Handbook of Urban Education

H. Richard Milner, Kofi Lomotey

Health, Nutrition, and Physical Activity

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Samuel R. Hodge, Alexander Vigo-Valentín
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Introduction

Over 40 years ago, education historian Lawrence A. Cremin (1970) defined education as “the deliber-
ate, systematic, and sustained effort to transmit, evoke, or acquire knowledge, attitudes, values, skills, or
sensibilities, as well as any outcomes of that effort” (as cited by Franklin, 2003, p. 153). Our conceptu-
alization of urban education is captured in the preceding quote as well as in Banks (2006) description
of the general purpose of education in a democratic society. Specifically, he asserted that:

Education in a democratic society should help students acquire the knowledge, attitudes,
and skills needed to become productive workers within society as well as develop the
commitment, attitudes, and skills to work to make our nation and the world just places in
which to live and work. We should educate students to be effective citizens of their cultural
communities, the nation, and the world. (Banks, 2006, p. 145)

Historically and contemporarily situated, the preceding quotes provide an appropriate start to
our discussion on health, nutrition, and physical activity through the medium of physical educa-
tion for youth in urban schools and communities.

Traditional physical education is instruction in (a) physical and motor fitness; (b) fundamental
motor skills and patterns; and (c) skills in aquatics, dance, and individual and group games and
sports including intramural and lifetime sports (Hodge, Lieberman, & Murata, 2012). In urban
schools, physical education teachers tend to focus instruction on physical fitness, activity-related
content knowledge and skill, personal and social skill development, and fundamental motor
skill development (Hodges Kulinna, McCaughtry, Cothran, & Martin, 2006). There is a long,
dynamic and rich history of physical education in the United States with an increasing focus on
health, nutrition, and physical activity.

Historical Account and Current Emphasis

The history\(^1\) of physical education in the United States progresses from a focus on gymnastics
and calisthenics for schools in the 1800s, through a transition to a focus on sport, games, and
dance at the beginning of the 20th century (Vlček, 2011). Political and militaristic influence
associated with war (World Wars I and II, as well the Korean and Vietnam Wars) shifted the emphasis to physical fitness and exercise in response to concerns about fitness levels of military personnel and American citizens in general (Jurkechová, Vlček, & Bartík, 2011; Vlček, 2011). Since the mid-1960s, the benefits of physical activity have been widely published. For example, Hein and Ryan (1960) discussed the importance of physical activity in an article titled, “The Contributions of Physical Activity to Human Well-being.” In the 1970s and 1980s, school physical education programs were dominated by curricular innovations such as adventure education, cooperative learning, movement education, social responsibility models, sport education, and more as well as activities for the inclusion of students with disabilities (Hodge et al., 2012; Vlček, 2011). Economic recessions and concerns about program quality in the 1980s and 1990s contributed to cutbacks in many school physical education programs characterized by reductions in the amount of time students spend in physical education classes (Vlček, 2011).

In contrast, the publication of the National Standards for Physical Education by the National Association for Sport and Physical Education (NASPE, 1995, 2004) has influenced the development of physical education curricula, instruction, and assessment. Its mission “is to enhance knowledge, improve professional practice, and increase support for high quality physical education, sport, and physical activity programs” (NASPE, 2013, p. 1). Likewise the organizers of the 2005 World Summit on Physical Education called for stronger international status of physical education in school politics and in daily school function as integral to education and to human and social development (Hodge et al., 2012).

In today’s physical education programs, students are encouraged to live a physically active life through skillful movement, recreation and leisure, and sports. Physical education programs should promote knowledge, social development, skill acquisition and improvement, regular physical activity, and participation in healthy activities, including games, sports, leisure, and recreational activities (Hodge et al., 2012). All youth should be physically active daily for good health and wellness because this constitutes an important component of a healthy lifestyle. This must also include healthy dietary choices and habits. However, despite results published in credible reports from various scientific communities (i.e., health, medical, educational, and governmental) about the need for and benefits of physical activity and proper nutrition, many youth do not engage in physical activity regularly and have poor dietary habits, particularly those living in rural and urban communities (Centers for Disease Control & Prevention [CDC], 2006a). There is continued need for research in the public interest that is theoretically sound regarding the health, nutrition, and physical activity behaviors of youth in urban schools and communities.

Demography and Urban Schools

Though confounded, most nations worldwide have established ethnic/racial categories (Carter & Fenton, 2009). Specific to the United States, there are several “categories denoting race and ethnicity . . . in accordance with the 1997 Office of Management and Budget (OMB) standard classification scheme” (Aud et al., 2012, p. vii). In this scheme, the designation of Hispanic is an ethnicity category, not a race category (Aud et al., 2012). The terms used to identify race/ethnic categories are American Indian/Alaska Native, Asian/Pacific Islander, Black (not Hispanic), Hispanic (not White), White (not Hispanic), and Two or more races (Aud et al., 2012). These broad categories are far from perfect, however, as there are many different groups with their own socio-cultural heritages, languages, traditions, and lifestyles within each category (e.g., African American, Italian American, Mexican American, Puerto Rican, and many more).
Today, Black and Hispanic residents are the two largest race/ethnic minority groups in the United States. The U.S. Census Bureau reports that 30% of the total population is either Black (16%) or Hispanic (17%). In 2009–2010 at public schools, much higher percentages of Hispanic (37%), Black (37%), and American Indian/Alaska Native (29%) attended high-poverty schools (i.e., highest quartile of schools in the state in terms of poverty) than Asian/Pacific Islander (12%) and White (6%) students (Aud et al., 2012). These schools are often in rural and urban areas.

