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FITNESS

The Benefits of Health-Related Fitness Education in Secondary PE

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Abstract

The health status and physical activity levels in the United States of adolescents and adults is disheartening. Many health professionals have been using the term exercise is medicine *to advocate more physically active lifestyles. Unfortunately, the focus of most PE curriculums is directed toward a sport and game model, which research indicates does not prepare students for continued PA, exercise, and fitness. This article challenges higher education and secondary PE programs to re-evaluate the curricular approach of a sport and game model and shift to a health-related fitness education model. Health-related fitness education can empower students to create and execute a plan for lifetime fitness through learning the skills (e.g., exercise modalities) and knowledge (e.g., goal setting, FITT principles, planning) needed for staying fit. Health-related fitness education also helps develop self-efficacy and other affective attributes that can motivate for lifelong habitual adherence. There is no greater time than now for PE to be the leader in exercise is medicine, by equipping youth with the tools to make exercise, PA, fitness, and health a way of life today and forever.*

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Physical educators and other physical activity (PA) providers are under increasing pressure to keep curriculum current and relevant. Research confirms that student outcomes improve when physical educators utilize an evidence-based approach to teaching. The opportunity for physical education (PE) to be the leader in transforming societal health and fitness is greater than ever. Over the last 40 years, substantial evidence has accumulated concerning the importance of PA and health outcomes (Blair & Morris, 2009; Warburton, Nicol, & Bredin, 2006). Research shows children in the United States are healthy and happy as they engage in traditional PA. In addition, families report higher levels of satisfaction if their children participate in PA (Timperio et al., 2013).

Despite the abundant information demonstrating the role of PA in maintaining a healthy lifestyle, informative approaches alone have not been enough to promote lifestyle behavioral changes in much of the population (Nahas, Goldfine, & Collins, 2003). Consequently, the health of the U.S. population is alarmingly poor and the need for change is paramount. Only 21.7% of adults (Centers for Disease Control and Prevention [CDC], 2017c) and 16.3% of adolescents (Song, Carroll, & Fulton, 2013) meet the national guidelines for aerobic and muscle-strengthening activity. Regarding general PA participation, only 49% of adults are active at the recommended levels (B. Lewis, Napolitano, Buman, Williams, & Nigg, 2017). Furthermore, more than one third (36.5%) of adults and one fifth (20.5%) of adolescents (12 to 19 years) are considered obese (CDC, 2017a). Lack of time, lack of motivation, and perceived adverse effects associated with PA are the most commonly cited psychological barriers to PA (Netz, Zeev, Arnon, & Tenenbaum, 2008).

To further complicate matters, prevalence of chronic disease continues to increase, with physical inactivity being a substantial contributor (Booth, Roberts, & Laye, 2012). There is also a relationship between physical inactivity and mental health conditions (Clow & Edmunds, 2014). Of the $2.7 trillion in annual health care costs, chronic and mental health conditions account for 86% of those costs (Gerteis et al., 2014). The $320 billion that was spent on prescription drugs in the United States in 2015 was primarily allocated to chronic conditions that are preventable by behavioral choices concerning PA and nutritional habits (CDC, 2017d).

Meanwhile, the public health community has become increasingly interested in the potential contributions of PE programs offered in public schools to improve children's health and lifestyle habits (Sallis et al., 2012). This renewed interest in PA is understandable given that K–12 PE, a preventive medicine intervention, is in place for youth aged 5 to 18 across much of the United States. To promote this initiative, health professionals have also implemented the concept of *exercise is medicine*, a phrase that implies that a proactive stance rather than a reactive one is much more cost effective and should be the primary approach to wellness (Berryman, 2010; Lobelo, Stoutenberg, & Hutber, 2014; Pedersen & Saltin, 2015).

Until the early 1900s, the focus of PE was on health and exercise, which is aligned with the idea that exercise is medicine. Subsequently, a curricular transition ensued where games and sports became the dominating curricular force in PE. This change in focus halted for a brief period in the 1930s–1940s during the World Wars with the recognition that fitness enhancement was needed for troops to be battle ready (Berryman, 2010). After World War II, PE programming reverted to the sport and game model, which is the staple of most secondary programs today (Mears, 2008; Miller et al., 2017).

