

## Physical School Education, and Active Living Lifelong

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The aim of this clause is to analyze the purpose of school-based extracurricular initiatives in facilitating immediate and long-term positive impact on physical action, healthy behavior, and obesity in youngsters. A critique of the role of various sports-related initiatives that have been developed to address the obesity epidemic currently facing children within the United States is provided, with a specific emphasis on intramural sports as a preferred mechanism to encourage long-term participation in athletics and physical activity pursuits. The article presents support for the notion that a physical education curriculum that includes Intramurals before, during, and after school can help kids learn the skills to enjoy taking part in a diversity of sports designed to facilitate lifelong active living.

Granting to the Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity, the associated cost of being overweight or obese was more than \$117 billion in the year 2000 (U.S. Department of Health and Human Services, 2001). In a late review, Finkelstein, Ruhm, and Kosa (2005) outlined these economic causes and consequences, concluding that government interventions are required. The percent of overweight adults, teens, and children have increased so significantly that the CDC and numerous other federal, province, and local authorities have identified the reduction of obesity as one of the nation's top health priorities.

Numerous agents have been identified as contributors to the nation's obesity epidemic. Years of inactivity, poor feeding habits, and hereditary factors have certainly all made for a role (Hedley et

al., 2004). Yet, the realness is that these factors may be the only symptoms of more complex cases. Elements such as supervised and restricted play, less recess, and overspecialized and highly competitive sports have conspired to produce an environment for kids that promotes sedentary living and diminishes physical activity (Rosenfeld, 2004). In an attempt to improve the competency and competitiveness of a future workforce, government agencies at every level have overemphasized academics often at the expense of extracurricular components like physical education (Datar & Sturm, 2004). Most school districts across the nation have reacted with severe reductions in recess and physical education to gain time for highly structured activities and standardized testing. For instance, the School Health Policies and Programs Study (U.S. Department of Health and Human Services, 2000) reported that only 8% of primary schools and 6.4% of middle schools in the United States provide daily physical training or its equivalent. Even more surprising, 29% of primary schools do not provide regularly scheduled break for students in all grades kindergarten through fifth degree (U.S. Department of Health and Human Services, 2000).

The aim of this clause is to offer an overview of youth sport participation and the role that schools can work in facilitating larger participation rates among school-age kids. This composition will also present evidence suggesting that the philosophy behind intramural sports within the school setting may be an efficient path to boost physical activity among a larger number of kids. Our premise is guided by the leisure repertoire, theory (ISO-Ahola, Jackson, & Dunn, 1994; Mobily, Lemke & Gisin, 1991), which proposes that people who arise a wider spectrum of activities at a young age are more likely to continue to take part in activities as they age owing to a broader leisure repertoire of options. We also talk about the social, ecological model (McLeroy, Bibeau, Steckler, & Glanz, 1988) and show how this framework can guide intramural program development, implementation, and valuation.

## Organized Youth Sport Participation

Youth sport has been experienced as one possible medium that could encourage more physical activity and play a major part in improving children's overall health. Indeed, recent studies examining recreational sport participation among middle-school students indicates a positive correlation between regular sport participation and increased physical activity (e.g., Hoffman, Kang, Faigenbaum, & Ratamess, 2005). Along the surface, it appears there is an obvious relationship between participation in youth sport and increased health benefits, but further scrutiny reveals that the events associated with youth sport participation are often at odds. For example, Louv (2005) argues that the growth in child obesity has "coincided with the greatest growth in organized sports for children in history" (p. 47). So, critics of sport question whether sport can act a part in directing the youth obesity issue. There may be various causes for this apparent positive association between child obesity and organized youth sport opportunities. The most apparent explanation may be that participation in youth sport has turned down significantly among both boys and girls during middle school years (Hedstrom & Gould, 2004; President's Council on Physical Fitness and Sport, 1997). Although the dropout rate from sport increases among 11- to 13-year-old group (Petlichkoff, 1996, p. 418), middle schools have consistently been an understudied setting for studying physical activity patterns (McKenzie, 2001).

One important cause for this fall in youth sport participation is that there are fewer choices for pupils who are not advanced athletes (Koplan, Liverman,

& Kraak, 2005). Other prominent factors include disinterest in sports, sports no longer being fun, problematic issues with a coach or teacher, and desiring to take part in other activities (Seefeldt, Ewing, & Walk, 1992). Some other contributing factor behind this fall has been the increasing distance that children hold out from schools. In an era where local school systems build bigger schools on the outskirts of communities where land is cheaper, students are therefore faced with longer commuting times (Cohen et al., 2006).