The term urban typically denotes major cities and metropolitan areas. Common to large urban communities are school districts with high-poverty and low-performing schools. This includes those defined as persistently lowest-achieving schools (U.S. Department of Education, 2013). Many problems epitomize high-poverty urban schools. Common problems include budget deficits, equipment/supply shortages, inadequate school facilities, overcrowded classes, high percentages of poor (including White) and mostly Black and Hispanic students who tend to perform lower on standardized tests compared to White peers within suburban districts. In fact, White students are more likely to attend schools in suburban and rural areas and less likely to attend schools in high-poverty urban communities (Aud et al., 2012).

Educational disparities persist in these schools, which include persistently low-achieving schools. Those identified as persistently lowest-achieving schools are defined as among the lowest-achieving 5% of Title I schools or a high school that has had a graduation rate of less than 60% over multiple years (U.S. Department of Education, 2013). Although between 1990 and 2010, high school dropout rates declined for Black, Hispanic, and White students, rates were typically much higher for Black and Hispanic students compared to Asian/Pacific Islander and White students (Aud et al. 2012). This means that although there have been improvements in such factors as high school graduation rates for Black and Hispanic students, large gaps still exist between them and the academic achievement of Asian/Pacific Islander and White students, particularly in urban schools (Swanson, 2009). In addition to the aforementioned educational and economic issues and problems, the health of youth in urban communities is of concern (Skala, Springer, Sharma, & Hoelscher, 2012; Sweeney, Glaser, & Tedeschi, 2007).

It is well accepted by educational, health, and medical professionals that physical activity and proper nutrition are essential to the health and wellness of youth (U.S. Department of Health and Human Services, 2008; Strong et al., 2005). However, most youth do not meet the national guidelines of at least 60 minutes of moderate to vigorous physical activity daily (Lounsbery, McKenzie, Morrow, Monnat, & Holt, 2013; Troiano et al., 2007). This is true for youths with disabilities in urban communities also (Ortiz-Castillo, 2011). These issues are “particularly relevant given the recent increases in obesity and its associated problems, including high blood pressure, elevated cholesterol, and Type 2 diabetes, which disproportionately affect minority and socio-economically disadvantaged children” (Lounsbery et al., 2013, p. S141).

Health, Nutrition, and Physical Activity

The research literature suggests that education, health and medical, legislative, and governmental entities should position themselves strategically to act as a team in addressing health priorities (Blanchett, Mumford, & Beachum, 2005). Andrade and Dean (2008) explained that through the 20th century health, medical, and related professionals worldwide mostly focused their attention on attending to societal issues such as the world wars and the polio epidemic. For the past 50 years, however, there has been more attention given globally to health issues linked to lifestyle such as heart diseases, smoking-related diseases, hypertension, stroke, obesity, diabetes, and cancer (Andrade & Dean, 2008).
Health Crisis in Urban America

The aforementioned health issues can reduce life expectancy. There are racial/ethnic disparities in morbidity and mortality rates and these differences have negative consequences particularly for the poor, Black, and Hispanic populations (Heron, 2012; Keppel, Pearcy, & Heron, 2010; Miniño & Murphy, 2012). For example, national mortality data reveal that in 2001 “Black men and women had the highest death rates from all causes combined and from many specific causes at nearly all levels of education, and the largest average life years lost before age 65 years” (Jemal et al., 2008, p. 1). Yet for more than 30 years, reducing racial/ethnic disparities in mortality rates has been a part of the national health agenda (Keppel et al., 2010). Even so, disparities in mortality between racial/ethnic groups persist (Keppel et al., 2010; Miniño & Murphy, 2012). Higher mortality rates are also associated with low educational success and other indicators of poverty and low income (Jemal et al., 2008). Tellingly, and emblematic of life circumstances (e.g., poverty and food deserts) and lifestyle decisions and behaviors (e.g., poor eating habits), cardiovascular diseases and diabetes are among the top five causes of death for Black and Hispanic Americans (U.S. Department of Health and Human Services, 2010a, b).

For school-age youth, asthma (a chronic respiratory disease) is a major health issue, which disproportionately affects students of color in urban communities and adversely affects their quality of life and school experiences (Basch, 2011a). In fact, experiencing an asthmatic attack is the leading cause of absenteeism across school contexts (Krenitsky-Korn, 2011). Students with asthma are more likely to miss school, perform less well academically, and participate less in school activities compared to peers without asthma (Basch, 2011a; Krenitsky-Korn, 2011). From an analysis of national health statistics, Basch (2011a) reported that “poor urban minority children not only have higher rates of asthma and more severe forms of the disease, but are much less likely to receive contiguous high-quality medical care and to consistently use appropriate, efficacious medications” (p. 607). He explained that such youth are more likely to experience severe asthma that influences their quality of life negatively including lowering their motivation and ability to learn in school. Disability and poor health also adversely affects physical activity levels (Ortiz-Castillo, 2011). For example, a youth with severe asthma finds difficulty in breathing, and, consequently is less likely to be physically active, but more likely to spend greater amounts of screen time such as watching television and playing computer/video games (Conn, Hernandez, Puthoor, Fagnano, & Halterman, 2009).

There is a cyclical pattern in that those in poor health and/or have disabilities are more likely to be physically inactive, which contributes to overweight and obesity status, and this body status adversely affects health. David L. Katz, Editor-in-Chief of the journal, Childhood Obesity, argued that “obesity is on the causal pathway to every major chronic disease that plagues modern societies. Obesity is the major driver of diabetes trends around the globe, and the reason that what was once adult-onset diabetes was transformed into type 2 diabetes, a condition afflicting youth now all too routinely” (Katz, 2013, p. 1). Lifestyle-related health issues such as those identified here can be addressed effectively through education, proper nutrition, and regular physical activity for meaningful health benefits (Andrade & Dean, 2008).

