need to be educated about nutrition, the politics of what is available in certain neighborhoods, and how some groups are marginalized. One coach commented on the influence of poverty, stating that families spend their salaries first on rent, and the rest on food and other expenses.

“Youth [and their families] won’t do the right eating. They do what they have to do to survive. They spend their money for rent. The rest is leftover for food and all other expenses.” - Focus group participant

Focus Group Recommendations:

- Work together as a partnership – parents, youth, coaches, and the general community.
- Demonstrate healthy choices through trips and food preparations. Extend programs past 8 weeks and into the summer. Include youth and parents.
- Include a gardening project to engage youth in learning about food and nutrition.
- Subsidize coupons that youth and parents can use to buy nutritious foods in their neighborhoods.
- Create incentives for stores to carry healthy foods.
- Create coupon books for youth, for example, salads at McDonald’s.
- Encourage youth to create video games involving nutrition.
- Support the development of more nutritious food vendors in the community – carts, stands, health food outlets.
- Encourage sports for life.

III. Informational Interviews

Six individuals representing different organizational perspectives on coach education and training were

interviewed. One interviewee is an entrepreneurial owner of a sports training facility for youth in both Europe and the United States. He recruits and regularly trains coaches for his enterprise. The second and third interviewees comprise a set of coach trainers who run a youth sports research organization at a major state university. Their knowledge of coach education is both research-based and practical. Their institution conducts statewide coach training for sports organizations. They are also co-authors of a coach manual and accompanying parent manual on youth sports. The fourth interviewee is the head of a coach training institute that was founded and is being developed in New York City. The fifth interviewee directs training and technical assistance, mainly on the west coast, for afterschool youth programs with sports components. The sixth interviewee is a manager for physical activity and health for the urban youth sports department of an organization on the east coast. All six of the interviewees share a passion for and commitment to youth, developmentally-appropriate physical activity, and sports.



(T. Briganti)

The following are some insights about coaches and their preparedness, current practices, and visions for youth coach training obtained from the coach informational interviews.

Defining Coach and Coach Preparedness

One interviewee made a key point regarding the importance of clarifying the use and meaning of the term “coach”. He stated that the term “coach” means different things to different people and varies to include volunteer coaches, high school coaches and professional coaches. Each category requires different levels of formal credentials. Professional coaches, for example, may not be required to have formal coaching education. On the other hand, high

school coaches are required to have a teaching certificate, a minimum number of college credits, and a locally-decided number of Continuing Education Units (CEUs) every five years.

He also indicated that some states require coach education. These include New Jersey, New Hampshire, North Dakota and Louisiana. Pennsylvania does not hold volunteer coaches to the same standard as professional coaches. Delaware calls for “qualified” coaches. Requirements for volunteer coaches are generally state-generated. In New Jersey, for example, volunteer coaches are required to take a three-hour safety training class leading to certification, in order for the state to grant civil immunity. In youth sports, other than those connected to school programs, most coaches are volunteers. According to some interviewees, some volunteer coaches may have no experience in their sport. However, interviewees voiced concern that coaches need to have not only generic knowledge of sports, but also techniques to specific to their sport in the areas of sportsmanship, nutrition, and sports psychology.

Interviewees acknowledged that few coaches are trained. Out of approximately 30 million active coaches, two to three million are volunteer coaches. Of those, 10% receive formal training. Coach training is good for the league or organizing body. Coaches who have been trained tend to remain coaches for a longer time. Also, coach training protects volunteer coaches, emergency care workers and policy makers under the Volunteer Protection Act. It appears that small organizations may have a smaller number of “ready-to-go” coaches.

An interviewee shared that national guidelines for training have been developed within each sport. The most aggressive training is in soccer. He said that as a result of the 1984 Olympics, funding for training was mandated for wrestling, gymnastics and ice

hockey; but this does not necessarily apply to private sports clubs. “Less technical” sports, such as football, baseball and soccer, frequently engage parents as coaches and tend to be less rigorous in training requirements. However, “more technical” sports, such as aquatics, tennis, gymnastics and golf, require coaches to be better trained.

Current Practices in Youth Coach Training

The interviewees shared their view that youth coach training is challenging. Youth organizations often do not have time built into their schedules for training, nor do they have the budget. Furthermore, they are reluctant to charge fees.

Yet many coaches are volunteers and/or novices. One interviewee shared that many youth sport coaches are recent college graduates. They have little experience working with youth and may have no

experience coaching and/or playing the sport that they will coach. It is very difficult, if not impossible, to enforce what coaches learn and how well they coach.

In addition, several interviewees shared their frustration that some national organizations have developed excellent coaching curricula. However, the coaches are not often the beneficiaries of such curricula.



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Two training priorities emerged: 1. the priority of coaches should be valuing youth, rather than winning; and 2. nutrition education should be an added component. One interviewee explained, “The nutrition component is typically missing in coach training. Nothing about nutrition is required by law. The American Sport Education Program (ASEP) may be the only curriculum that addresses nutrition. Otherwise, safety procedure training may include issues of hydration, for example, drinking ½ cup water every half hour to avoid dehydration”. However, in the past three years, a Boston organization has developed a coach training program that has been well-received. This component

involves partnering with a nutritionist from a local medical center, who presents a 1½ hour training session.

Ideas for Youth Coach Training and Youth Sports

Interviewees indicated that directors of youth sports organizations need to set standards and expectations for coaches and to develop quality control. One strategy is through youth coach training. In addition, it was suggested that coach training be integrated into earning college credits. One interviewee pointed out that research is needed to learn what organizations provide coaching information, whether information is transmitted to the coaches and/or the athletes, and whether information ultimately improves the behavior of the athletes.

Sports programs can be placed on a continuum ranging from general recreation programs, to performance enhancement programs, to those that aim for a ratio of strength to lean body mass. Programs may require some differentiation in training, but one interviewee suggested that it would be helpful to start with a template for training connected to age-appropriateness. Basic curricula would address fair play, discipline, and that defense and offense are equally important. It would also include eating for sports performance. For example, the curricula could address strategies for healthy weight maintenance and ways of encouraging healthy eating. Coaches would benefit from sports nutrition information, such as whether athletes should eat quick energy snacks, and what athletes should consume before, after, and between practices.

In addition, coaches could learn about positive youth development practices. For example, physical activity is often misused by coaches as a punishment. Young people may be told to run laps or do push-ups. A more positive practice would be to allow them to plan their own workout schedules.

“Coaches often have winning as their highest priority. They need kids to be their highest priority.”

- Interviewee

There are many opportunities to facilitate youth development within sports programs, although sports in and of itself is not necessarily practiced with youth development in mind. One coach trainer shared,

“A sport is not necessarily a youth development activity, but needs to be.”

Another explained,

“The essence of sports is trying to win. How you win is most important. It is the youth development/moral development aspect.”

A third warned that it may be difficult for coaches and those associated with sports to understand youth development. It may also be difficult for youth development practitioners to embrace sports.



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It was recommended that coach training include the basic idea that the two goals of winning and life skills are equally important. That is, one does not have to stop winning games to teach life skills. For example, coaches could learn that the skill of sportsmanship is demonstrated differently throughout the various developmental stages. It changes from pleasing one's parent(s) to rooting for the opponent.

“One does not ‘catch’ good sportsmanship. One learns it. One needs to learn to make one's own decisions to develop moral values as opposed to the coach telling you how to handle each situation.” - Interviewee

It is important for coaches to be able to work with a broad range of players. They must be able to encourage those not as skilled or less motivated to increase their participation. In addition, coaches need to understand that more skilled athletes can be overused, resulting in muscle injuries. This in turn can lead to sustained injuries. The continuum of athletes with whom the coaches should be able to constructively work ranges from the overused and injured athlete to the under-used, less skilled player.

