It has become evident in recent years that many youths are not getting enough daily physical activity (Centers for Disease Control & Prevention, 2004). This lack of physical activity has been cited as a major factor in the increased prevalence of health-related problems among youths, such as type 2 diabetes and obesity (Kerner, 2005). The availability of technology such as cable television, the Internet, and interactive electronic games is believed by many to be a contributing factor to a sedentary lifestyle because children are spending their leisure time interacting with those devices rather than running, riding their bike, or playing sports (Sherman, 2000). It has also been pointed out that schools now require less physical education because of an increased pressure to improve scores in other school subjects (Maeda & Murata, 2004). This is unfortunate, because physical education has the potential to empower children with skills that they will need in order to enjoy the benefits of regular physical activity for the rest of their life (Pangrazi, 2007).

In order to ensure that children will become more physically active and fit, those who teach physical education should use a variety of strategies that will encourage students of all ability levels to participate fully in physical education classes and to engage in an active lifestyle outside of class (National Association for Sport and Physical Education [NASPE], 2004). The national physical education standards three and four read as follows:

Standard 3: Participates regularly in physical activity.
Standard 4: Achieves and maintains a health-enhancing level of physical fitness. (NASPE, 2004, p. 11)

In order to create an environment that is conducive to helping students make progress in standards three and four, teachers should employ a number of proactive strategies to encourage student activity both during school and during nonschool hours (Johnson & Deshplande, 2000).

The Checklist
Given the importance of promoting student physical activity and fitness, K-12 physical educators should examine the degree to which their program is directly addressing standards three and four and create plans to enhance underdeveloped
Figure 1. The Physical Activity and Fitness Promotion Checklist

Directions: Assess the school physical education program in each of the following areas, using this scale:
1—Not discussed
2—Discussed
3—Planned
4—Partially implemented
5—Fully implemented

Instructional Strategies for Promoting Physical Activity
___1. Traditional sports are modified to increase activity and skill opportunities.
___2. Team size for traditional field sports such as softball, football, and soccer is kept at 7 members or less.
___3. Elimination games are either not used or the rules are altered to keep all children active.
___4. Out-of-class exercise calendars or fitness logs are distributed regularly, and students are required to use them or
    are given extra credit for successful completion.
___5. Invigorating, appropriate music is played during a variety of daily warm-ups.
___6. Students are surveyed periodically regarding their physical activity preferences.

Program Fitness Equipment and Facilities
___7. An exercise facility with age-appropriate aerobic and resistance equipment is maintained and used or equipment is
    regularly set up in the gymnasium.
___8. At least one complete class set of pedometers is available.
___9. Heart rate monitors or pulse sticks are used periodically during physical education class.
___10. There is sufficient exercise equipment (e.g., jump ropes, exercise bands) and space available for each student so
     that waiting time is eliminated.
___11. School physical education facilities are available for students and staff after school, in the evenings, or on
     weekends.

Physical Fitness Testing
___12. Age-level standards for fitness test components are posted.
___13. Students are given informal opportunities to serve as a peer monitor during fitness testing.
___14. Public recognition is given to children who achieve the expected levels of activity and fitness.

Publicizing the Importance of Physical Activity
___15. Posters of males and females exercising are visible to students in physical education classes.
___16. A bulletin board displaying current newspaper or magazine articles on the benefits of activity and fitness is
     maintained.
___17. A department web site featuring policies, curriculum, and fitness information is maintained.

Student Understanding and Application of Fitness Concepts
___18. Students are assessed on their understanding and application of primary fitness concepts.
___19. Students design a personal activity program and maintain a portfolio that includes a record of weekly activity.
___20. Students are required to complete web-based assignments that focus on health-related information.

___ Total

parts of the program. The Physical Activity and Fitness Promotion Checklist was created for this purpose.