Nutrition and Physical Activity in Urban America

There is reason for concern regarding the food choices of families who reside in urban communities, particularly those who are poor, including White, but mostly Black and Hispanic youth (Fisher, Arreola, Birch, & Rolls, 2007; Zive, Berry, Sallis, Frank, & Nader, 2002). For instance, studies reveal that as the consumption of soft drinks, fruit drinks, and fried foods has...
increased considerably in the past 30 years or so, the consumption of healthier foods, such as fruits, vegetables, and milk has decreased for adolescents (Malik, Schulze, & Hu, 2006). Youths in urban communities tend to have a high consumption of fat, sodium, cholesterol, and total daily caloric intake (Sweeney et al., 2007). Both Black and Hispanic youth tend to regularly consume sweetened juices and soft drinks and this increases their risk of being overweight or obese, which has negative consequences to health and wellness (Malik et al., 2006; Tanasescu, Ferris, Himmelgreen, Rodriguez, & Perez-Escamilla, 2000; Vigo-Valentín, Hodge, & Kozub, 2011).

There is also concern about physical inactivity among residents in urban communities, particularly for Black and Hispanic groups and persons with disabilities (CDC, 2006a; Ewing, Schmid, Killingsworth, Zlot, & Raudenbush, 2003; Ortiz-Castillo, 2011). Black and Hispanic youth are less likely to participate in organized or leisure-time physical activity compared to White peers (Annesi, Faigenbaum, Westcott, & Smith, 2008; Basch, 2011b; CDC, 2012). However, Floyd, Spengler, Maddock, Gobster, and Suau (2008) found that moderate and vigorous forms of physical activity were higher with unorganized activities such as walking in a city park. Linked to physical inactivity, Black youth have both the highest prevalence and increase of overweight and obesity (Annesi et al., 2008). Black and Hispanic girls are at higher risk for overweight and obesity compared to White girls of their age (Basch, 2011b; Gordon-Larsen et al., 2004; Harris, Gordon-Larsen, Chantala, & Udry, 2006). This is because socio-cultural and environmental factors play a major role in childhood obesity among these populations (Barr-Anderson, Adams-Wynn, DiSantis, & Kumanyika, 2013). For example, culturally influenced dietary habits (e.g., consumption of sweet snacks and carbonated beverages), and high amounts of screen time and other sedentary behaviors, influence Black and Hispanic girls’ weight status (Barr-Anderson et al., 2013; Thompson et al., 2003). Youth who are overweight or obese are more likely to become adults who are overweight or obese (Dowda et al., 2004). This trend may occur across generations within families. Predictably, and troubling as well, research indicates that even 2- to 5-year-old children with excessive body weight are likely to become obese adults (U.S. Department of Health and Human Services, 2010c).

Physical activity behaviors are influenced by cultural; environmental; hereditary (e.g., adiposity or body fat); psychosocial (e.g., self-efficacy, support of parents and peer groups); and individual (e.g., sports, physical fitness goals) factors (Choh et al., 2008; Pérusse, Tremblay, LeBlanc, Bouchard, 1989; Saunders et al., 1997). In regard to environmental factors, African American boys and girls in urban spaces typically have less access to programs, facilities, and safe and attractive areas for play (Annesi et al., 2008). Moreover, crime has been cited as a barrier to physical activity, particularly among those living in rural and urban communities (McGinn, Evenson, Herring, Huston, & Rodriguez, 2008). Nonetheless, youth residing in urban areas with high levels of incivility and crime are “more likely to walk to school, in spite of lower levels of perceived safety” (Rossen et al., 2011, p. 262). Reasoned efforts should be directed at reducing these youths’ exposure to dangers in these communities by constructing safe routes to and from school (Rossen et al., 2011).

It is well accepted that daily physical activity during childhood and adolescence is beneficial to health. Common benefits include “lower adiposity, improved cardiovascular health and fitness, reduced symptoms of depression and anxiety, greater global self-concept and esteem, and better academic performance” (Rossen et al., 2011, p. 262). In contrast, a lack of regular physical activity combined with poor dietary habits lead to health conditions associated with overweight and obesity status. A wealth of research confirms that a strong association exists between overweight and obesity of youth and an increased risk of various chronic diseases such as asthma,
cardiovascular diseases, hypertension, and diabetes (Galal, Fahmy, Lashine, Abdel-Fattah, & Galal, 2011; Olshansky et al., 2012; Peeters et al., 2003; Sinha et al., 2011). Dietary habits such as the consumption of healthy foods (e.g., fruits and vegetables) as opposed to unhealthy foods (e.g., sugary snacks) are major factors that influence the health status of youth in urban communities. Likewise, time spent participating in sedentary activities rather than moderate to vigorous physical activities can adversely impact youths’ health and wellness including whether they will become overweight or obese.

**Childhood Overweight and Obesity**

The prevalence of childhood obesity has increased markedly in the last three decades (Ogden, Carroll, Curtin, Lamb, & Flegal, 2010; Wang & Beydoun, 2007) and is a public health issue. U.S. Surgeon General, Regina M. Benjamin, exclaimed,

> Our nation stands at a crossroads. Today’s epidemic of overweight and obesity threatens the historic progress we have made in increasing American’s quality and years of healthy life. Two-third of adults and nearly one in three children are overweight or obese. In addition, many racial and ethnic groups and geographic regions of the United States are disproportionately affected. The sobering impact of these numbers is reflected in the nation’s concurrent epidemics of diabetes, heart disease, and other chronic diseases. If we do not reverse these trends, researchers warn that many of our children—our most precious resource—will be seriously afflicted in early adulthood with medical conditions such as diabetes and heart disease. This future is unacceptable. (U.S. Department of Health and Human Services, 2010c, p. 1)

It is estimated that about one third of youth are either overweight or obese (Ogden et al., 2010). In high school, about 30% of the students are either overweight or obese (CDC, 2011a). Those who are obese during childhood are predisposed to experience a decline in life expectancy along with health-related ailments and socio-psychological issues (Galal et al., 2011; Olshansky et al., 2012; Peeters et al., 2003; Sinha et al., 2011). Different factors including culture, ethnicity, and socioeconomics influence the likelihood of youth becoming overweight or obese (Caprio et al., 2008; Harris et al., 2006; Wang & Beydoun, 2007).