Today's trends are perplexing given the evidence indicating that conceptual PE is more effective than the traditional sport and game model for sustained PA and fitness outside the classroom (Dale & Corbin, 2000; Fairclough, Stratton, & Baldwin, 2002). Despite empirical evidence for conceptual PE and long-standing concern from the public health community (Sallis et al., 2012), limited curricular changes in higher education and K–12 PE programs have taken place that allow behavioral change for lifetime fitness and wellness. To that end, Haerens, Kirk, Cardon, Bourdeaudhuij, and Vansteenkiste (2010) argue that very little transfer of learning occurs between what is taught in school PE and subsequent PA habits later in life. This paper elaborates on methods through which health-related fitness education in secondary PE can induce behavioral change to create healthy lifestyle habits for sustained physical fitness, disease-free lifestyles, and higher quality of life in adolescents and adults.

Lifetime Activities vs. Sport Activities

Substantial research indicates that PA patterns and fitness levels during adolescence directly relate to PA habits and fitness dur-

ing adulthood (Craigie, Lake, Kelly, Adamson, & Mathers, 2011; Gordon-Larsen, Nelson, & Popkin, 2004; Högström, Nordström, & Nordström, 2015; Telama et al., 2005). These findings imply that students who develop the tools to stay active and become fit in adolescence can experience the lifelong benefits associated with PA. For example, Wanless et al. (2014) examined an after-school running program and found that PA tracking devices, such as pedometers, can help individuals increase PA through increased monitoring and self-regulation. Significant changes in PA behavior occur when self-monitoring is combined with goal setting and/or performance feedback (Michie et al., 2011). To elicit the desired outcome of lifelong fitness, PE professionals must critically examine and evaluate current curricular choices.

Lifetime activities, which have been defined as activities that carry over into adulthood, can be done on a regular basis and have the potential to help individuals improve their health and/or skill-related fitness (Mohr, Townsend, & Pritchard, 2006; J. Ross, Dotson, Gilbert, & Katz, 1985). To that end, activities such as swimming, biking, running, walking, weight lifting, resistance training, and high intensity training fit the classification as lifetime activities. Learning lifetime activities during the adolescent years can have a great transfer effect into adulthood (Fairclough et al., 2002). Green, Smith, and Roberts (2005) stated that youths' experiences have profound implications for their subsequent patterns of participation in PA. As early as 1999, Roberts indicated that by the age of 16, adolescents have already begun adopting many of their adult leisure practices. Unfortunately, in the field of PE individual fitness activities, especially those related to resistance training and high intensity training, are not considered lifetime activities and are marginalized. This marginalization may be due to a lack of practitioner knowledge regarding how to teach these activities (McGladrey, Hannon, Faigenbaum, Shultz, & Shaw, 2014).

More recently, Barney, Pleban, Wilkinson, and Prusak (2015) examined college students' thoughts and perceptions of their high school PE experiences and current PA patterns. Students specified that they primarily participated in team sports, with several reporting that team sports were the most enjoyable activity, especially among males. Students also reported perceiving their high school PE expe-

rience as irrelevant, and they noted that they would have preferred to learn more lifetime activities (e.g., weight training, golf, swimming). The results of the study suggested that the respondents did not feel that their PE courses equipped them with the tools needed for lifetime PA. A key point to reflect herein is that students enjoyed team sports, yet felt that they did not get any value from team sports as young adults. To that end, it is the job of the educator to provide a rigorous curriculum that is relevant to lifetime fitness and provide students with appropriate challenges to grow. This approach has the potential to help students acquire lifetime habits, instead of other approaches that center around game playing to elicit momentary "fun" (Ferkel, Razon, Judge, & True, 2017).