For instance, examining physical activity patterns among middle school young women, Cohen et al. (2006) establish that scholars who endured more than 5 miles from their school had significantly lower levels of natural process. Lack of time resulting from increasing commuting times and bus schedules, and excessive quantities of homework combined with environmental barriers (e.g., weather, no equipment) (Allison, Dwyer, & Makin, 1999) have all led to falling rates of participation in extracurricular activities like plays.

An increasing negative attitude toward physical activity has been another contributing factor resulting in the diminution in physical activity patterns. Although younger children receive a generally positive attitude toward physical education and activity, there is substantial evidence to indicate that their positive perceptions decline with age (Trudeau & Shepherd, 2005). Body awareness, particularly for female teens and overweight kids, may be another significant obstacle to participation in extracurricular physical activity opportunities (Allison et al., 1999; Phillips & Hill, 1998). Nevertheless, more or less recent surveys (e.g., Thompson, Humbert,

&Mirwald, 2003; Trudeau & Shepherd, 2005) suggest that quality physical training course of studies can help maintain initial positive positions, therefore resulting in more physical activity.

An emerging notion, supported by a maturing body of research that has examined declining physical activity patterns in youth, has led to calls for schools to (re) introduce intramural programs (Koplan et al., 2005). The main motivating factor behind intramural implementation is to engineer sporting opportunities around children's motives for taking part in sport. For example, when Seefeldt, Ewing, and Walk (1992) examined why children participate in sport, they found that "wanting to win" was rated 8th behind factors such as "to have fun," "to stay in shape," "to learn and improve skills," and "to play as part of a team." Similarly, in reviewing research conducted on motivation to participate in sports, Weiss and Ferrer-Caja (2002) found the major motivational themes

to be developing physical competence, social acceptance (e.g., being part of a team, being with friends), enhancing physical fitness, and enjoying the experience.

Most middle and high schools have interscholastic sport teams with estimates ranging from 82% among middle schools and 94% among high schools (Wechsler, Devereaux, Davis, & Collins, 2000). In contrast, far fewer schools offer intramural programs. For example, only 49% of schools surveyed by the 2000 School Health Policies and Programs Study (SHPPS) offered intramural sports (Burgeson, Wechsler, Brener, Young, & Spain, 2001). Currently the opportunities provided by interscholastic sports are so focused on winning and competition (Petlichkoff, 1992) that schools seem to be overlooking the reasons why children want to participate in sport and thus may be contributing to this reduced participation.

To counteract these issues, the Committee on Prevention of Obesity in Children and Youth (Koplan et al., 2005) recommended that intramural sports be more widely introduced within schools to meet the needs of students with a wide range of abilities who lack time, skills, or confidence to participate in interscholastic sports. The committee also recommended that these sport programs become a staple of both school and after-school programs. Although they strongly recommend the implementation of intramural sports, the committee also noted that more research, specifically large-scale studies, be conducted to identify how they contribute, both singly and in conjunction with other interventions, to physical activity objectives.

Wechsler et al. (2000) contend that because of the lack of prestige associated with intramurals (in comparison with interscholastic sports), their potential is often overlooked. However, researchers and policy makers have become more interested in intramural sports because they target children who may not have participated in much physical activity, children who may not have the skills to participate in interscholastic sports, or children who dislike the competitive nature of interscholastic sports (Wechsler et

al., 2000).

### So Why Schools?

Because of the considerable amount of time children spend there, the school environment provides a convenient mechanism to offer physical activity interventions. However, opportunities for engaging in physical activity also exist owing to physical education classes, recess periods, extracurricular sports and physical activity programs, and access to playing fields, school gymnasiums and playgrounds (Wechsler et al., 2000). These resources coupled with trained school personnel can provide a platform to address the youth obesity epidemic. Indeed, research has shown that well-designed school-based physical activity programs can have a significant impact on the physical activity levels of young people (USDHHS, 1997).