Troubling disparities in childhood obesity exist between groups from ethnically and socio-culturally diverse backgrounds. In particular, the prevalence of overweight and obesity among and between Black and Hispanic adolescents is significantly higher compared to their White peers (Crawford, Story, Wang, Ritchie, & Sabry, 2001). Less than half of Black and Hispanic adolescents attending high school are physically active for at least 60 minutes most days of the week (CDC, 2011b). In today’s society, many youth would rather spend time watching television and engaged in other sedentary activities (e.g., computer/video games) instead of being physically active (Gordon-Larsen, Adair, & Popkin, 2002). This occurs more now than in past years because of today’s lifestyles that are influenced by increased access to technological innovations such as computer/video games (Amusa, Toriola, & Goon, 2012).

It is no surprise therefore that increases in obesity rates in recent years have contributed to health concerns (Flegal, Carroll, Ogden, & Curtin, 2010). The national obesity rate is 36% and is estimated to reach 50% by the year 2030 (Dionise & Pompa, 2012). Obesity is a chronic disease defined as a range of weight that is greater than what is considered healthy for a given height (Flegal et al., 2010). It compromises health because a disproportionate amount of body fat
relative to lean body mass raises the likelihood of certain diseases (RAND Corporation, 2004). The RAND Corporation (2004) presented the following findings about obesity:

- Obesity in the U.S. population has increased steadily over the last two decades.
- Severe obesity is increasing the fastest.
- Obesity is linked to rising health care costs more than either smoking or drinking.
- The health effects associated with overweight and obese youth can also lead to an increase in morbidity in adulthood.

There are many different methods to assess body composition such as underwater (hydrostatic) weighing, bioelectric impedance, skinfold thickness, waist-to-hip ratio, body mass index (BMI), and more (Fogelholm & van Marken Lichtenbelt, 1997). BMI has become a widely accepted measure in estimating body composition. BMI is calculated as a person’s weight in kilograms divided by height in meters squared (kg/m\(^2\)). It is a statistical measure of a person’s weight-to-height ratio. For adults, a BMI of \( \geq 30 \text{kg/m}^2 \) is labeled as obese and morbidly obese is defined as BMI \( \geq 40 \text{kg/m}^2 \). For youth and adolescents ages 2–20 years, BMI classifications (e.g., normal, overweight) take into consideration age and gender.

The CDC defines obese as at or above the 95th percentile of BMI for one’s age. Further it defines overweight as between the 85th and 95th percentile of BMI. Youths with a high BMI “are more likely than those with a normal BMI to have insulin resistance (which can lead to diabetes), high blood pressure, and unhealthy levels of fats and other lipids” (U.S. Department of Health and Human Services, 2010c, p. 2). In addition to physical ailments, youth who are overweight or obese may also face social stigmas and psychological difficulties (U.S. Department of Health and Human Services, 2010c).

**Obesity and Disability**

There is a causal relationship between obesity and disability. Researchers have reported that at all ages obesity plays a major role in disability. For example, research indicates there is “a positive association between increased adiposity, frequently measured as . . . BMI or waist circumference . . . , and physical disability as defined by impairments in performing activities of daily living” (Wong et al., 2012, p. 710). In most cases, a person who is excessively overweight or obese is likely to have other health-related issues, such as asthma, diabetes, high blood pressure, and high cholesterol as well as limited mobility. This contemporary phenomenon is known as *mobility disability*. It is the condition in which movement decreases as obesity increases and it is becoming increasingly prevalent. Obesity can negatively affect an individual’s ability to perform activities of daily living, including many forms of physical activity and can decrease quality of life. For youth who are morbidly obese, active movement alone (e.g., running in the gym) can be difficult. In addition, youth who are obese may face social stigmas and potential ridicule (e.g., bullying at school) that are associated with their weight status.

Students who are morbidly obese may require accommodations to their education program, as mandated in Public Law 108–446, the Individuals with Disabilities Education Improvement Act (IDEA, 2004). The disability category, *Other Health Impairments*, is defined as limited strength, vitality, or alertness caused by chronic or acute health problems that adversely affect educational performance (IDEA, 2004). A student who is obese may qualify for special education services under this category. If the student qualifies for special education services, then an Individualized Education Program (IEP) and/or Individualized Health Plan must be written to address his or her health concerns and educational programming. Before participating in
physical education, the student will need a comprehensive medical exam, thorough evaluation, and an IEP developed. A high-quality physical education program is beneficial to youth who are less competent movers and those who are obese. The IEP team should provide input into a student’s overall individualized program and the physical education teacher works with the student at a pace that is comfortable and nonthreatening to her or his psychological safety.

It is clear that from the 1970s to today obesity rates have increased continuously for both female and male youth alike. Between 1971 and 2000, the prevalence of obesity quadrupled (i.e., changed from 4% to 16%) in the United States for youth ages 6 to 11 years old and more than doubled (i.e., changed from 6% to over 15%) among youth ages 12 to 19 years old. Overall, about 16% to 19% of youth (ages 6 to 19 years old) are overweight. Of particular concern, Black, Hispanic, and American Indian youth tend to be overweight and obese more so than White youth. For example, Hispanic youth are at over 25% and Black females are at 23%. Further over 39% of American Indian youth, including Native Alaskans ages 5 to 18 years old, are overweight or obese. If obesity trends for youth continue to ascend at current rates, obesity will soon become a pandemic. A pandemic is defined as an epidemic occurring over a wide geographic area and affecting an unusually high proportion of the population. Many factors contribute to childhood obesity and some are modifiable and others are not.

Most factors linked to obesity-related health issues are modifiable such as physical inactivity, sedentary lifestyles, and poor eating habits. On the other hand, nonmodifiable causes are usually not under a person’s control but still may affect her or his ability and will to manage weight and health, such as socioeconomic status, environment, and genetics. Next, we briefly discuss both modifiable and nonmodifiable factors.