Interviewees agreed that coaches need to develop skills to work with the parents of players. They, or another representative of the sports program, could provide parent training about youth sports. It was stated that parents today are consumed with tensions from work and life. Parents need incentives to encourage them to participate in training about youth sports as well as quality training material. Some basic curricula may include topics such as: the role of youth sports in developing life skills and self-confidence; ways parents and coaches can work together to meet youth needs; and constructive praise; and teamwork.

IV. Coach Training Curriculum Review

Fourteen organizations were identified. These included National Soccer Coaches Association, NYS Public School Athletic League, US Professional Tennis Registry, YMCA Youth Super Sports, US Soccer Association, Pop Warner, American Swim Coaches Association, USA Track & Field, American Sport Education Program, National Alliance for Youth Sports, National Association for Sport and Physical Education, Youth Sports Research Council, Positive Coaching Alliance, and Team Up for Youth. Their coach training curricula were reviewed to determine the extent that their coach education programs address each of the eight domains of the National Standards for Athletic Coaches (NSAC). The domains addressed include: I. Injury Prevention, Care and Management; II. Risk Management; III. Growth, Development and Learning; IV. Training, Conditioning and Nutrition; V. Social/Psychological

Aspects; VI. Skill, Tactics and Strategies; VII. Teaching and Administration; and VIII. Professional Preparation and Development.¹

While all eight domains are touched upon by all programs, not all 37 standards within those eight domains are met. For instance, Domain IV addresses training, conditioning, and nutrition. While most programs met standards for training and conditioning, very few address the standard for good nutrition in relation to sports performance. There was also limited information related to hydration, which is addressed primarily in the context of heat illness prevention.

Very few programs include youth development. If addressed, it typically covers physical development differences of youth at various age groups. The organizations that include youth development publish sport-specific manuals (purchased separately) that provide skill instruction at age-appropriate levels. Many of the programs do not touch upon the elements essential to the healthy development of youth, as identified by Konopka and Pittman.² One standard within Domain III calls for understanding the social and emotional development of the athletes being coached.³ However, they are rarely emphasized in these programs. Only five out of fourteen (36%) organizations address the social and emotional aspects of youth development in their course description or curriculum.⁴⁻⁸

- **The National Soccer Coaches Association (NSCA)** states, “special emphasis is placed on understanding the physiological and psychological differences of coaching children... the overall objective of this course is to help coaches create the optimal learning environment for players at this developmental age [5 to 12 years].”⁴
- **YMCA Youth Super Sport’s *Rookie Coaches Training Guide*** “provides skill instruction at an appropriate level, and understands the players’ social and emotional attributes...”⁵
- **US Soccer Association** addresses three domains of learning (psychosocial, cognitive and psychomotor), by teaching coaches about child characteristics and how to develop age-appropriate activities for youth sports training.⁶

- **National Alliance for Youth Sports** has “growth and development” as one of the topic areas covered in their coach training course. This topic area covers body types, characteristics of children 6 to 14 years, and coach’s tips on learning skills.⁷
- **Team Up for Youth** is a program for youth development based on their “Building Blocks—five principles from youth development research that can be applied to youth sports programs to support kids’ healthy development”. These 5 core principles are safety, positive relationships, physical activity, youth participation, and skill building.⁸

With limited detailed information available on coach training curricula, it is unclear to what degree sports nutrition is incorporated into these programs. Two organizations (New York State Public School Athletic League and National Alliance for Youth Sports) addressed nutrition in their regular programs.^{7,9} Another organization mentions nutrition briefly in its training program, but only in the context of pre-game eating to enhance sports performance during a game.^{10,11} Sports nutrition is not just about the application of eating strategies to perform optimally during a game/competition; it also involves dietary strategies to promote good health and optimize physiological responses for adaptation to training, as well as to recover quickly after each exercise session.¹²



(E. Ichinose)

Four other organizations have nutrition as a topic for annual conferences,^{4,13} online discussion forums,⁶ or special topics courses that are not part of the regular training program.¹⁴ One of the organizations clearly stated that there is no information about nutrition in the training program as “health is not an emphasis”. This particular program focuses more on teaching technical skills associated with the sport and creating a positive learning environment for the youth.⁴

None of the training programs indicated hydration by itself as a topic^{4-11, 13-19} It may be integrated into the injury prevention, care & management training because adequate fluid intake is necessary to prevent dehydration and heat illnesses, but the specifics are not entirely clear. All in all, there is limited information on hydration, which may be because hydration is not a specific standard within the NSAC.³

Two major organizations that implement sports education training programs, the American Sport Education Program (ASEP)^{10,11} and National Alliance for Youth Sports (NAYS),⁷ have relatively comprehensive training programs that incorporate all eight domains of the NSAC to some degree. While ASEP publishes sport- and age-specific resource manuals that give instruction on how to create practice plans that adapt skills-based activities and drills for a particular age group, it does not provide specific training on the developmental stages. NAYS has “growth and development” as one of the topic areas covered in their coach training course. This topic area covers body types, characteristics of children 6 to 14 years, and coach’s tips on learning skills. Both programs cover the psychology of coaching youth sports and encourage coaches to promote some of the essentials to healthy development of young people. ASEP teaches its coaches that they

“have the responsibility to help players develop character. The old saying that ‘sports builds character’ is not quite accurate. It is the coach that helps the young athlete learn sportsmanship, respect, and honesty. One can encourage the development of these values at practices and games.”¹¹

ASEP places an emphasis on “athletes first, winning second,” and states that one of the major responsibilities of being a youth coach is “to help players develop character”.¹¹ Similarly, NAYS teaches the coach methods for developing self-esteem, self-confidence, self-responsibility, and self-concept in young people.²⁰

ASEP’s training program mentions nutrition in the context of pre-game eating to enhance sports performance during a game.¹¹ In the training course by NAYS, nutrition is a subtopic within the “Physical Preparation and Conditioning” topic area; however, the depth of this aspect of the course is unclear.²⁰ Both ASEP and NAYS mention hydration in terms of it being a vital component in preventing heat illnesses. ASEP promotes the incorporation of “Drink Breaks” into the practice plans for youth sports. It is unclear how NAYS encourages adequate fluid consumption.^{11,20}

While all fourteen programs appear to touch upon all eight domains of the NSAC in their respective coach training programs, none incorporate all 37 standards into its regular curriculum. Many curricula lack adequate coverage in nutrition, hydration, and the essentials for healthful youth development.

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Implications of the Findings

The purposes of this study are to gain insight into the extent to which current youth sports programs in a variety of settings include positive youth development and nutrition information and practices; and to learn about the content of a select group of large-scale, established coach training programs and the gaps that exist in current training initiatives in relation to positive youth development and nutrition.

In the study, quantitative and qualitative assessments were used to determine the extent to which positive youth development and nutrition are integrated into youth sports. Additionally, youth sports coach training curricula were examined to determine the overall content and the extent to which positive youth development and nutrition concepts are included.

Several significant findings emerged from the study. First, while most *directors* in the study indicate that they have had youth development training, more than half of the *coaches* surveyed indicate that they have not had such training.

Further, when asked about the nature of the youth development training received, many directors and coaches cited trainings generic to working with youth (e.g., child abuse), as opposed to targeted positive youth development training. In addition, the responses given by coaches and directors of mega organizations (i.e., those with national affiliation and significant presence in multiple borough sites), were not significantly different from those of coaches and directors of large organizations (i.e., those without national affiliation), but with significant

presence in at least one borough. This would appear to indicate the need for trainings targeted to all directors and coaches on the concept of how to integrate youth development concepts and practices into their sports program regardless of organization size and affiliation.