Conceptual Physical Education vs. Traditional Physical Education

Project Active Teens was a unique, longitudinal, public school project facilitated by a university and was designed to promote PA among teens (Dale, Corbin, & Cuddihy, 1998). The study developed lesson plans for one semester of conceptual PE classes that blended classroom sessions with physical movement sessions. PA and wellness programs were taught in classroom sessions, whereas the movement sessions were spent building skills to develop and promote lifelong fitness habits. The PA patterns of the conceptual PE students were then compared to the students from traditional PE, which consisted primarily of sports and games. A 3-year follow-up study indicated that students in the conceptual PE classes participated in significantly greater levels of PA compared to students in the traditional PE courses (Dale & Corbin, 2000).

Traditional secondary PE is known to have a team sport and game-oriented curriculum (Dale & Corbin, 2000; Mears, 2008). Evidence indicates that traditional team sports and games lead to health-enhancing benefits in participants. However, PA trends suggest that active adults and older teens spend the majority of their active time participating in fitness activities and not in sports (Fairclough et al., 2002; Hulteen et al., 2017; Physical Activity Council, 2017; U.S. Census Bureau, 2012; Woods, 2017). The practicality of sports being an agent to enhance fitness levels as individuals

age is limited in scope and is contingent upon competing demands (e.g., work, family), resources, current fitness levels, and many other contributing factors. Providing students with various forms of exercise and PA (e.g., body-weight training, weight training, group fitness, aerobic dance, high-intensity training, swimming, biking, hiking/backpacking) that can be done individually or in a group setting has the potential to be more effective in inducing behavioral change for lifetime fitness.

It is also important to note that team sport curriculum tends to focus on winning rather than mastery of skills (Mohr, Townsend, & Bulger, 2001; Siedentop, 1994; Stanec & Lay, 2008). When teaching a team sport curriculum, many teachers use the multiactivity approach (Siedentop, 1994; Siedentop, Mand, & Taggart, 1986), which focuses on teaching a compilation of different games and activities throughout the course. Through this curriculum, students usually receive a few days of skill instruction and drill practice, followed by several days of limited supervision game play (Mohr et al., 2006). Consequently, team sports curriculum may cater only to the talented athletes or those with potential to become athletes (Haywood, 1991; Mohr et al., 2006). Haywood (1991) argued this point by demonstrating that a team sports curriculum focuses more on playing games and less on skill development, which in turn negatively affects students with less athleticism, as more advanced students dominate game play. Specifically, evidence shows that team sports curriculum not only favors the athletic students but also has a negative effect on the less athletic males as well as a majority of females (Kimball, Jenkins, & Wallhead, 2009; Myrick, 1996; Rikard & Banville, 2007).

Sport and Game Emphasis

With the fast growth of sport and games knowledge, the challenge of keeping up with the ever-growing body of information is greater than ever. Sport can bring great value to a certain population of students physically and psychosocially but also has potential inherent risks as they move into adulthood. Educators have a responsibility to examine potential risks with the health and safety of all students concerning lifetime PA adherence. One key reason for limited adult participation in sport is the risk of injury that many adults cannot afford. Exposure and long-term participation in certain types

of intense sports/games that require contact such as hockey, football, rugby, basketball, and soccer may sometimes lead to unhealthy outcomes (e.g., injury) during adulthood (Caputo & Mattson, 2005; Cross et al., 2017; Gouttebarge, Aoki, Lambert, Stewart, & Kerkhoffs, 2017; Misra, 2014; Ristolainen et al., 2010; Schallmo, Weiner, & Hsu, 2017; Stein, Alvarez, & McKee, 2015). In contrast, exercise modalities such as resistance training, cardiovascular equipment, group fitness, and swimming focus on functional fitness and with correct programming prescription are less likely to cause injury (Conn, Annest, & Gilchrist, 2003).

Along with injury comes the nature of the importance of body size (e.g., increased body composition or muscle mass) within different sports. Surprisingly, football players (especially linemen) show warning signs and symptoms of metabolic syndrome (Judge, Stone, & Craig, 2010). Although competitive athletes (i.e., football players) may be assumed to be sheltered from risks of cardiovascular disease, metabolic syndrome and other associated adverse biomarkers for heart disease place them at higher risk for a number of post-competitive pathogenic chronic health consequences (Buell, Calland, Hanks, & Thorne, 2008; Judge et al., 2010). This is not an attack on extracurricular sports, as they can have a positive impact in many ways and are highly encouraged for youth outside of school. Instead, this study highlights the importance of health-related fitness education in PE. While sport will end for most, the need to stay physically active and fit will not.