The Physical Activity and Fitness Promotion Checklist (figure 1) was initially developed by generating items from
the fitness literature and then getting input from a panel of four experts. The panel members averaged over 25 years
of physical education teaching experience, and each had been recognized as a state physical education teacher-of-the-year
at either the elementary, middle, or high school level. The checklist was then field tested with 30 physical education
teachers, who evaluated it for content validity and clarity. All 20 items were deemed appropriate by over 90 percent
of the 30 teachers. For each item, a five-point Likert-style scale was utilized for responses. The five-point scale was patterned
after the stages of change (SOC) model, as applied to exercise behavior (Ciccomascolo & Riebe, 2006; Prochaska & Marcus,
1994). This model suggests that individuals change behaviors, such as smoking or a sedentary lifestyle, by moving through
a series of stages that represent their readiness to change. It comprises a five-stage process of behavioral change: (1) precontemplation, (2) contemplation, (3) preparation, (4) action, and (5) maintenance. The SOC model has been used to promote physical activity, based on the supposition that people must move through the early stages, where motivation and commitment are developed, before taking action and changing their behavior (Nahas, Goldfine, & Collins, 2003). Consequently, the corresponding five-point Likert scale used in the checklist (1 = Not discussed, 2 = Discussed, 3 = Planned, 4 = Partially implemented, and 5 = Fully implemented) was developed to allow physical education programs to follow a similar path to increased physical activity as individuals in the SOC model.

The checklist differs in several ways from the Physical Education Curriculum Analysis Tool (PECAT), a 204 page document developed by the Centers for Disease Control and Prevention (2006). The purpose of PECAT is to help physical educators design and evaluate physical education curriculum outcomes, and it describes what students are expected to know and do at the end of each grade-level range in accordance with all six national standards. In contrast, the Physical Activity and Fitness Promotion Checklist focuses exclusively on specific teaching strategies that will help students meet standards three and four (i.e., attain acceptable physical activity and fitness levels). The checklist may also be more practical for teachers to use, because it includes only 20 items and may be used at any grade level. Finally, by incorporating a five-point scale patterned after the SOC model, rather than the three-point scale in PECAT, the checklist allows programs to set goals and track program progress in the encouragement of student physical activity and fitness more precisely than PECAT.

Five central areas were identified for the checklist: (1) instructional strategies for promoting physical activity, (2) program fitness equipment and facilities, (3) physical fitness testing, (4) publicizing the importance of physical activity, and (5) student understanding and application of fitness concepts. Sub-items were then created for each of the five areas.

**Instructional Strategies for Promoting Physical Activity**

*Item 1.* Traditional sports are modified to increase activity and skill opportunities.

*Item 2.* Team size for traditional field sports such as softball, football, and soccer is kept at seven members or less.

*Item 3.* Elimination games are either not used or the rules are altered to keep all children active.

*Item 4.* Out-of-class exercise calendars or fitness logs are distributed regularly, and students are required to use them or are given extra credit for successful completion.

*Item 5.* Invigorating, appropriate music is played during a variety of daily warm-ups.

*Item 6.* Students are surveyed periodically regarding their physical activity preferences.

**Rationale for Items 1–6**

Given the limited time available for physical education, it is essential that physical educators design challenging learning activities that keep all students active throughout the class period. Excessive management time and large class size can lead to student inactivity and apathy. To increase activity levels, rules of traditional games should be modified to allow students to speed up play. For example, the rules of softball may be altered to require defensive players to change positions after each batter and also have each team member bat once per inning instead of playing by the traditional “three outs” rule. Teachers should avoid elimination games or find ways to “recycle” students who have been eliminated back into play as quickly as possible in order to keep all students active. Team sizes should be kept small with multiple games occurring simultaneously to maximize skill opportunities for students (Graham, 2001). A variety of warm-ups should be offered with stimulating music as a background whenever possible. This should more fully engage students and moti-
vate them to exercise vigorously.