Despite the varied interpretations and lack of standardization on the concept of positive youth development, the majority of coaches and directors felt strongly that their program demonstrated positive youth development practices. These practices would reflect a change from deficit-focused programs to a strength-based approach. This approach embraces a shift from problem-fixing to healthy development; from single programs to community-wide strategies; from youth as recipients of service to youth as active participants; from dependency on public institutions to strengthening of youth's natural support systems; and from focusing on at-risk youth to providing positive supports and opportunities to all youth.¹



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Participants in the focus groups indicated that the goals of their programs range from introduction to sports to teaching fundamental techniques of a particular sport.

Interestingly, participants in the focus groups expressed that the goals of their programs reflect an emphasis on positive youth development. These were expressed in explicit statements such as, "Our program is about youth development. Sports are the hook. We have social, academic emotional and physical goals". They were also expressed in implicit statements such as identifying the program goal as "bringing order to the lives of ...kids (who are)...out late running the streets" and "A kid... wants relief from stress through sports."

Because up to 70% of youth who play sports will stop by the age of 12,² these are important goals for sports programs. Youth are motivated to participate in sports because they are interested in developing and demonstrating physical competence, gaining social acceptance and support, and having fun as a result of participation in the activity.³ They reportedly disengage from sports because they are no longer having fun, experience too much pressure, or do not like the coach.²

In the study, 95% of the directors and coaches strongly agreed or somewhat agreed with the statement that their youth sports program “provides youth with recognition and praise for their effort, improvement and sportsmanship.” Seventy-nine percent of young people reported that their coach always praises them when they try and work hard. There were no significant differences when looking at different age groups: 5 to 7, 8 to 10, and 11 to 13; or when comparing responses from boys and girls. Coaches in the focus group confirmed the fact that they believe their behavior has a strong impact on their players. These findings further support the importance of training coaches in the skills of implementing positive youth development, with emphasis on establishing a common language and understanding of core concepts.

Program design also plays a part in retaining young people in sports programs. In looking at the responses of youth, 90% of youth respondents “always” feel safe at their sports program, 75% feel as if they “always” fit in with their team, 76% state their sports program “always” helps them make and keep friends and 79% state that their coach “always” praises them when they try and work hard.

While these are



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encouraging results, it may be worthwhile to look at the 25%, 24% and 21%, respectively, to determine why these youth responded either “sometimes” or “never” to each of the three youth development categories.

Also, informational interviews confirmed that sports become increasingly competitive for youth in preadolescence. As youth enter preadolescence and adolescence, there are fewer opportunities to experience sports either as a generalist (i.e., playing in more than one sport), or in a non-competitive arena. This could partly account for youth expressing that sports are no longer fun and that they feel too pressured.

A study by National Institute on Out-of-School Time confirms the findings of the informational interviews. The study identifies factors that contribute to youth leaving sports at age 12, which include more competitive team membership prerequisites and fewer supervised sports opportunities for less athletic or less competitive youth.⁴ These data would seemingly invite youth sports programs to explore the possibilities of shifting the focus from primarily offering competitive sports to also offering less competitive and multiple sports and thereby promoting a life-long pleasure in engaging in physical activity.

With regard to nutrition practice and nutrition education, most coaches and directors in the study have not received training in nutrition. In general, their sports programs do not address the nutrition needs of their young players. Forty-five to sixty-four percent of directors and coaches responding to the survey, respectively, say that their program “does not at all” offer formal nutrition education components in the form of workshops, videos, handouts, parent newsletters or other. This was confirmed in both the surveys and the focus groups. Twenty-five percent of youth responded that their sports program “never” teaches them about healthy eating. Games, celebrations and events typically do not include food of any kind. Alarming, coaches indicated that they are generally unaware of whether or not their players have eaten breakfast or lunch prior to practice or games. They became aware through a lack of energy shown once the practice/games began. Not

only does an energy deficit negatively affect a youth person's sports performance, it also poses a threat to health. Thus, it is crucial that coaches be aware of the young athletes' eating practices.

According to the survey results, coaches were more knowledgeable about and more effectively monitored hydration practices of youth. Eighty-one percent of directors and coaches surveyed reported that their program "frequently" encourages youth to drink water before, during or after activity. However, only 51% of the young athletes surveyed said that their coach "always" wants them to drink water before practice and games, and 62% reported that their coach "always" wants them to drink water during practice and games. While 79% of the directors and coaches say that their program "frequently" provides water, and 25% say they "do not at all" provide water, only 60% of the youth report that their program "always" gives them water, and 22% of the youth state that their program "never" gives them water.



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Parents are even less sure of the hydration practices. Twenty-one to thirty percent of parents responding to the survey are "not sure" whether their coach wants their child to drink water before, during, or after practice and games. In fact, 22% to 44% of parents indicated that they were "not sure" about hydration and nutrition education practices of the programs their children attend, or indicated that the practices "never" take place.

The absence of food in sports programs, particularly when combined with parents' uncertainty about nutrition education and hydration practices of the program, points out missed opportunities to teach youth and their families about the importance of nourishment and fluid consumption in the context of physical activity. Sports programs are not taking advantage of the opportunities to be role models of good nutrition practices in the context of daily operations and special events. Minimally, there is an apparent need for improved communication and

education to take place between the sports program and parents regarding healthy eating and hydration practices.

Focus group participants voiced their concerns about youth nutrition, saying that parents are busier than ever, and have less time to prepare meals. They elaborated that not only do parents need to know how to make healthy choices, they need to advocate for the increased availability of fresh fruit and vegetables in their neighborhoods.

Interestingly, one agency staff member reported that when youth were made aware of the possibility of nutrition education workshops when filling out the study survey, they expressed interest in participating. This highlights the need to develop strategies that will engage young people around nutrition-related topics.

Most coach training curricula lack adequate coverage in nutrition, hydration, and the essentials for positive youth development. This is significant

because coaches are important messengers and teachers, who can reach young people and communicate positive messages for healthy development. Without adequate coach training in positive youth development, young athletes may retain their participation in sports while gaining experiences related to security, belonging, acceptance, independence, relationships, values, achievement, and recognition. At the same time, coach training in nutrition and hydration can lead to proper youth practices in these areas.

The Ecological Systems Theory, introduced by Bronfenbrenner and elaborated on by others, embraces the premise that human behavior can be best understood by taking into consideration the context in which the person is embedded.⁵ Davison and Campbell⁶ built on the Ecological Systems Theory of Bronfenbrenner as well as research related to parenting and children's eating and physical

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activity in order to develop a model of family ecology and children's eating, physical activity and sedentary behaviors. In the model, they relate four aspects of parenting to obesity risk behavior: *knowledge and beliefs* about behaviors that reduce/promote obesity risk behaviors; *modeling* of healthy and unhealthy eating and activity behaviors; *accessibility* of healthy and unhealthy eating and physical activity options; and *shaping* of children's eating and physical activity behaviors by the use of reward and punishment systems.

The research cited by Davison and Campbell supports the notion that increasing family awareness of nutrition and physical activity practices and the role parents' behaviors play, can improve the health and well-being of youth.⁶ Families could experience healthy foods at practice and games and learn about basic nutritional requirements for both youth at different developmental stages as well as for specific sports.