Catering PE curriculum to team sports that involve contact such as soccer, hockey, or football may be unknowingly steering adolescents toward future participation (adulthood) in sports with potential long-term adverse health consequences (e.g., injury) that may hinder their ability to stay active, rather than help. Staying away from a curriculum that emphasizes team sports also ensures that students perceived to be talented athletes, or those with the potential to become talented athletes, are not accommodated at the expense of other students. Team-sport-based curriculum can leave less developed or less athletically gifted adolescents with a distasteful PE experience. This poor PE experience with team sports during adolescence can transfer into a dislike of PA during adulthood. For many years now, secondary PE unknowingly has portrayed to many students that if

they are not competent (i.e., athletically gifted) in sports and games, then fitness and health is not for them. Conversely, fitness and health is for everyone, while sport is just one avenue for enhancement.

Noncontact team sports have their own unique obstacles and barriers. They require multiple participants, a specific playing field or equipment, and sometimes organization and officiating. These limitations make participation difficult for adults and older teens because of busy schedules, limited free time, monetary restrictions, and lack of participants to compete. In this regard, Roberts (1999) proposed that the low rate of participation for older adults in physically active recreational activities might be due to the limited opportunities for pursuing these activities upon leaving school. As more research investigates current practices involving team sports, physical educators need to be more conscious of whether current curricular practices are relavant and evidence based. There is more intentional scrutiny of long-term PA outcomes.

Furthermore, if secondary PE is concerned only with sports, games, and achieving the required amount of PA, then many states and districts that allow athletes to opt out of PE have a valid rationale, as students will receive the same type of experience or an experience at an even higher level than the one provided in PE. These authors are not advocating for this exception, but rather making a point that secondary PE should not exclusively be limited to a sports and games curriculum. Rather, secondary PE should aim to provide students with the tools to stay active and fit now and for a lifetime (Ennis, 2011; Ferkel et al., 2017; Prusak et al., 2011). Accordingly, we believe a secondary PE curriculum predicated on health-related fitness education can meet these goals.

Self-Efficacy and Motivation in Students

An examination of motivation and self-determination in students reveals that students who feel like they cannot adequately perform the skills required for a task are less likely to persist at that task/activity outside of school (Greenwood-Parr & Olsin, 1998). Self-efficacy in students' motivational profiles also plays a role in their ability and willingness to participate and learn within educational settings (M. Ross, Perkins, & Bodey, 2016). The concept of self-efficacy is derived from Bandura's (1986) *social cognitive theory* and can be a useful predictor in assessing behavior. With respect to

PA and fitness, self-efficacy represents one's perceptions of confidence in his or her activity level and/or confidence in an activity. Individuals often report various levels of confidence in different activities or conditions (Nahas et al., 2003). Choosing activities that make students feel less confident and unsuccessful (e.g., competitive team sports) could deter them from continuing these activities on their own.

Considering that self-efficacy and motivation are among the greatest contributors to health behavior (Lox, 2017), PE should aim to increase students' self-efficacy and motivational levels not only for the mere enjoyment of the course content but also for long-term PA behaviors in students. To that end, lowering students' perceptions of self-efficacy through games requiring athleticism can especially deter students, given that a low sense of self-efficacy leads to negative affective responses to activity, and negative affective responses to activity are highly associated with physical inactivity (Ekkekakis, Parfitt, & Petruzzello, 2011). This information is consistent with the view that teaching adolescents skills that increase PA, while focusing on the benefits of high-quality exercise can combat current poor lifestyle habits (Ennis, 2010). In direct opposition of a team sports and game model, an individualized health-related fitness education model that allows students to see personal growth and improvement by adopting a mastery rather than performance standpoint (Louw, Dunlop, Yeo, & Griffin, 2016) can provide them with a more plausible pathway to behavioral change.