In order to increase the likelihood that students will engage in vigorous activity during nonschool hours, physical educators may also require students to provide documentation of their physical activity, such as homework calendars, lists of specific activities to be practiced outside of class, or activity logs. Age-appropriate homework calendars that provide specific physical activities and require parent or guardian verification that the activity has been completed are an excellent way of encouraging students to be active (Pangrazi, 2007). A homework calendar may also incorporate student choice and use the time spent in activity as the primary requirement. Exercise logs that are part of a physical education journal are also effective because they allow students to chronicle daily physical activity. These journals may also include the student's personal activity program and may require students to show how consistent they have been in adhering to the set of activities they have selected. Student surveys are important because students are more likely to be physically engaged in preferred activities (Stelzer, 2005). This is particularly important in ethnically diverse classes (Hill & Cleven, 2005).

Program Fitness Equipment and Facilities

*Item 7.* An exercise facility with age-appropriate aerobic and resistance equipment is maintained and used or equipment is regularly set up in the gymnasium.

*Item 8.* At least one complete class set of pedometers is available.

*Item 9.* Heart rate monitors or pulse sticks are used periodically during physical education class.

*Item 10.* There is sufficient exercise equipment (e.g., jump ropes, exercise bands) and space available for each student so that waiting time is eliminated.

*Item 11.* School physical education facilities are available for students and staff after school, in the evenings, or on weekends.

Rationale for Items 7-11

The availability of exercise rooms that include sufficient quantities of age-appropriate aerobic and resistance equipment—as well as class sets of jump ropes, pedometers, heart rate monitors, and pulse sticks—greatly increases students' opportunities and interest to work independently or cooperatively with a partner. In addition, these types of activities are ideal for goal setting and record keeping. Familiarity with school exercise equipment may increase the likelihood that students will use the equipment outside the classroom (Bycura & Darst, 2001). In larger secondary schools, classes can design a rotating schedule to give all students quality time in the exercise room. While vigorous physical activity during physical education class time is essential, there is normally insufficient time to achieve the amount of daily physical activity that students need. Thus, physical educators may provide supplemental activities before and after school and during lunch periods. School exercise facilities may also be made available after school, in the evenings, and on weekends. This will encourage students to work toward accomplishing goals and may also result in parent participation (Gabbe & Hamrick, 2001). Exercise facilities also provide physical educators and other staff members a place to engage in regular physical activity. This is essential, because an instructor's fitness level tends to motivate students toward an active lifestyle (Stelzer, 2005).

Physical Fitness Testing

*Item 12.* Age-level standards for fitness test components are posted.

*Item 13.* Students are given informal opportunities to serve as a peer monitor during fitness testing.

*Item 14.* Public recognition is given to children who achieve the expected levels of activity and fitness.

Rationale for Items 12-14

A key component in the promotion of fitness is assessment. Fitness assessment provides information about students' current level of fitness. This baseline information helps students set realistic fitness goals and motivates them to improve. Fitness scores may be communicated in graphic forms and sent to parents as a way to enlist them as partners in the process. Fitness assessment helps teachers to gauge the effectiveness of physical activities over a period of time, as it provides evidence of whether student participation in specific activities results in improved fitness levels. Fitness testing also makes students aware of the specific components of fitness that will assist them in designing comprehensive, personal, activity programs (Stewart, Elliot, Boyce, & Block, 2005).

Students should also be given frequent opportunities to test their fitness informally, by using other students as peer monitors (Hill, 2003). In addition, public recognition should be given to students who have achieved acceptable levels in both physical activity and fitness in order to draw attention to the importance of an active lifestyle.

Publicizing the Importance of Physical Activity

*Item 15.* Posters of males and females exercising are visible to students in physical education classes.

*Item 16.* A bulletin board displaying current newspaper or magazine articles on the benefits of activity and fitness is maintained.

*Item 17.* A department web site featuring policies, curriculum, and fitness information is maintained.