Davison and Campbell's research indicate that parents' knowledge of nutrition is one factor that positively impacts on healthier dietary behaviors in children. They also reported that parent role modeling of eating impacts on the eating of young children. In addition, they found that a child's consumption of food increases, (e.g., fruits and vegetables), when they are both available (present in the home) and accessible (within reach). Certain strategies used by parents to encourage youth to eat one food by rewarding with a second less nutritious food may be counterproductive, and lead to the desirability of the less nutritious food.⁶ These findings reinforce the need to increase parent awareness of the significance of parents' role in influencing their children's eating habits.

In the area of physical activity, research again supports the idea that increasing family awareness and knowledge of good practices can improve the health of young people. For example, research suggests that parents who encourage their children to be physically active tend to have more physically active children.⁶ In addition, active parents tend to have active children. Parents can enable accessibility to physical activity both by creating home environments that foster activity (e.g., by providing activity related equipment), and by facilitating involvement (e.g., by paying related fees or by providing transportation to the activities).

Finally, parents need to be aware of their children's sedentary behaviors, and their own role modeling, accessibility and shaping in this area. Youth are surrounded by sedentary behaviors in their home through TV, VCRs, video game equipment, and computers. While few studies have looked at the extent to which parents encourage sedentary behaviors in their children, Davison and Campbell point out that the combined prevalence of working parents and the belief that TV-viewing is a safe activity in potentially unsafe neighborhood environments, would reinforce the value of sedentary behavior. In addition, TV-viewing is the most frequently shared family activity. Although children watch an excessive amount of TV, averaging two to three hours per day, studies show that parents who set limits on their children's total TV-viewing time tend to have children who watch less television.^{6,7}

While the study did not specifically address community involvement, the notion of ecological dependency was raised in the focus groups. Several agency representatives emphasized a need to address limiting environmental factors (e.g., limited food choices in the community), and possible solutions (e.g., increased exposure to new foods via gardening programs). Such ideas suggest the need for an ecological approach to promoting a healthier lifestyle in communities with limited resources. The Daniels and Perkins Athletic Square Model (see Figure 3, page 20),² incorporating youth, coaches, parents and community in the sports program, would support the involvement of community in youth sports programs.

Additionally, the Institute of Medicine identified five environmental factors that inhibit children's healthy eating and physical activity.⁸ They include: 1. pressures on families to minimize both the cost of food as well as the amount of time to prepare food; 2. reduced access to fruits, vegetables and nutritious foods; 3. design of urban and suburban communities that limit opportunities for walking and physical activity; 4. decreased walking or biking to and from school as well as decreased physical activity during school; and 5. competition for leisure time between sedentary screen activities and playing outdoors. This study reinforces the notion that there are a complexity of issues surrounding the problems of unhealthy eating and inactive lifestyles among young people, and it suggests a systems approach to the solutions. With approximately 40 million youth participating in various sport organizations and 56% of all 5-10 year-olds playing sports,⁹ it seems logical to use sports programs as significant loci to address youth well-being through positive youth development and nutrition.

At the same time that sports programs are being encouraged to incorporate positive youth development and nutrition and hydrations practices, coach training curricula do not appear to be meeting the standards set by the National Standards for Athletic Coaches. In cases where curricula meet the standards, not all coaches appear to be trained in the curriculum. Similarly, parents are not aware of the youth development and nutrition practices of the sports programs in which their children participate. Clearly, education and support for directors, coaches, youth, parents, and the community at large regarding positive youth development and nutrition core principles & practices are essential. This can serve as an effective strategy for addressing the issue of under-active and poorly-nourished youth.

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Recommendations

The Positive Youth Development and Nutrition in Sports study was a descriptive study, based on a relatively small sampling. The intent was to collect data using multiple approaches (survey, focus groups, informational interviews, and analysis of youth sports curricula) in order to identify similarities, differences, and needs in the results. This study's recommendations have implications for youth sports programs, coach training organizations, communities, and policy makers, particularly regarding the design of programs, curriculum content, and training approaches.

The premise of the study is that an unprecedented number of children and youth are considered to be overweight and obese, leading to poor health consequences. The causes of these conditions are rooted in complex, interrelated environmental factors. The work of Bronfenbrenner and other ecological systems theorists would suggest that the key to understanding and finding solutions to the childhood obesity epidemic requires the consideration of the context in which the youth live (i.e., family, school, after-school activities, and the community).

Youth sports programs, in which approximately 40 million youth participate, provide one venue for consideration. Because many young people are already engaged in physical activity, youth sports programs are logical places to instill practices of positive youth development and nutrition. These practices serve to improve the well-being of the youth and may also help to retain youth in sports activities. Because most youth leave sports by age 12, and activity in adolescence is a predictor for young adult activity, retention of youth in physical activity is an additional challenge.

This study questioned to what extent positive youth development and nutritional practices occur in youth sports programs and also to what extent coaches are trained in positive youth development and nutrition. Based on the study findings, many recommendations follow:

Sports Programs/Coach Training

- Provide coach education that includes information about nutrition education, hydration, and positive youth development.
- Provide incentives to expand coach training to incorporate youth development, nutrition and hydration into the existing essential concepts of sports.
- Encourage coaches to integrate the teachings of healthy lifestyles, including proper nutrition and hydration practices, into sports education and parent communications for optimum health and sports performance.
- Create an organizational culture of wellness. Align policies, procedures and practices to reflect an environment of healthy eating, hydration and active lifestyle.



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Youth

- Offer opportunities for youth to learn about the value of healthy eating and hydration, particularly as it relates to improving sports performance and active lifestyles. Include experiential strategies, such as cooking and community gardening to provide opportunities to learn about how food is provided and prepared.

- Find means to engage youth in sports beyond age 12 and into adolescence. Promote a life-long pleasure in engaging in physical activity, especially for those who are less athletic or competitive.
- Increase youth's understanding about the value of physical activity for health and wellness across the life cycle.

Parents and Families

- Provide information for parents, including onsite demonstrations and samples of healthy foods.
- Provide creative resource materials on healthy nutrition and youth development practices (e.g., refrigerator magnets, recipes and portable reminders of healthy behaviors); Offer information on topics such as choosing healthy fast foods, supporting children in sports; and good sportsmanship.
- Help parents develop an understanding of the value of active lifestyles, providing nourishment for effective performance, and role-modeling healthy eating and physical activity.

Community

- Engage local businesses in promoting messages of positive youth development and nutrition in sports.
- Disseminate messages about positive youth development and nutrition in sports at community events and local gathering places (churches, schools, libraries, agencies, businesses).
- Advocate for food retailers to offer healthy fruits, vegetables and other healthy food choices.
- Provide access to healthy foods, for example, by bringing farmer's markets to local communities and encouraging community gardening.

Policy Makers

- Support adequate funding for the promotion of sports programs as the vehicle for positive youth development and healthy lifestyles, including funding for research and evaluation of these efforts.
- Review and revise, if appropriate, the National Standards for Athletic Coaches (NSAC) to ensure inclusion of positive youth development, nutrition, and hydration standards.

Researchers

- Conduct evaluation studies on the impact of coach training programs on actual coach practices and existing programs that incorporate positive youth development and/or nutrition education.
- Study and recommend public policy practices and issues that determine the food offerings of local food retailers.
- Identify factors that would motivate coaches to include more youth development and nutrition practices in their programs.



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Methodology and Study Design

Overview

Data for this descriptive study were collected using a mixed method approach that combined quantitative and qualitative methods. Data were obtained by four means: 1. surveys, 2. focus groups, 3. informational interviews, and 4. coach training curriculum review. These data sources were used with the intent to document similarities and differences between programs.