**Modifiable Factors**

Typically, modifiable causes of overweight/obesity status are under the control of the individual and are associated with lifestyle choices and behaviors, cultural norms, and family values and influences. These causes are therefore modifiable through education and lifestyle changes such as increased exercise and informed life choices. As such, engaging youth in healthy experiences (e.g., bicycling) may affect their attitude and behavior toward healthier lifestyles. In fact, most factors associated with obesity-related conditions are modifiable. Next, we present examples of modifiable lifestyle choices and behaviors with reference to pertinent research.

**Physical inactivity**—the lack of regular physical activity (exercise) correlates with an increase in overweight and obesity rates throughout the United States and is now identified as the fourth-leading risk factor for mortality worldwide (World Health Organization, 2010). Logically as physical education teachers encourage and demonstrate physically active lifestyles for their students, combined with parental support and role modeling, students may increase (modify) their physical activity behaviors (Hodge et al., 2012). It is also important to mention that habits of physical inactivity develop early on in a child’s life and may persist into adulthood and perpetuate continued physical inactivity (Dowda et al., 2004). Physical inactivity is further exacerbated for individuals with disabilities (Ortiz-Castillo, 2011).

Empirical studies confirm that most adults with disabilities do not participate in any leisure-time physical activity compared to adults with no disabilities (Rimmer, Riley, Wang, Rauworth, & Jurkowski, 2004). Likewise youths with disabilities participate in physical activity less so compared to peers without disabilities (Ortiz-Castillo, 2011). In that, they tend to be less physically active, have lower levels of fitness, and higher rates of obesity than peers without disabilities (Rimmer et al., 2004; Rimmer & Rowland, 2008; U.S. Department of Health and Human Services,
It is reported that youths with physical disabilities (e.g., cerebral palsy, muscular dystrophy) have lifestyles that are more sedentary compared to peers without disabilities or those with other types of disabilities such as hearing impairments (Imms, 2008; Longmuir & Bar-Or, 2000). It is important for physical education teachers to encourage and promote regular daily physical activity for students with and without disabilities. This should be augmented with the support and encouragement of parents at home and in the community. Further, physical education teachers should promote physical activity beyond the school setting. For example, physical education teachers in concert with health professionals can provide advice and serve as leaders in the conceptualization, development, implementation, and evaluation phases of urban health promotion programs, especially for those programs intending to increase physical activity behaviors (Lawson, 2005).

**Sedentary behavior**—a high percentage of youth are less active compared to those of past generations. Today’s youth tend to watch television (TV), sit at a computer, play video games, and engage in similar behaviors at high rates that take up time that could be used for physical activity. Watching TV is the most prevalent (75% of youths) sedentary pursuit and is a predictor of overweight/obesity. Gordon-Larsen and colleagues (2004) found that African American: (a) caregivers (mothers/grandmothers) controlled the quality rather than quantity of TV that their daughters or granddaughters watched; (b) caregivers were generally unaware of the amount of TV their daughters/granddaughters watched; (c) daughters/granddaughters preferred sedentary behavior (i.e., TV viewing) rather than physical activity; (d) mothers/grandmothers perceived TV as filling an important role as that of safe and affordable child supervision; and (e) mothers/grandmothers were poor role models for a physically active lifestyle, and acknowledge their own low motivation to be physically active. Of course, African American parents care deeply about their children’s health and wellness. However, they often face barriers to supporting healthy eating and physical activity for themselves and their children. In general, research indicates that personal (e.g., time constraints and fatigue); social (e.g., lack of family support); community (e.g., limited access to, and expense of recreational facilities); and environmental (e.g., lack of safety, unlit sidewalks for exercising at night, and lack of safe bicycling and walking trails) factors tend to adversely affect the physical activity levels of African American adults; which in turn, influence their children (Bopp et al., 2007). It is noteworthy to mention that research indicates for each additional hour of TV watching by youth there is a 2% increase in the prevalence of obesity (Kohl & Hobbs, 1998). There is a positive link between the amount of TV viewing and the consumption of sweets and snacks as well (Tanasescu et al., 2000).

**Poor eating habits**—overconsumption of high-calorie foods increases a person’s risk of becoming overweight or obese; it also increases the risk of other health-related conditions (e.g., high cholesterol, high blood pressure, and diabetes). This means that poor dietary choices and habits combined with physical inactivity results in high risks and problems associated with excessive weight gain and obesity status (Hodge et al., 2012). Poor dietary behaviors include high consumption of soda and sweetened drinks, as well as high-fat and fried food. Instead, youth should consume higher proportions of fruits and vegetables in their diet. According to the CDC (2011b), Black and Hispanic youth tend to consume fewer proportions of fruits, salads, and vegetables compared with their White peers. In general, parents’ dietary habits influence their children’s food choices (Morello, Madanat, Crespo, Lemus, & Elder, 2012). Further, there is a negative association between unhealthy eating behaviors and screen time among ethnic minority youth (Sisson, Shay, Broyles, & Leyva, 2012).

Urban schools should provide students with health information, including discourse about dietary choices and behaviors, and implement culturally responsive physical education programs.
that promote healthy living (Vigo-Valentín et al., 2011). Culturally responsive physical education programs are designed to recognize students’ socio-cultural norms, life experiences, and other relevant factors to facilitate meaningful learning experiences that lead to healthier lifestyles (Timken & Watson, 2010). To advance such a program, teachers must accept that: (a) all students can achieve educational success, (b) they are part of and have obligations to serve their local communities, (c) they are responsible for creating positive learning experiences that help motivate students to learn, and (d) each student brings life experiences that can enhance the overall learning context (Hastie, Martin, & Buchanan, 2013).