Self-Determination Theory

Self-determination theory (SDT) states that behavior can be categorized as intrinsically motivated, extrinsically motivated, or amotivated (Deci & Ryan, 1985, 2000). Per Deci and Ryan (2000), intrinsically motivated people seek out challenges and desire to explore and learn without external rewards. Extrinsically motivated individuals are motivated by a means to an end and not for the inherent satisfaction of engaging in an activity (Deci & Ryan, 2000). Amotivation refers to situations when individuals perceive no contingencies between outcomes and the actions they choose while possibly experiencing feelings of incompetence and uncontrollability (Vallerand et al., 1992). According to the theory, three needs motivate all behaviors (including health behavior): competence, relatedness, and

autonomy (Deci & Ryan, 2010). As such, Deci and Ryan (2010) suggested that people are inherently motivated to operate effectively in their environment (competence), feel a sense of personal initiative and input in the activities they are undertaking (autonomy), and feel connected to others in their environment (relatedness). To this end, they suggested to the extent that social factors satisfy one's needs for perceptions of competence, autonomy, and relatedness, they will foster self-determination in an individual. Consequently, social factors that negatively affect those perceptions reduce motivation and lead to amotivated behaviors.

Research into the use of SDT for predicting long-term PA behaviors has generally concluded that participants who have a sense of competence over task-related skills, autonomy over the specific activity choice, and a sense of relatedness to others who are physically active with them display greater long-term adherence to the activity as opposed to others whose needs for competence, autonomy, and relatedness are not met (Hagger & Chatzisarantis, 2007, 2008; Edmunds, Ntoumanis, & Duda, 2006, 2007). Through these findings, it is evident that PE programming based on athletic games could reduce the sense of competence, autonomy, and relatedness for any participant who may not have the build and/or requisite skills to master the game; that is, these participants may not feel enough autonomy within the structured game design and its rules to relate to others who are better fit for winning the game. Consequently, PE programming that centers on the teaching of noncompetitive and diverse health-related fitness skills (e.g., resistance training, cardiovascular training modalities) instead of competitive gaming would most likely allow a higher sense of mastery and autonomy in all students. Such an approach would ultimately enable long-term PA behaviors in participants—one of the longest standing goals of PE (Sallis et al., 2012).

Of further relevance, SDT proposes that motivation occurs on a continuum from no motivation at all (i.e., amotivation) to extrinsic motivation to ultimately intrinsic motivation (Deci & Ryan, 1994). To that end, it is known that intrinsic motivation is associated with more positive affective responses and with cognitive and behavioral results (Vallerand & Rousseau, 2001). A number of studies have also shown that intrinsic motivation for PA leads to sustained PA behav-

ior (Duncan, Hall, Wilson, & O, 2010; M. Lewis & Sutton, 2010; Teixeira, Carraça, Markland, Silva, & Ryan, 2012). However, in most cases, individuals move through the continuum and do not immediately start from a place of intrinsic motivation (Wiberg, 2016).

From a PE programming standpoint, it is implied that for sustained PA behavior, most individuals need to see results and receive some type of external reward to repeat the activity and/or undertake similar activities (Lox, 2017). Health-related fitness education avails itself to setting goals, experiencing results and outcomes, and adjusting these goals for better results and outcomes (Houston & Kulinna, 2014). Therefore, health-related fitness education allows for considerable chances of satisfying individuals who are extrinsically motivated and, as a result of repeated exposure and some improvement, could help them move to a more internally motivated state. Specifically, changing secondary PE curricula from the traditional game and sport model to a health-related fitness education model would allow students guidance regarding development of a fitness plan and the process that occurs as they look to improve fitness. During this process, students would also start to enhance fitness through programming, which would elicit greater motivation for more activity.

In a game-playing model, however, students' success would be mainly defined as the score of the game, and especially within team play settings, students would have little control and autonomy over their success. Furthermore, for students who may not be athletically adept for the game, a sense of competence would be challenging to develop. From an SDT standpoint, this is important because a high sense of competence acquired through repeated exposure and a sense of autonomy and control over the activity and/or its outcomes are seen as the main precursor of long-term activity (Deci & Ryan, 1994). Thus, the health-related fitness education model would not only have a more positive effect on students' lifestyle choices but would also present greater prospects in facilitating long-term activity adherence.