A sample of 22 programs (12 mega and 10 large organizations)* from all five boroughs of New York City and Long Island were contacted and invited to take part in the study. Of these, a total of 17 programs from ten mega and seven large organizations actually participated. Directors, coaches, youth and parents from each program/organization were invited to participate. The goal was to survey one director, two coaches, eight to ten youth (ages 6-13) and three to five parents from each of the participating sport programs/organizations at each selected site in order to complete the needs assessment.

Surveys were created specifically for each group of participants (coaches, directors, youth and parents). These tools addressed issues of youth development and nutrition as they pertained to the particular youth sports program. A total of 19 directors, 23 coaches, 102 young people and 95 parents completed the self-administered surveys, which equaled a total sample size of n=239 (see Table 5). More parent participants were obtained than anticipated.

Data also came from focus groups and informational interviews. A series of questions were developed for the focus groups that expanded on the content of the surveys. Focus groups were held

with directors and coaches (nine participants total) of programs invited to participate in the surveys, as well as directors and coaches of other sports programs. The informational interviews were held with directors of model coach training programs from various regions of the U.S., as identified by experts in the field.

In addition, an analysis of coach training curricula was conducted to determine the content of coach training initiatives with particular emphasis on youth development, nutrition, and hydration practices.

Site Selection

The afterschool youth sports programs invited to participate in the study were selected based on the number of young people the program served, the types of sports offered, the location of the program, the number of sites at which the activities are offered, the age group of the participants, and national or local affiliations. The programs selected are located

Table 5. Survey Participant Totals by Organization Type

| | Mega* | Large* | Subtotals |
|-----------|-------|--------|-------------|
| Coaches | 13 | 10 | 23 |
| Directors | 10 | 9 | 19 |
| Youth | 67 | 35 | 102 |
| Parents | 46 | 49 | 95 |
| Subtotals | 136 | 103 | Total = 239 |

* Note: See definitions for "mega" and "large" organizations on page 44.

Table 6. Program by Organization Type and Location

| Borough | Mega* | Large* |
|---------------|-------|--------|
| Brooklyn | 2 | 1 |
| Bronx | 2 | 1 |
| Manhattan | 2 | 2 |
| Staten Island | 1 | 0 |
| Queens | 3 | 1 |
| Long Island | 0 | 2 |
| Total | 10 | 7 |

* Note: See definitions below.

throughout New York City and Nassau County (Long Island). All five boroughs (Bronx, Brooklyn, Queens, Staten Island and Manhattan) were represented (see Table 6). These programs primarily serve inner-city youth, the majority of whom are of low socioeconomic status. The age range of participants served through these programs included the study's target range of 5-13 year olds. These programs were categorized as "mega" or "large" organizations depending on national or local affiliations and the size of the program. "Mega" organizations are defined as nationally-affiliated and have a presence in most, if not all, of the five boroughs of New York City. "Large" organizations are defined as locally-affiliated programs that serve broad communities within at least one borough. The sports included in the study were basketball, football, boxing, baseball, gymnastics, softball, karate, swimming, tennis, soccer, and track and field.

I. Surveys

Three distinct surveys were constructed for the target groups: directors/coaches (as one group), youth, and parents in the sports program. These data collection tools were designed to reveal to what extent existing

youth sports programs incorporate youth development practices and whether or not they include nutritional components to promote healthy eating. They were also designed to reveal the extent of training the coaches and directors of the program have had with regard to positive youth development, nutrition, and hydration.

The content of the surveys, which incorporated questions utilizing positive youth development and nutrition models, were mostly based on the works of two key youth development researchers, Daniel Perkins, PhD,¹ and Karen Hoffman Tepper, PhD.² Additional background information by a youth nutrition researcher, Suzanne Nelson Steen, DSc, RD, was used to construct the nutrition component of the research tool. The director/coach surveys included questions that ranged from age and gender to the amount and types of training in youth development and nutrition they had experienced. Youth and parent surveys included questions on the types of sports in which the child is involved, as well as the number of hours per week the child practices and plays.

The youth and parent surveys contained parallel questions to each other and were designed to be far more succinct than the director/coach surveys from which they were derived. The director and coach surveys were more in-depth in terms of both their youth development and nutrition content as well as demographic questions. The triangulation of the data collected from each group (directors/coaches, youth and parents) enabled comparative analysis of existing gaps and differences in perception of the issues addressed in the instruments according to group.

The categories of youth development incorporated into the director/coach survey, which combined the theories of Perkins and Tepper, included the following: physical and psychological safety and well-being, supportive relationships between young people and staff, opportunities for youth to belong, opportunities for them to build skills, support for youth efficacy and mattering, and opportunities for recognition.^{1,2} At least two to three questions from each of these broader youth development categories were integrated into the survey. In turn, these

questions were paraphrased and combined into fewer questions that were integrated into the youth and parent surveys. For the youth survey, questions that encapsulated each youth development category were rewritten in a manner that the children could relate to and understand. The youth development categories used in the youth and parent surveys included: physical and psychological safety, supportive relationships, opportunities to belong, and opportunities for recognition.

The coach/director survey was also designed to reveal which nutritious foods were provided for snacks and celebratory purposes. Coach and director surveys included a battery of questions addressing water consumption practices. The youth and parent surveys included one question pertaining to whether or not their sports program promoted healthy eating and proper hydration.

After receiving approval from the Institutional Review Board (IRB) of Cornell University, these instruments were piloted at one mega and one large organization to test comprehensibility and to receive feedback from respondents. Coaches, directors, and young people from these pilot sites, as well as a sampling of parents, participated. Tools were then revised based on the pilot data and feedback.

Data Collection

The data were collected via site visits in which consent/assent forms and self-administered surveys were distributed to the four participant groups: directors, coaches, youth and parents. Site visits facilitated greater participation rates and ease at which the data was collected. For programs in which parents would not be present during the scheduled site visit, parent surveys and both parent and youth consent forms were sent to the program directors and/or coaches to distribute and collect prior to the site visit. During the scheduled site visit, the self-administered director/coach and youth surveys were distributed, and the parent surveys and youth assent forms were collected. Parents who were present during the site visit who did not obtain parent forms prior to the visit were able to complete the self-administered surveys. A few sites were able to

capture parents using two methods: 1. distribution of forms preceding the visit by the director or coach, and 2. distribution of forms by a research staff member during scheduled visits if parents were present.

Each researcher who visited a site was responsible for taking notes regarding site environment using a standard observational tool. This included the types of food present and available, as well as the interactions among program staff, youth and parents (if any were present). These notes provided additional qualitative data. Some sites required multiple visits for various reasons, for example, youth not returning consent forms on time. Two sites mailed in surveys from young people who were not present at the time of the visit.



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Analysis of Surveys

The results from the coach/director, youth, and parent surveys were examined in various ways. First, an independent sample T-test was used to determine if there were any significant differences between mega and large organizations in order to establish comparability.

The youth development and nutrition components of the coach and director surveys were analyzed by creating scales to reflect the overall averages of mean scores from individual surveys according to answers for specific groupings of questions that pertain to these two components. Youth development questions were grouped into six categories: physical and psychological well being, fostering supportive relationships between youth and staff, opportunities to belong, opportunities for skill building, support for efficacy and mattering, and opportunities for recognition. Answers to each question ranged from a minimum score of 1 to a maximum score of 4 (e.g., "strongly agree" = 1, while "strongly disagree" = 4). The same range was applied to each sub-category of youth development with a score of 1 reflecting the most positive answers,

and a score of 4, the most negative. An average score from each category was taken from each individual survey. From this, an overall average was obtained to assess to what extent the program, according to director and coaches combined, implemented the various categories of youth development. The same scales were used to examine and compare youth development categorical means between the coaches and directors, as well as means between mega and large organizations.