Sallis et al. (2001) found that children are less likely to participate in physical activity in the absence of adult supervision and thus suggest that schools are critical environments. Indeed the authors found that few students chose to be physically active during unstructured school time. They concluded that more environmental supports with appropriate adult-supervised activities that attracted students would encourage greater levels of physical activity. Finally, Steinbeck (2001) suggested that physical activity programs within schools can play a pivotal role in helping children acquire skills that promote long-term physical activity. Thus the goal is not simply to provide students with current recreational opportunities for physical activity, but also to encourage participation in an environment that includes adult supervision or facilitation so that it continues throughout life.

Although the U.S. philosophy of education has been targeted as a potential contributor to inactive and overweight children, the fact remains that public schools are the only institutions that have structured and continuous contact with nearly all children (Story, 1999). School-based physical education may be the only oppor-

tunity for some children to receive instruction and practice the skills designed to facilitate active living. In addition, schools have both the physical resources (i.e., gymnasiums, sport fields, equipment) and personnel to design and implement programs, establish and enforce policies, and model preferred behaviors (Wechsler et al., 2000). A review of the literature on school-based health promotion inter-ventions provides evidence that schools can play a key role in behavioral change interventions (Hayman et al., 2004) and can positively impact factors contributing to childhood inactivity and obesity (Luepker et al., 1996).

Nader et al. (1999) examined the impact of a multifaceted individual, school, and family-based program to reduce cardiovascular disease in elementary school children and found significant improvements in eating habits and physical activity. Although programs like those implemented by Nader et al. (1999) appear to be most effective in positively impacting multiple health behaviors in children, the feasibility of implementing such a comprehensive program in most elementary and middle schools is questionable. With major reductions in physical education classes and the elimination of both human and material resources for physical education instruction and practice, implementing multifaceted programs are likely unrealistic goals for most school districts across the United States. More feasible interventions include policy changes that require minimal cost and staff commitment (e.g., reduction of the fat content in school lunches) and extracurricular physical activity programs that extend beyond the physical education class and incorporate both student and volunteer parents in their administration.

Extracurricular physical activity programs have been used extensively in schools in an attempt to positively impact the physical activity of students (Wechsler et al., 2000). Extracurricular opportunities in most schools are typically categorized as arts (e.g., drama, music), clubs (e.g., chess, yearbook), or sports (interscholastic or intramural). In regard to extracurricular sporting opportunities, interscholastic sports are often valued more by

schools and communities and occur more frequently in both middle and high schools than intramural sports (Centers for Disease Control and Prevention, 1994). Although participation in interscholastic sports has been linked to positive behaviors such as reduced alcohol and drug use (Shilts, 1991), good conduct, academic achievement, staying in school, and having good social skills (Ewing, Seefeldt, & Brown, 1996; Jeziorski, 1994; Poinsett, 1996), access to most interscholastic sport opportunities is often limited to only the most gifted of athletes.

In contrast, intramural sports are designed for both boys and girls with a wide range of skills who may lack the skills, confidence, or desire to participate in interscholastic sports (Stein, 1983). Furthermore, intramural sports are designed to supplement the regular physical education program by providing opportunities for students to participate in a variety of activities that allow for exploration of individual skills and talents in an inclusive student-centered environment. Even an extensive array of interscholastic sport opportunities can accommodate only a small percent-age of students. Interscholastic sport by its very nature is designed to include only the most talented students. Although the benefits available to the fortunate few that are talented enough to participate are quite substantial, the fact remains that most students would never participate. Therefore, although intramural sport opportunities may not yield the quantity of benefits reported for interscholastic sports (e.g., Marsh & Kleitman, 2003), the potential to impact a much larger percentage of the student population is clearly greater for intramural sports. In addition to creating direct opportunities for increasing the physical activity of children, intramurals also have the potential to promote adherence to sport participation, thereby increasing the likelihood of adopting lifelong physically active lifestyles.

### Leisure Repertoire Theory: Promoting Leisure for Life

One philosophy that highlights the value of intramural sport

programs is the lei-sure repertoire theory (Iso-Ahola et al., 1994; Mobily et al., 1991). Activities that individuals do well at and regularly participate in constitute their leisure repertoire. Therefore, this theory suggests that individuals who develop a wider spectrum of activities during childhood are more likely to continue to participate as they get older as a result of a broad leisure repertoire (and thus more activities to draw from).