Health-Related Fitness Education

Health-related fitness education is not merely about providing students with physically active classes, but rather about providing a comprehensive, physically active approach involving instruction on

social, cognitive, and physical skills, along with the affective traits of personal ownership for enhanced quality of life. A health-related fitness education-based curriculum would include didactic content that teaches health and fitness concepts (e.g., F.I.T.T principle, progression, goal setting, time management, fitness plan development) and activity sessions that focus on fitness programming in a noncompetitive setting (Dale & Corbin, 2000; Mohr, Townsend, & Pritchard, 2006). An example of this approach would be a split-week program with different modalities of fitness activities and PA implemented throughout a week (5-day cycle). Table 1 illustrates an example of a split-week program that implements body-weight training education, weight training education, cardiovascular training education, sports and games, rhythmic activities, outdoor recreation, and health-related fitness knowledge.

Learning health-related fitness habits can have a positive carryover effect into adulthood and increase the amount of exercise and PA in the adult population (Craigie et al., 2011; Gordon-Larsen et al., 2004; Högström et al., 2015; Telama et al., 2005). In addition to having a positive effect on exercise in adulthood, health-related fitness education can have favorable effects on adolescent students academic achievement (Sallis et al., 2012). Mears (2008) stated that expanding curriculum diversity in high school PE may lead to students discovering PA that will facilitate motivation for continued participation beyond the school setting. This theory is also consistent with earlier findings (Morgan, Pangrazi, & Beighle, 2003) that indicate that much of the PA that children engage in occurs outside of the PE classroom. In fact, Burgeson, Wechsler, Brener, Young, and Spain (2001) pointed out that only 8.4% of elementary schools, 6.4% of middle schools, and 5.8% of high schools provide enough daily PE for students to reach PA guidelines throughout a school year. This information is crucial, as it stresses the notion that what students learn in the classroom needs to have a carryover effect into real-world situations if they are to sustain fitness habits independently.

Lack of self-management skills is a frequently cited explanation for why adults lack physically active lifestyle habits (Lox, 2017; Sallis & Hovell, 1990). If people miss knowledge concerning health implications of an unhealthy behavior pattern, they may also lack the motivation and self-discipline to alter that behavior (Hirvonen,

Table 1
Health-Related Fitness Education Split-Week Program Example

Monday / Day 1 **Body-Weight Training Education**	Tuesday / Day 2 **Activity Day**	Wednesday / Day 3 **Weight Training Education**	Thursday / Day 4 **Activity Day**	Friday / Day 5 **Cardiovascular Training Education**
• Overall fitness and health knowledge; fitness plan programming • Body-weight and implement movements • Educational body-weight workout	• Sport/games, or outdoor recreation, or rhythmic activities	• Weight training knowledge and training programming • Weight training techniques and movements • Educational weight training workout	• Sport/games, or outdoor recreation, or rhythmic activities	• Knowledge on CV health and monitoring; CV programming • Cardiovascular (CV) training • Small-sided games or nutrition education
Lesson Order and Time Allocations *Times will fluctuate depending on individual school schedule.*				
Monday / Day 1	Tuesday / Day 2	Wednesday / Day 3	Thursday / Day 4	Friday / Day 5
1. 15–20 min. Knowledge session 2. 3–5 min. Warm-up/ movement preparation 3. 10–15 min. Skill teaching for body weight/ implement movements 4. 5–10 min Educational body-weight workout 5. 2–3 min. Cooldown/ check for understanding	1. Sport skills, tactics, and small-sided games. 2. Instructional models such as TGfU[a] and Sport Education[b] are recommended. 3. Outdoor recreation or rhythmic activities instead of sports/games.	1. 5–10 min. Knowledge session 2. 3–5 min. Warm-up/ movement preparation 3. 10–15 min. Skill teaching for weight training movements 4. 15–20 min. Educational weight training workout 5. 2–3 min. Cooldown/ check for understanding	**TGfU Model Example.** 1. 5–8 min. Warm-up/ workout 2. 3–4 min. Small-sided games with stipulations 3. 6–9 min. Skill/tactics practice 4. 4–5 min. Small-sided games with stipulations 5. 6–9 min. Skill/tactics practice 6. 5–6 min. Small-sided games 7. 2–3 min. Cooldown 8. 4–6 min. Lesson closure	1. 10–15 min. Knowledge session 2. 3–5 min. Warm-up/ movement preparation 3. 10–20 min. CV workout 4. or 5. 10–15 min. Small-sided games or nutrition education 5. or 4. 2–3 min. Cooldown/check for understanding