Similarly, scales were created based on the aggregation of various questions that addressed nutrition practices. A scale that combined both coach and director averages were created along with scales that compared the means between these two groups. One scale reflected positive nutrition practices, while the other reflected negative nutrition practices. Sub-scales were created from the positive nutrition scales, which grouped questions according to frequency of meals served (breakfast, lunch and dinner), nutrition education, and the frequency in which nutritious food snacks were provided by the program. The minimum score for these scales was 1 and the maximum was 4, with a score of 1 reflecting greater frequency of positive nutrition practices and a score of 4 reflecting not practicing at all. A hydration scale was also constructed to measure the extent of hydration practices.

The youth data were viewed in three ways: 1. by gender, 2. by age (5 to 7, 8 to 10 and 11 to 13 years), and 3. all youth combined. Frequencies for each survey answer were averaged according to these groupings and analyzed as such.

II. Focus Groups

After most of the data collection tools were completed and collected from each participating program, qualitative data were gathered via two focus groups, comprised of directors and coaches of youth sports programs. These groups included individuals who participated in the survey as well as others who did not. The coaches and directors were self-selected through purposeful invitation. The

issues and questions addressed during these focus groups allowed for more in-depth reflections of survey content. Topics included the following: program goals, impact of program, role of parents, contribution acknowledgement, how issues of physical ability and size are dealt with as it pertains to coach training, hydration practices, coach training and recruitment, nutrition practices, availability of foods, and childhood obesity.

Nine of the 42 coaches and directors who completed the surveys also participated in one of two focus groups and represented different organizations, boroughs and sports. The sports represented by these individuals were aquatics, basketball, baseball, softball, football, and track and field. The notes generated from these focus groups were used to inform the findings.

In analyzing the focus group data, a coding system was created and utilized for organizational purposes. Observed regularities and patterns as well as topics covered were coded, as a means of sorting out the descriptive data. The categories that emerged were as follows: program goals, program effects/implications, coach training and recruitment, relationships with parents, awareness of nutrition and hydration practices of youth participants, barriers to implementing positive youth development and nutrition, and recommendations.

III. Informational Interviews

Informational interviews were conducted with leaders of models of coach training programs from throughout the U.S. to gain insight into the extent to which youth development, nutrition, and hydration practices were incorporated in coach training. These were conducted both in person and by telephone. Questions included inquiries about the current practices of the program models, knowledge of national and local coaching practices, and visions for coach training. The notes generated from these open-ended interviews were used to inform the findings.

IV. Coach Training Curriculum Review

The coach education curricula of fourteen coach training programs were selected and reviewed. The extent to which coach education programs address each of the eight domains of the National Standards for Athletic Coaches (NSAC) served as the basis for analysis of the fourteen organizations (see page 32). The organizations were selected as a result of: 1. the survey responses of coaches in regard to the source of the certifications they received in their sport; 2. informational interviews indicating leading national and local coach training organizations; and 3. peer referrals from coach education programs. Once identified, each organization's coach training curriculum overviews, topic guidelines, course descriptions, workshop agendas, and/or annual conference topics were obtained via the internet or in hard copy. Questions were followed up through telephone calls and email communications.

All of the data gathered were catalogued into the NSAC's eight domains for coaching education, and organized into a matrix to facilitate analysis. The NSAC document contains 37 standards that are grouped into eight domains of knowledge and ability.³ These eight domains include:

- I. Injury Prevention, Care and Management
- II. Risk Management
- III. Growth, Development and Learning
- IV. Training, Conditioning and Nutrition
- V. Social/Psychological Aspects
- VI. Skill, Tactics and Strategies
- VII. Teaching and Administration
- VIII. Professional Preparation and Development.

Various aspects of youth development are covered in two of the domains: Domain III contains standards that address individual and developmental differences in young players, and Domain V comprises standards that identify how coaches can develop a positive, confident athlete, while appreciating the individuality of each youth. Enhancing performance with good nutrition is a nutrition standard that is addressed in Domain IV,

along with standards for training and conditioning. While essential for optimal sports performance, hydration is not a specific standard among the eight domains.

The NSAC was developed by over 140 sport organizations that agreed to a core set of competencies and knowledge from which coaches can develop their expertise.³ These eight domains of the NSAC were selected as an analysis tool because they reflect the fundamental competencies that administrators, athletes and the public should expect of sports coaches at various experience levels. Particular attention was focused on how the youth coach training/course/curriculum covered youth development, nutrition, and hydration.

Of particular interest were two national organizations that offer coach training education. The American Sport Education Program (ASEP) and National Alliance for Youth Sports (NAYS). These two organizations have some of the most extensive coach training; thus, they were examined more closely.

Limitations

There are a number of limitations in the methodology of the study. Because data collection took place in the spring season, many sports that occur during other times of the year were not able to participate in the study. Thus study timing limited the amount of participation and variety of sports represented, which consequently reduced sample size.



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Another limitation involved the youth and parent surveys, which were abbreviated versions of the coach and director surveys. Several components were combined to reflect one question. This was deliberate in that coaches and directors were the main focus in obtaining information about youth development and nutrition practices in youth sports programs. Yet, the limited number of questions in the youth and parent surveys proved to be a constraint in the amount of information gathered, which may have impacted findings and the triangulation of responses between groups.

Observer effect, which is the presence of the researcher during the time of survey self-administration was another limitation of the methodology. This had a confounding effect on the study because participants' behavior may have changed with the presence of the researcher, thereby affecting the way in which participants (particularly youth) may have responded to the questions. For example, the youth respondents may have offered what they perceived as more socially-appropriate responses.

Self-selection of organizations, as well as coach and director participants who were invited to join the focus groups, were also worth noting. The individuals who took part may have been more motivated and have had a greater interest in youth development and nutrition as it pertains to sports programs, thus potentially biasing the responses.

Endnote:

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Closing Thoughts

While preparing this study, we came to appreciate and realize even more, the magnitude of attentiveness that is required and the resources that are needed to work on the issues surrounding childhood obesity. Our awareness has increased in realizing how multi-layered its caverns are (significantly), and how complex the solutions are (apparently). These realizations bring us to one fact and conclusion – time is of the essence.

Improving the health status of youth in our nation through nutrition and physical activity requires vigilance and continued focus at the local, state and federal levels. This will include attention from both the public and private sectors.

CUCE-NYC would like to thank The Afterschool Project of the Robert Wood Johnson Foundation for giving us the opportunity to conduct this study, and we look forward to continued collaboration in the search for long-term solutions. Only by collectively harnessing our nation's resources and taking informed action will we reach the goal of a healthier population. We sincerely hope this report will serve as a catalyst to help generate future steps in the field.



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Appendix



(T. Briganti)



(E. Ichinose)

APPENDIX: NATIONAL, STATE AND LOCAL YOUTH DEVELOPMENT SPORTS PROGRAMS

National and State Programs

Several excellent afterschool youth program models incorporating youth development and sports have begun to sprout throughout the country. These include, but are not limited to the following:

Hearts 'N Parks-Promoting Physical Activity in the Community

http://www.nhlbi.nih.gov/health/prof/heart/obesity/hrt_n_pk/

Hearts 'N Parks is a national community-based program with a presence in 11 states. The National Heart, Lung, and Blood Institute (NHLBI) and the National Recreation and Park Association (NRPA) support this program. It is designed to promote heart-healthy lifestyles in communities through park and recreation agencies. The broader goals are to reduce the growing trend of obesity and risk of coronary heart disease in the United States by encouraging community members of all ages to follow a heart-healthy eating plan, as well as to engage in regular physical activity. The main strategy of Hearts 'N Parks is to provide science-based information and build skills to already existing community-based programs. The activities designed are to be incorporated into a variety of programs such as nutrition and fitness activities, and stress reduction or family life programs. Consumer-oriented materials that communicate heart-healthy messages related to weight management, physical activity, high blood pressure and cholesterol, and heart disease. Staff training and resources are also integrated into heart-healthy activities as well as used to aid in the development of existing activities within the community organization.