Nonmodifiable Factors

There are also nonmodifiable factors that influence a person’s health. Socioeconomic and environmental factors as well as genetics are considered nonmodifiable factors. These are factors that are not under an individual’s direct control (Hodge et al., 2012).

Socioeconomic status—can have a significant influence on health and wellness within families and across multiple generations. Socioeconomic status is defined as the position of a family or an individual on a scale that measures such factors as education, income, occupation, and place of residence. Poverty has negative consequences for health and health care services in rural and urban environments (Peterson & Litaker, 2010; Salgado de Snyder et al., 2011). Data from the National Center for Education Statistics show that Black and Hispanic youths are much more likely to live in poverty than are White and Asian youth (Aud et al. 2012). National data indicate that the “percentage of Black children living in poor households varied from 41 percent in 1990, to 32 percent in 2000 and 34 percent in 2006. Since 2007, this percentage has steadily increased from 31 percent to 37 percent in 2011” (Aud et al., 2012, p. 28). In addition to educational disparities, lower socioeconomic status can have a significant impact on obesity and obesity-related ailments and conditions within families.

Increasingly common in urban communities are overweight and obese youth. National trend data for the past 50 years show overweight and obesity of youth has increased steadily in the United States (Crespo & Arbuesman, 2003). Tellingly, Black, Hispanic, and American Indian youth are more likely to be overweight or obese compared to White peers (Wechsler, McKenna, Lee, & Dietz, 2004). In addition to concerns about their physical health, youth who are overweight or obese may struggle with social and psychological issues. It is not uncommon for youth who are overweight or obese to be targets of relentless teasing with fat jokes, bullying, and even threats with bodily harm (Li, Rukavina, & Wright, 2012). These youth may turn to unhealthy snacks as a source of comforting. Taken together, physical inactivity, poor dietary habits, and childhood obesity appear to have an adverse effect on academic performance (Datar, Sturm, & Magnabosco, 2004; Li et al., 2012). More forcefully, Basch (2011b) said, “physical inactivity is highly and disproportionately prevalent among school-aged urban minority youth, has a negative impact on academic achievement through its effects on cognition” (p. 626). Poor eating habits combined with low levels of physical activity are cause for concern with many students in urban schools. Schools should provide students with information on proper nutrition and making good dietary choices to promote healthier lifestyles (Hodge et al. 2012).

Environment—the built environment can contribute to an increase or decrease in obesity rates. For instance, urban neighborhoods that include commercial and retail stores, recreational destinations, and interconnectivity between places may provide increased access to physical activity opportunities and thereby help decrease obesity rates. For some families, however, their physical
activity behaviors are hindered by concerns about safety in the communities in which they live. Parents may be reluctant to send their children outside to play—or even let them walk to school—if the community is unsafe. Contrasting this, King et al. (2006) found that those (mostly Black and White women) perceiving the community as generally safe reported more minutes of moderate to vigorous physical activity compared with those reporting their community as less safe.

It is troubling, yet reality, that youth in urban cities are likely to witness or even engage in high-risk behaviors such as smoking cigarettes, drinking alcohol beverages, or using illegal drugs (Atav & Spencer, 2002). They have limited access to healthier food choices as well, which can contribute to weight gain (Galvez et al., 2009). High-poverty communities are often food deserts, in which healthy, reasonably priced food is unavailable within walking distance or on a bus route. Instead convenience stores, fast-food restaurants, and liquor stores are very accessible within urban perimeters (Galvez et al., 2009; Hearst, Fulkerson, Maldonado-Molina, Perry, & Komro, 2007; Lucan, Barg, & Long, 2010). Disconcerting as well, access to quality health care services is limited in these areas (Harris & Mueller, 2013).

**Genetics**—a greater risk of obesity has been found in youth of obese/overweight parents. Empirical studies indicate that genetic heredity (e.g., adiposity or body fat) accounts for obesity in 25–40% of individuals who experience it, and researchers believe that some youth are predisposed to overweight or obesity status. In addition to environmental, social, and economic factors, it is argued that genetic factors also influence physical activity behaviors (Choh et al., 2008; Pérusse et al., 1989). Choh et al. (2008) asserted that sport and leisure physical activity are significantly influenced by genetic factors such as adiposity. There also appear to be strong associations between adiposity, obesity, and health conditions such as asthma (Fenger et al., 2012). Genetic predispositions toward behavioral tendencies such as physical activity versus inactivity require additional empirical analyses. In some cases, however, individuals may need medication to stabilize and control health conditions such as asthma.

**Physical Education in Urban America**

In urban schools, physical education teachers are responsible for helping students from economically, ethnically, culturally, and linguistically diverse communities become physically literate. But it is not uncommon for students to experience inadequate and marginalized physical education programs at urban schools (Ward & O’Sullivan, 2006). Commonly, physical education teachers in urban schools face such issues as (a) poor facilities and equipment shortages; (b) disruptive, disengaged, and defiant students; and (c) inadequate professional preparation and unsupportive administrators (McCaughtry, Barnard, Martin, Shen, & Hodges Kulinna, 2006). These challenges tend to adversely affect the quality of physical education programs in urban schools. Not surprisingly, there is strong advocacy for addressing urban challenges. This must include reevaluation of school physical education policies and practices to help address health and wellness issues linked to sedentary lifestyles, poor nutrition, and limited physical activity (Lounsbery et al., 2013).

Physical education advocacy is also given in the 2012 Shape of the Nation Report, which was released jointly by the NASPE and the American Heart Association. NASPE’s position is “that every child in the U.S. deserves a quality physical education and needs physical activity, whether that activity occurs within a formal program or is outside the classroom at recess, through intramurals or in recreational play” (NASPE and American Heart Association, 2012, p. 3). Recently, First Lady Michele Obama launched the Let’s Move!—Active School initiative to promote a
higher level of physical activity in schools through physical education and active engagement before, during, and after school (www.letsmove.gov). Further, the enactment of Goals 2000: Educate America Act (Public Law 103–227) promotes a comprehensive approach to education. Of particular relevancy here, Goal Three of the Educate America Act specifies that all students will have access to physical education and health education to ensure they are fit and healthy (U.S. Congress, 1994). For that purpose and more, physical education teachers should structure their curricula and pedagogies around national standards. NASPE (2004) provides six national standards for physical education. These standards and essential components of a comprehensive physical education program are presented in Table 3.1.