[a]Teaching Games for Understanding (Griffin & Butler, 2005). [b]Sport Education (Siedentop, Hastie, & Van der Mars, 2011).

Huotari, Niemelä, & Korpelainen, 2012). Health-related fitness education programs should teach students to self-access their own fitness levels and use that information to create a personal fitness program. However, in a 2016 survey of high school PE teachers, only 21% of teachers surveyed said they incorporated fitness concepts and knowledge during each class period. In the same survey, 48.9% of teachers said that students did not self-assess their fitness levels and only 33% of those surveyed said their students developed personal fitness plans (Mercier, Phillips, & Silverman, 2016). By effectively learning how to implement fitness programs and asses their own fitness levels, students would be provided with the fundamentals to possess effective fitness habits later in life (Morgan et al., 2003).

Purpose and Reflection

Health professionals and government agencies in the United States are trying to determine how to improve individuals' health as the cost of hypokinetic disease is becoming catastrophic. Physical educators have the unique opportunity to change the lives of students they work with now and in the future. A plethora of educators are trying diligently to provide students with an excellent learning experience. Often, the curriculum being introduced is taught well and learned by the students; unfortunately, most skills and knowledge developed in the classroom have limited translation to sustained PA and fitness.

Conclusion

Changing curricular *practice* is a difficult process, best illustrated by "lag time." Barriers often include implementation difficulties, lack of access to research, and lack of awareness of available educational tools. Establishing a curricular balance between enjoyment, physical fitness, psychological well-being, and lifelong lessons for a healthy and active adult lifestyle is essential for success. National guidelines suggest that adults participate in at least 150 min of moderate or 75 min of vigorous exercise each week (CDC, 2018). Researchers have also suggested that increasing PE and PA within schools and after school (Wanless et al., 2014) may have the greatest impact on improving PA behaviors. Top-down policy and legislative changes pertaining to the curricular emphasis in PE classes focusing on lifelong PA and fitness have been suggested (Story, Nanney, & Schwartz, 2009).

Physical educators must evaluate curriculum and ask the question: Is this preparing students for a lifetime of exercise and PA for sustained health and fitness? If the curriculum taught is a sports and game model, the realistic answer to this question, based on empirical findings, may be no (CDC, 2017a, 2017d; Hulteen et al., 2017; Physical Activity Council, 2017; Woods, 2017; U.S. Census Bureau, 2012). Providing students a curriculum predicated on health-related fitness education can equip them with the tools to facilitate competence and the confidence to engage independently and autonomously in lifetime PA and fitness. Sport and games have their own place and value within the affective realms. However, the amount of sport and games programming needs to be adjusted so that it provides a more comprehensive and applicable educational experience.

Finally, physical educators have shown concern for the decline of time allotment for secondary PE. Many physical educators devote much time and energy to advocating for additional time. This genuine concern is appreciated and commended. However, if secondary PE continues to be a playtime and does not offer rigorous educational subject matter, then the decline will only be exacerbated or paraprofessionals will be hired to monitor a controlled recess. Today, more than ever, PE professionals have an immense opportunity to provide students, communities, and society at large with an education of substantial value. Only a carefully planned and evidence-based education can facilitate long-term PA habits and help increase the quality of life of many. A curriculum focused on health-related fitness education that also includes sport, outdoor recreation, and rhythmic activities has great potential to be that agent of change.

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