CANFit- California Adolescent Nutrition and Fitness Program- Nutrition and Physical Activity for the Underserved

<http://www.canfit.org/>

CANFit is a California statewide non-profit organization whose mission is to engage communities and build their capacity to improve the nutrition and physical activity status of low-income youth from the African-American, American Indian, Latino, Asian American and Pacific Islander from ages 10 to 14 years. There are three main components of the program. The first is to provide training and technical assistance to youth serving entities to improve nutrition and physical activity and to prevent obesity in low-income communities of color. The second is to develop, evaluate, and disseminate effective, culturally appropriate nutrition and physical activities, educational materials and social marketing programs. The third is to advocate for policies that enhance nutrition and physical activity in after school programs and community settings. CANFit is dedicated to promoting healthy lifestyles within minority communities and does so through culturally appropriate means.

An example of a CANFit campaign within an underserved minority group is their API Campaign, in which they used digital storytelling to promote physical activity amongst Asian/Pacific Islander adolescents. In an effort to increase physical activity amongst the API youth, CANFit conducted a campaign with community-based-after-school programs in the San Francisco Bay Area. This campaign came up with an innovative way of integrating oral history, creative writing, filmmaking and digital media manipulation to create digital storytelling. Digital storytelling is a grassroots media phenomenon in which communities create short 3 to 5 minute digital stories from photographs, letters, news clippings, and other materials from the kids own lives. It allows for creative thought and self-reflection. The process of digital storytelling raised awareness among the youth and served as the base for physical activity promotion projects implemented by participating programs, which plans to introduce the CANFit campaign.

Sport in Society –Increasing the awareness of sports in society

<http://www.sportinsociety.org/>

The Center for the Study of Sport in Society's (Sport in Society), founded in Boston in 1984 by Dr. Richard E. Lapchick, is a comprehensive outreach project that seeks to promote the awareness of sports and its function in society. The center develops programs that identify problems, offer solutions, and promote the benefits of sports because they believe that sports programming is an excellent vehicle for creating positive social change. They put their beliefs into practice by supporting a variety of year-round educational and outreach programs. These programs aim to educate and inspire young people to become active members of their communities through sports. Some of their programs include Urban Youth Sports, Athletes in Service to America, Mentors in Violence Prevention Program, Project Teamwork, and Sports CAP. *Urban Youth Sports* works particularly with girls and inner-city youth by providing them with quality sports and recreation opportunities that address obstacles within their built environment, such as transportation, safe playing fields and access to recreation facilities. *Athletes in Service to America* is an AmeriCorps-funded violence prevention and education program. *Mentors in Violence Prevention Program* is a gender violence prevention and education program. *Project Teamwork* is a program that sends a mixed-gender and multi-racial team of professional and collegiate athletes into schools to conduct diversity training and conflict resolution programming. The focus of Sports CAP, the Sports Career Awareness and Placement network is to provide women, people of color, and people with disabilities with improved access to the sporting industry. Additionally, Sport in Society's Urban Youth Sports project partners with Harvard Prevention Research Center to address regional, racial, ethnic, gender, and age-related inequalities in physical activity among Boston Youth.

Girl Power and You! - Nutrition, Health and Physical Activity

For more information on Girl Power and You!, contact Naomi Kulakow, FDA Coordinator, at (202) 205-8682, nkk@bangate.fda.gov; or Elaine McLaughlin, USDA Coordinator, at (703) 305-2554, Elaine.McLaughlin@fns.usda.gov.

Girl Power and You is a joint effort with the United States Department of Agriculture (USDA) and the Food and Drug Administration to design materials for young adolescents girls and boys (particularly African-American girls ages 11-14 years) to promote nutrition, health and physical activity. This program is aimed to empower girls to make informed food choices in a variety of settings. These materials are to be disseminated in after-school programs that work with both boys and girls. Participation from both genders is encouraged. The Food and Drug Administration (FDA) used focus groups to develop these program materials. Focus groups took place in Chicago, West Palm Beach, Los Angeles, and Calverton (Maryland). The issues addressed in the focus group were relationship between television viewing and snacking, food preparation and food safety, health consequences of obesity and overweight, and being able to read Nutrition Facts Labels properly for weight maintenance. Materials were based on the result of the two focus groups held in 1997 and 1998, which produced very similar findings.

Community Network for Youth Development – A youth development framework

<http://www.cnyd.org/home/index.php>

The Youth Development Framework for practice is a research-based framework developed in partnership with Dr. Michelle Gambone of Youth Development Strategies, Inc. and Dr. Jim Connell of the Institute for Research and Reform. It is at the core of programs for the Community Network for Youth Development and serves as a roadmap for youth workers, organizations, and policy-makers by identifying desired long-term outcomes for young people. It explains the youth development practices that need to be in place to achieve these outcomes. The Community Network for Youth Development serves youth workers and youth-serving organizations in the Bay Area as an intermediary organization that strengthens youth development through community capacity-building and policy management. The framework is based on five supports and opportunities: safety, supportive relationships, meaningful youth involvement, skill building and community involvement. The nine identified links between these supports and

opportunities to organizational practices are: 1. low youth to staff volunteer ratios; 2. safe, reliable, and accessible activities and spaces; 3. flexibility in allocating available resources; 4. range of diverse, interesting and skill building activities; 5. continuity and consistency of care; 6. high, clear, and fair standards; 7. ongoing, results-based staff and organizational improvement process; 8. youth involvement; and 9. community engagement.

SPARK– Sports, Play and Active Recreation for Kids!- PE model programs

<http://www.sparkpe.org/>

Project SPARK evolved from a research grant in which a team of researchers and educators from San Diego State University received in 1989 from the Heart, Lung and Blood Institutes of Health to create, implement, and evaluate an elementary physical education program that would eventually become a nationwide model. The grant proved to be a success; today, SPARK programs include Early Childhood, Elementary Physical Education, Lifelong Wellness, Middle School PE, After School (Active Recreation) and High School PE. To date, SPARK has provided curriculum, training, and consultation to teachers/youth leaders representing thousands of schools nationwide. It provides components for comprehensive school health and initiates environmental change. SPARK's dedication to combating childhood obesity by improving the quantity and quality of physical activity for children and teachers everywhere has been proven to be effective.

SPARK has proven to promote academic achievement, has increased moderate to vigorous physical activity in students by 50% or better in SPARK PE classes, has increased fitness achievement as measured by the Fitnessgram, has increased sport skills development (throw, catch, kick), has increased the enjoyment of PE, and has improved teacher instruction. Thus, the effects of SPARK are lasting and broad. SPARK has been cited in the Surgeon General Report on physical activity and health as a school-based solution to the nation's health care crisis. In 1993, it was validated by the U.S. Department and earned Exemplary Program status. SPARK has also been honored with the Governor's Commendation award.