Applying this theory to youth sport, one can see that an important predictor of life-long participation in sport does not appear to be the volume of sport involvement as a child but rather the number of different sports that young people are taught (Roberts & Brodie, 1992). As adults we become more conservative about our lei-sure lifestyle and tend to make leisure choices from our own repertoire of skilled activities (Iso-Ahola, 1980; Iso-Ahola et al., 1994; Roberts, 1999). Consequently, the greater the repertoire of choices, the more likely individuals will remain a com-mitted sports participant when moving from adolescence to adulthood. The inclusive multiple sport orientation of intramurals may be well suited to achieve the goal of facilitating physically active adults that are committed sport participants.

Some recent studies have found a positive association between participation in youth sports and increased physical activity in later life (e.g., Kuh & Cooper, 1992; Taylor et al., 1999; Telama et al., 1997). Seefeldt, Ewing, and Walk (1992) found that youth sport participation was correlated with a strong appreciation of fitness that carried on later in life. Alfano, Klesges, Murray, Beech, and McClana-han (2002) found that African American and Caucasian women who participated in youth sport had higher levels of physical activity and lower body mass indexes (BMIs) as adults. However, these findings come with a caveat. For example, Taylor et al. (1999) found that children who had negative experiences in youth sports and were “forced to exercise” were less likely to be physically active as adults. Thus, although participation in youth sports could be a contributing factor in preventing both youth and adult obesity, it may also be a detriment depending upon a child’s

experience. Sport participation itself may yield immediate benefits in the form of increased physical activity, yet long-term benefits such as positive attitudes toward sport participation and physical activity may be more dependent on the environment in which sport participation occurs.

The ultimate purpose of physical education and its supplemental activities like intramural and extracurricular sports is the promotion of ongoing active lifestyles and lifelong participation in sport and physical activity (Fairclough, Stratton, & Baldwin, 2002; Green, 2000). Furthermore, it has been noted that by age 16 most adolescents have adopted a pattern of leisure activities and sport participation that will form the foundation of their adult leisure lifestyle (Roberts, 1999). For example, in a study of men and women, the main characteristic of adults who had become committed to sport was that they had participated in several (usually three or more) games or activities during their sport careers (Roberts & Brodie, 1992).

Therefore, researchers and policy-makers have begun to examine the long-term ramifications of youth involvement. These results have suggested that enjoyable participation in activities during childhood and adolescence can result in a “leisure for life” philosophy. For example, Scott and Willits (1989, 1998) found that participation in leisure activities as an adolescent was a strong predictor of involvement as an adult even after controlling for gender, education, and income. In examining youth sport participation, Perkins, Jacobs, Barber, and Eccles (2004) found that young adults were not likely to participate in sport if they had not participated in the past. Their study corroborated earlier findings by Telama, Laakso, Yang, and Viikari (1997) suggesting that sport participation at age 12 significantly predicted young adulthood sport participation. These findings suggest that youth are more likely to continue participation in an activity if they begin participating at a younger age. As Perkins et al. (2004) conclude, “sports participation during early adolescence is likely to lead to

greater participation in adulthood, underscoring the importance of getting youth involved in sport activities so that they can develop lifelong habits that include physical fitness” (p. 516).

The social ecological framework recognizes that different factors influence an individual’s ability to change their physical activity behavior. It strongly supports the notion that everybody lives within an environment influenced by social systems that influence healthy behavior choices and patterns. To change behavior requires physical environments and social systems that support healthy lifestyle habits (McLeroy et al., 1988).

Research has shown that programs that target multiple levels associated with this model will be more likely to affect long-term change (e.g., Sallis et al., 2006). For example, an intramural program guided by the social ecological framework might target maximum participation among participants and the promotion of how physical activity can benefit the child (individual level). It may also incorporate activities so that the students can be socially active and provide education to parents about the value of intramurals being a part of the school curriculum (inter-personal level). Committing resources and time to an intramural program would be an example of effecting change at the organizational level. Another example of change at this level might be to provide specialized training to teachers to ensure that they are adequately prepared to facilitate intramural sport programs. Targeting the community and environmental levels becomes much harder and requires more collaboration among schools and outside community agencies (Ward et al., 2007). Examples can include opportunities for students to be engaged in activities within their community, to expand upon their intramural experiences within the school. The final level within this model, public policy, focuses on laws and policies at local, state, and national levels that promote physical activity. Policy changes that require minimum amounts of daily physical activity in schools (which have been adopted in many states) represent public policy that would support efforts to implement

intramurals during and after school. In turn this strategy would increase children's current physical activity and promote lifelong active living. Research and evaluation could also be used to document specific outcomes and benefits associated with well-designed intramural sport programs, which in turn would support the creation of new policies mandating increasing access to physical education, intramurals, and minimum requirements for daily physical activity.