### Table 3.1 NASPE Content Standards and Essential Components of a Comprehensive Physical Education (PE) Program

<table>
<thead>
<tr>
<th>NASPE Content Standards*</th>
<th>Components of a Comprehensive PE Program**</th>
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<tr>
<td>Standard 1</td>
<td>Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.</td>
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<tr>
<td>Standard 2</td>
<td>Demonstrates understanding of movement concepts, principles, strategies, and tactics as they apply to the learning and performance of physical activities.</td>
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<tr>
<td>Standard 3</td>
<td>Participates regularly in physical activity.</td>
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<td>Standard 4</td>
<td>Achieves and maintains a health-enhancing level of physical fitness.</td>
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<tr>
<td>Standard 5</td>
<td>Exhibits responsible personal and social behavior that respects self and others in physical activity settings.</td>
</tr>
<tr>
<td>Standard 6</td>
<td>Values physical activity for health, enjoyment, challenge, self-expression, and/or social interaction.</td>
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</table>

Component 1 Is organized around content standards that offer direction and continuity to instruction and evaluation.
Component 2 Is student centered and based on the developmental urges, cultures, tendencies, and interests of students.
Component 3 Has physical activity and motor-skill development at its core.
Component 4 Teaches management skills and self-discipline.
Component 5 Emphasizes inclusion of all students.
Component 6 Emphasizes instruction focused on the process of learning rather than performance outcomes.
Component 7 Teaches lifetime activities that students can use to promote their health and personal values.
Component 8 Teaches cooperative and responsibility skills and helps students develop sensitivity to multiple diversities.

Most states mandate that students at all school levels must take some type of physical education. Still, there is considerable variability across school districts for time (minutes) required in physical education per week at the different school levels (NASPE and American Heart Association, 2012). More effort is needed to ensure that students are enrolled in physical education rather than being exempted from it simply because they participate in athletic events or they are members of a school’s marching band as is common today. The enactment of the Local School Wellness Policy (U.S. Department of Agriculture, 2011) encourages schools to include supplementary nutrition and physical activity opportunities for students. In a survey study, which included the East, Midwest, and West regions of the United States, Lounsbery et al. (2013) found that elementary schools provide about 63 minutes per week of physical education with a range of 30 to 250 minutes per week. Nationally, across all 50 states and the District of Columbia, the required minutes per week of physical education ranges from 0 to 150 minutes or more at the elementary level, 0 to 225 minutes or more at the middle/junior high school level, and 0 to 225 minutes or more at the high school level (NASPE and American Heart Association, 2012). Physical education programs should more consistently provide students with opportunities and ample time for physical activity through a variety of experiences.

The need for regular moderate to vigorous physical activity for all youth in the Healthy People 2010 and 2020 reports (CDC, 2006a; U.S. Department of Health and Human Services, 2000, 2010b) provide strong advocacy as well for physical education. The reports specify that regular moderate to vigorous physical activity can benefit all individuals and that physical activity can enhance stamina, muscular strength, and quality of life by improving the ability to perform activities of daily living. This is especially important for youth with low fitness levels. Physical activity experiences should be provided in physical education programs by culturally competent teachers. Culturally competent teachers can more justly serve students in urban schools. Yet physical education teachers have self-reported low to modest levels of cultural competency in working in diverse settings (Harrison, Carson, & Burden, 2010). As findings from studies confirm, physical education teachers generally value student diversity, but tend to struggle or fail to implement culturally responsive pedagogies (Columna, Foley, & Lytle, 2010; Harrison et al., 2010). Harrison and colleagues (2010) asserted that to ensure equitable opportunity for student success, “it is important to prepare teachers by requiring a broad base of cultural knowledge and culturally responsive teaching strategies” (p. 194). For instance, it is important that teacher candidates have opportunities for student teaching at urban schools to identify issues, address problems, reflect, and think critically about what cultural competency means in teaching students from diverse communities (Columna et al., 2010; Harrison et al., 2010).

### School-Wide Considerations

Urban schools should address health, nutrition, and physical activity issues to benefit students and their communities. This starts as basic as critically reflecting on the types of foods they serve, the amount of physical activity they provide, and how they build awareness of healthy eating habits and the importance of increased physical activity for all students. To those aims, comprehensive school health and physical education programs are necessary. Table 3.2 presents strategies that schools might implement in promoting proper dietary habits and ensuring students participate in moderate to vigorous physical activity daily.

Physical education teachers should also reflect on their pedagogies in working with students who are overweight or obese, including those with mobility disability and/or who have other disabling health conditions such as severe asthma.
Teaching Considerations

For a student who is obese with severe asthma, for example, not all moderate to vigorous physical activities (e.g., distance running) are suitable (Hodge et al., 2012). Excess body weight, physical illness, and social and psychological factors such as poor self-image are barriers to healthy living. In such cases, an individualized health and physical education plan should be implemented (Hodge et al., 2012). Before creating such a plan, a medical exam is necessary to determine if other health-related conditions are present such as diabetes and/or high blood pressure. The CDC (2006b) has identified strategies for schools and districts to consider in supporting students with asthma within a coordinated school health program. This document is available at www.cdc.gov/HealthyYouth/asthma/pdf/strategies.pdf. Moreover, students who are obese should generally avoid contraindicated activities such as (a) lifting their own weight in such activities as chinning and rope climbing, (b) lifting heavy weights, (c) partner tumbling stunts, and (d) excessive running (Hodge et al., 2012).