Rationale for Items 15-17

Health-related physical activity and fitness charts and directions should be posted to continually remind students of the importance of achieving acceptable levels of physical activity and fitness (Hill & Turner, 2004). Teachers should also display newspaper and magazine articles in order to inform students of the documented cognitive, affective, and physiological benefits of an active lifestyle. By posting pictures of
children of a similar age who are exercising, teachers will create positive fitness role models for students. Department websites are invaluable because program information may be accessed 24 hours a day by students, parents, and other interested parties. Web sites that include links to health and fitness databases, age-level fitness test standards, homework calendars, templates for activity logs, and information regarding fitness concepts expand student knowledge of the benefits of physical activity and fitness, encouraging students to be more active.

**Student Understanding and Application of Fitness Concepts**

*Item 18.* Students are assessed on their understanding and application of primary fitness concepts.

*Item 19.* Students design a personal activity program and maintain a portfolio that includes a record of weekly activity.

*Item 20.* Students are required to complete web-based assignments that focus on health-related information.

**Rationale for Items 18–20**

Students are more likely to begin and maintain an active lifestyle if they are able to identify the long-term benefits associated with being active (Ernst, Pangrazzi, & Corbin, 1998). Students need to learn what is required to optimize cardiorespiratory endurance and maintain flexibility, muscular strength and endurance, and body composition. They should also be able to apply the concepts of frequency, intensity, and time (FIT); design an appropriate personal activity plan; formulate a plan to prevent most common injuries; identify safe techniques for stretching; and demonstrate how to determine their heart and metabolic rate (Cardinal, Cardinal, & Burger, 2005). In addition, students can complete homework assignments, develop a personal portfolio that illustrates and keeps track of their activity program, and turn in written reports based on fitness information derived from newspapers, magazines, and the web (Woods, Karp, Shimon, & Jensen, 2004).

**Using the Checklist**

The *Physical Activity and Fitness Promotion Checklist* may be used as a program-development tool by an outside reviewer or in a self-study. Goals and projected dates for adoption may be set for each of the 20 items, particularly those that are not currently addressed in the program. The range of possible scores is 20 to 100; however, the central purpose of the checklist is to chart progress in specific areas over time rather than to focus on achieving a higher composite score.

The checklist may also be used to help determine what fitness equipment needs to be purchased in order to properly address specific criteria (e.g., a class set of pedometers, pulse sticks, stretch bands, or cardio and weight machines). Items in the checklist may serve as the basis for interview questions when committees are considering the fitness-leadership potential of candidates applying for physical education teaching positions.

**Final Thoughts**

There are significant benefits associated with physical education programs that promote physical activity and fitness. Students learn to take increasing responsibility for their physical health, because they understand the importance of being active and have been challenged to sustain an active lifestyle (Nilges, 2005). When students establish an active lifestyle during their adolescent years, it is more likely that they will persist in regular activity as they enter their adult years and reduce the chances for the onset of hyperkinetic diseases such as stroke, obesity, type 2 Diabetes, and heart attack (Prusak & Vincent, 2005; Shepard & Trudeau, 2005). Physical education programs that promote physical activity and fitness are also less likely than traditional "sport-based" programs to be eliminated when cut-backs in funding are deemed necessary (Blankenship, 2000).

Since a positive correlation between fitness and academic achievement has been documented, physical education programs that proactively promote physical activity and fitness support the entire learning process (U.S. Department of Health and Human Services, 1996). Programs that encourage students to develop a personal activity program also prepare students to successfully transition into commercial club membership when they graduate from high school, because they are familiar with a variety of fitness equipment. Physical education fitness facilities and equipment may also be used by school faculty and staff, providing physical educators an opportunity to be recognized as community leaders in physical activity and fitness (Stelzer, 2005). This form of community service by the physical education staff underscores the importance of the physical education program and should increase community support. Finally, schools that promote physical activity and fitness are better able to address state and national physical education standards than are traditional sport-based programs (California State Department of Education, 1994).

The *Physical Activity and Fitness Promotion Checklist* is designed to help K-12 physical education programs address national standards three and four. By using the checklist, physical educators will identify areas for improvement and, consequently, be able to develop specific plans to increase the physical activity and fitness level of students. By systematically addressing each item in the checklist, physical education programs will better ensure that students are making acceptable progress toward an active and fit lifestyle.

**References**


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