Measuring children's physical activity whether objectively (e.g., direct observation, physiological measures) or subjectively (interviews, self-report measures) can be problematic because it is such a complex behavior (Sallis & Owen, 1999). It is beyond the scope of this article to address this issue in detail. However, a detailed and complete review of research methods is available from other sources (Sirard & Pate, 2001; Ward et al., 2007; Welk, 2002).

## Conclusion

Despite recognition that environmental factors have contributed to the childhood obesity epidemic in the United States and that schools represent the only institutions that have structured and continuous contact with nearly all children, surprisingly few school-based interventions have been implemented and examined. The solution seems fairly simplistic. Children need to move more and eat less. However, unless structured environments like schools promote and facilitate these values, widespread changes in the activity patterns of children are unlikely. Several states have responded with legislation that requires minimum amounts of health and physical education in the curriculum and a minimum amount of physical activity during the school day. Although increasing physical activity requirements represents an excellent first step toward achieving a more active, healthier, and less obese population, without structured program alternatives, guidelines, and instructor training we run the risk of diminishing the value of this opportunity. Having students participate in classroom and recess physical exercise may achieve numerous short-term benefits and will likely improve student's performance on grade-specific academic requirements, but will it be effective in promoting lifelong physical activity? A structured physical education curriculum followed by opportunities for students to practice and test their skills is much more likely to have long-term impacts on physical activity patterns and general health and well-being. Extracurricular programs, like sport intramurals, can help students develop or refine skills in a variety of sport activities, increasing their repertoire of leisure skills while facilitating a lifelong adherence to sport and physical activity.

Public schools across the United States are clearly in the best position to positively impact the greatest number and diversity of children. Even though school physical education programs and their supplemental activities like interscholastic and intramural sports can positively affect the activity level and sport participation rates of young people, their true value lies in their ability to encourage sport participation after school ends, during the after-school lives of

children (Roberts, 1995). Physical education teachers and school sports are also well positioned to introduce students to a greater diversity of sports and physical activities that would normally not be considered by young people. In addition, MacPhail, Kirk, and Eley (2003) noted that young people are dissatisfied with the small number of sports in schools and want to experience a greater repertoire of sport options that extend beyond traditional activities. This represents a unique opportunity to present children with a greater array of sport experiences that will likely have a positive impact on lifelong physical activity and sport adherence.

The inclusive and diverse nature of intramurals, especially when combined with a school philosophy that encourages active living, can have a profound positive impact on a growing obesity epidemic. A prescriptive approach that mandates a minimal amount of moderate-to-vigorous daily physical activity can help achieve short-term goals that include making our children more active. Unfortunately, they do little to promote an active living lifestyle that extends beyond the school grounds and later in life. A physical education curriculum that includes intramurals before, during, and after school can help children learn the skills to enjoy participation in a variety of sports designed to facilitate lifelong participation.

## References

Alfano, C.M., Klesges, R.C., Murray, D.M., Beech, B.M., & McClanahan, B.S. (2002). History of sport participation in relation to obesity and related health behaviors in women. *Preventive Medicine, 34*, 82–89.

Allison, K.R., Dwyer, J.J.M., & Makin, S. (1999). Perceived barriers to physical activity among high school students. *Preventive Medicine, 28*, 608–614.

Booth, F.W., & Chakravarthy, M.V. (2002). Cost and consequences of sedentary living: New battleground for an old enemy. *President's Council on Physical Fitness and Sports Research Digest, 3*(16), 1–8.

Burgeson, C.R., Wechsler, H., Brener, N.D., Young, J.C., & Spain, C.G. (2001). Physical education and activity: Results from the School Health Policies and Programs Study 2000. *Journal of School Health, 71*, 279–293.

Calle, E.E., & Kaaks, R. (2004). Overweight, obesity, and cancer: Epidemiological evidence and proposed mechanisms. *Cancer, 4*, 579–590.

Centers for Disease Control and Prevention. (1994). Unpublished data: School Health Policies and Programs Study. Atlanta, GA: DC.