Healthy Kids Club- PE and Nutrition

<http://www.grandmashealthykidsclub.com/index.php>

Healthy Kids Club is an initiative/project launched in California through the Joy of Sports Foundation to increase the amount and quality of time kindergarten to 5th grade students attain physical education, to raise children's nutritional literacy, to help them build healthy eating habits, and to provide educational opportunities and information for their parents. The Joy of Sports Foundation houses numerous programs aimed at serving at-risk youth by fostering the development of the whole child. Various programs promote physical activity and acquiring life skills. Healthy Kids Club is targeted toward children who demonstrate high risk factors, including being physically-inactive, having low self-esteem or lack of confidence in their abilities, and poor eating habits. The program offers kids: 1. sports and fitness activities, 2. nutrition education, and 3. life skills training. The Healthy Kids Club meets up to five afternoons a week throughout the school year and during summer camp.

America Scores- Soccer and Literacy

<http://www.americascores.org/index.php?id=97>

The America Scores, which hopes to improve public education from the youth's perspective, is a national program and non-profit organization that combines soccer and literacy in different urban settings throughout the country. The mission is to teach kids writing, which is a tool they deem as necessary for a successful life. It seeks to inspire students to use the teamwork of soccer to achieve their academic goals. Ideally, the support and team camaraderie the youth enjoy on the field should parallel that of the classroom. In other words youth receive support through sports and academics. This program trains schoolteachers to take on the meaningful roles of soccer coach as well as writing coach.

The America Scores program provides resources for urban communities throughout the country, which include the following: soccer and creative writing curricula, professional development, technical assistance, national publications, and challenge grants. The soccer and creative writing curricula include lessons for developing leadership and

communication skills among urban youth. The professional development resources foster development of urban public school teachers and coaches. Technical assistance resources are to support and develop the soccer/academic enrichment model for both boys and girls. National publications made by children and that are for kids highlight the academic achievements of the youth in the program throughout the year. Challenge grants are grants given to highly committed individuals who want to develop soccer/academic enrichment programs serving inner-city youth through participation in their high school.

Local Programs

In addition to the large national programs that exist within various communities throughout the nation, there are other programs that are more local and specific to a community. These programs vary in focus from youth development to academics. However, all promote nutrition and physical fitness through the promotion of overall healthy lifestyles. Examples of such programs include: Team Up for Youth, Wings of America, Think Detroit, and the Cooke County Middle School After School Recreation Program (CASP).

Team Up For Youth – Promoting Healthy Development Through Sport

<http://www.teamupforyouth.org/>

Team-Up for Youth is an after-school program serving low-income youth of the San Francisco Bay Area. The program offers training, workshops and consulting to over 600 program directors and coaches. Some of its accomplishments to date include influencing public policy to support afterschool sports for girls and low-income children, having supported seven low-income communities through Neighborhood Sports Initiative, and making over \$1.1 million in grants to more than 40 non-profit organizations. The core principles of the program are based on five building blocks: safety, physical activity, positive relationships, youth participation, and skill building. These building blocks are to “improve the quality of sports programs to support young people’s emotional, social, and physical development”.

Wings of America- Enhancing the Quality of Life amongst American Indian Youth

<http://world.std.com/~mkjg/Wings.html>

Wings of America is an American Indian youth development program of the Earth Circle Foundation, Inc. based in Santa Fe, New Mexico. It was established in 1988 to reach the American Indian Youth, which is considered to be the most “at risk” population in the United States. Running, which is an integral in the spiritual and ceremonial traditions of American Indians, has been utilized by Wings as a unique means of helping Indian youth identify with their heritage and overcome the challenges they face. The mission of Wings is to enhance the quality of life of American Indian Youth by using running as a catalyst to empower them to take pride in themselves and their cultural identity, leading to increased self-esteem, health and wellness, leadership and hope, and balance and harmony. Wings offer running and fitness camps, leadership/camp facilitator training, outreach through wellness youth conferences, workshops, and special community events that fall within the Wing’s mission. The running and fitness camps focus on positive and healthy lifestyle choices and include traditional Indian games, running and fitness exercises, substance abuse prevention and nutrition education. Leadership and camp facilitator training consists of bringing high school and collegiate student athletes together for a week long training and promote the development of leadership and life management skills. The trainees are prepared to serve as facilitators, peer leaders and positive role models at the Wings Running and Fitness Camps.

Think Detroit – Building Character in Young People through Sports and Leadership Development

<http://www.thinkdetroit.org/>

Think Detroit is a nonprofit organization dedicated to building character in young people through sports and leadership development. Founded in 1977, Think Detroit has been providing character-enriching opportunities for young people throughout Detroit and has been committed to connecting dedicated volunteer coaches to young people and strengthening family ties. The population this organization serves has grown considerable from 120 children in 1997 to nearly 5,000 youth in its

athletic leagues in 2004. Since 1997, Think Detroit has built the largest youth baseball, softball, and soccer leagues in Detroit. It built the first DPS (Detroit Public School) high school leagues for girls and boys, as well as the only youth soccer league exclusively for girls in the history of Detroit. It spearheaded and completed the \$1.2 million renovation of Maheras – Gentry Park on Detroit's east side with the addition of five state-of-the-art ball diamonds and nine soccer fields. Additionally, Think Detroit has trained over 1,000 young people in computer basics and has provided home computers to more than half of them. This organization trains and recruits more than 500 community role models to serve as coaches, managers, and site coordinators yearly.

Think Detroit has won the following awards: The Social Entrepreneurship Award by the Manhattan Institute, which recognized Think Detroit as "one of the five nonprofits in the nation helping Americans realize their full potential"; the Best Nonprofit 2004 by Crain's Detroit Business; and the Leonard W. Smith Award for Organizational Excellence by the Youth Sports and Recreation Commission.

The Cooke County Middle School After School Recreation Program – The impact of after school programs in a poverty-impacted neighborhood
<http://www.gse.harvard.edu/hfrp/projects/afterschool/mott/casp.html>

The Cooke County Middle School After School Program (CASP) is an afterschool program located in an inner-city north-central Philadelphia neighborhood that aims to: 1. provide a safe, structured, adult-supervised environment that encourages positive adolescent development for as many of the school's students as possible; 2. provide opportunities for exercise and to develop fitness skills and wellness; 3. offer extracurricular activities that encourage the development of students' social, emotional, intellectual, and physical skills; and 4. teach children how to get along in a non-threatening environment, where they have the chance to interact with teachers outside of the normal educational setting. CASP facilities are located at Cooke Middle School, which include a classroom, a fitness center, and

gymnasium. The program offers the following activities: sports/physical fitness, art, dance, board games, reading, and homework.

CASP was involved in an evaluation study that aimed at determining whether an after school program administered by an urban public middle school, with limited funding support and technical assistance, can make meaningful improvements in academic and social outcomes for young adolescents (ages 10-14) living in poverty-impacted neighborhoods. The three research questions CASP addressed were as follows: 1. how is Cooke Middle School's afterschool program implemented and its activities reflect the program's goals? How could the current program model be strengthened given limited resources?; 2. what lessons does this program offer other urban school administrators who would like to implement and sustain an afterschool program?; and 3. what impact does the afterschool program have on the students' time use, attitudes, safety, and academic achievement?

Results show that 80% of the parents and caregivers agreed that the program has helped their child improve their overall behavior and 94% of caregivers believed that the program helped their child learn a new skill. Another success of CASP was that student participation in the program had a significant impact on their aspirations for further education, and they were more likely to want to attend college or job training after high school. Also, over 60% of the youth stated that they made four or more new friends, and another 25% reported that they had made at least one to three new friends as a result of participating in CASP. In analyzing the dosage level, students with higher levels of program attendance were significantly more likely to spend more hours each week on enriching activities such as dance, art, music, and exercise and strength training compared to students with lower dosage levels.