In teaching youth who are obese, physical education teachers must have an awareness and competence in promoting physical activity, proper diet management and nutrition, and behavior modification. Healthy People 2020 guidelines recommend that students engage in at least 60 minutes of moderate to vigorous physical activity daily (U.S. Department of Health and Human Services, 2010b). However, with students who are obese such a recommendation must be approached with reasonable caution. One consideration is using an individualized physical education program with such students. Hodge and colleagues (2012) insisted that such a “program should address burning fat, increasing energy expenditure, and even weight loss management” (p. 233). However, prolonged fasting to lose weight and excessive caloric restrictions are not advisable for youth because poor eating habits are established during childhood. Not only

Table 3.2 Coordinated School Health and Physical Education Programs to Combat Obesity

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<th>Programmatic Strategies</th>
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<tr>
<td>1  Implement a coordinated school health program. A coordinated school health program integrates eight components to improve students’ health awareness and behaviors: (a) health education; (b) physical education; (c) health services; (d) nutrition services; (e) counseling, psychological and social services; (f) health school environment; (g) health promotion for staff; and (h) family and community involvement.</td>
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<tr>
<td>2  Designate a school health coordinator to direct and monitor nutritional values and foods sources and to work collaboratively with the physical educators to ensure that health-related physical activity and fitness programs are provided and strengthened.</td>
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<td>3  Assess the school’s health policies and programs and develop a plan for improvement.</td>
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<td>4  Implement a quality health promotion program for school staff.</td>
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<tr>
<td>5  Implement a high-quality course of study in health education.</td>
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<tr>
<td>6  Implement a high-quality course of study in physical education. For students with disabilities and those who are obese, a caring, nurturing, and supportive physical education teacher can increase their motivation to become physically active.</td>
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<tr>
<td>7  Implement quality school meals and work to ensure that students have access to appealing, healthy choices in foods and beverages outside of the school meals program.</td>
</tr>
<tr>
<td>8  Educate students and their families about physical activity and nutrition.</td>
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</tbody>
</table>

*Note: Adapted from Hodge et al. (2012) and Wechsler, McKenna, Lee, and Dietz (2004).*
are these approaches psychologically stressful, but also they can adversely affect growth and the youth’s beliefs about proper eating behaviors. In all cases, consideration and respect must be afforded families and their youth who fast because of religious reasons, however. A balanced diet with moderate caloric restriction, especially reduced dietary fat intake, is important to addressing obesity status. Important dietary guidelines are provided by the U.S. Department of Agriculture and can be found at www.choosemyplate.gov.

For a student who has limited mobility and health concerns due to excessive weight, a behavior modification plan is an important consideration as well. Chambliss (2004) proposed the following four-phase approach to behavioral modification for combating overweight/obesity:

1. Phase I (*Assessment*) provides the foundation for a safe and personalized intervention. Such assessment and evaluation includes medical and psychiatric history, energy balance, and psychosocial factors.

2. Phase II is the *acute phase of treatment* involving multiple treatment modalities as determined by the evaluation of student needs and attributes. The acute phase promotes a reduced-calorie diet, exercise, and behavioral skills training.

3. Phase III is the *transition phase* in which the student is given greater responsibility for his/her goals and treatment plan in preparation for the final phase. The student develops long-term strategies, focuses on the relapse prevention, and development of long-term caloric and exercise goals.

4. Phase IV (*Maintenance*) occurs when behaviors are incorporated as a lifestyle; weight management depends on continued application of eating and physical activity behaviors; implement acute phase strategies if the student regains weight. (pp. 143–145)

The proportion of youth in urban dwellings, particularly poor, and mostly Black and Hispanic, who are overweight or obese and physically inactive is a national health concern. In a recent editorial, Katz (2013) phrased it quite well that obesity is “always a proxy measure and, for that matter, health is a proxy measure, too. Health only matters because it changes the quality of our lives. It is really living that matters. Healthy people live better. Healthy people have more fun!” (p. 2).

**Conclusion**

Health and physical education professionals as change agents can promote the enactment and implementation of school policies that enhance culturally relevant opportunities for students to live healthier. Urban schools and communities need health and physical activity programs designed for youth to participate in before, during, and after school hours. Programs that reinforce proper dietary habits and physical activity during recess, lunch, and after school will also increase the likelihood of youth engaging in physical activities regularly, while reducing the risks of overweight and obesity.

**Notes**

1. In this chapter, we give only a brief account of historical milestones. Many other scholars have discussed in greater detail key historical events in the profession (Jurkechová, Vlček, & Bartík, 2011; Kelly & Melograno, 2004; Lumpkin, 2011; Massengale & Swanson, 1997; Siedentop, 2006; Vlček, 2011; Zeigler, 2005).

2. For informed discourse about these and other models used in physical education, we recommend: Lund and Tannehill’s (2010) book, *Standards-Based Physical Education Curriculum Development*; and Dyson, Griffin, and Hastie’s (2004) article, “Sport Education, Tactical Games, and Cooperative Learning: Theoretical and Pedagogical Considerations.”
3. Many theories situate research and practice in physical education, physical activity, and health. These include the social-cognitive model, the transtheoretical model, theory of planned behavior, and social ecological approaches. For informed dialogue about these theoretical models, we recommend works by Ajzen (1991), Bandura (1986), Cardinal, Engels, and Zhu (1998), Foley et al. (2008), Golden and Earp (2012), Langille and Rodgers (2010), Marcus and Simkin (1994), Wang, Castelli, Liu, Bian, and Tan (2010).

4. Scholarly works cited in this chapter were selected based on their relevancy and informed discourse with priority given to up-to-date research associated with health, nutrition, and physical activity in the United States, and in particular, given to urban populations and areas.

References


Dionise, J., & Pompa, F. (2012, September 19). Obesity on the rise. A new study projects that the national obesity rate is headed higher for every state. *USA Today, 1A*.


