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Inappropriate Practices in Fitness Testing and Reporting: *ALTERNATIVE STRATEGIES*

Hhealth-related fitness testing has become mandatory in many states (Morrow, Fulton, Brener, & Kohl, 2008), and it is considered a customary part of a physical educator's work. Depending on the district, physical educators may test student body composition, cardiorespiratory endurance, muscular strength/endurance, and flexibility using health-related fitness test batteries such as FitnessGram® (Meredith & Welk, 2013). While many articles and practical guidelines (e.g., Corbin, 2009;

Meredith & Welk, 2013; Presidential Youth Fitness Program [PYFP], 2013; Wiersma & Sherman, 2008) are available for practitioners, and most physical educators are doing a fantastic job in conducting these tests, this article names six testing practices that should be categorized as "hall of shame practices" in physical education (Williams, 1992): (1) doing only the minimum to meet the test criteria, (2) not testing students with disabilities through exemptions, (3) testing a few students on display while having others as audience, (4) compromising the tests by being too flex-



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ible or helpful, (5) testing without teaching, and (6) fabricating test results.

When these inappropriate practices show up in the gymnasium or are found in reported data, they invalidate the good testing efforts and objectives, and they damage the image of physical educators and the entire profession. Therefore, based on years of field observations and the authors' research using large sets of teacher-reported fitness data, this article describes these inappropriate practices, with the hope that they will not be repeated. Alternative strategies as remedies for these inappropriate practices are also provided.

Doing Only the Minimum

Testing hundreds of students for several items is a daunting task for physical educators. It is even challenging to ensure that the students meet the health-related fitness guidelines or standards.

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Simply having students perform at the standard level for their age seems to be an easy solution. However, for those working in the field of sport and physical education, doing only the minimum not only goes against the mantra of encouraging students or athletes to do their best, but it makes test results useless. For example, a physical educator announces to the boys in his class, “Okay, boys, the standard says that in order to be in the fitness zone, you need to do 15 push-ups.” The teacher then has a group of boys line up and continues, “Now, get ready, everybody give me 15 push-ups!” The teacher counts and records 15 push-ups for almost all male students in the class.

While it is a professional expectation for the physical educator to know the criteria, making every student do only the minimum to meet the criteria is improper for two reasons. First, doing only the minimum to meet the standard will not provide students with valuable feedback on what they can do and what personal fitness goals they should set based on their performance, both of which are important parts of fitness education. Second, because of this practice, the recorded data do not reflect the students’ actual ability and lack variability. Thus, this practice would make fitness-testing data useless for researchers and policy makers who examine the results.

The alternative strategy for this practice is to provide an opportunity for students to do their best or receive optimal benefits. Physical educators are liable for student performance and well-being in the classroom. Using the most recent evidence, educators should look at the research and provide optimal conditions under which students can be their best and/or receive the most benefits (Silverman, Keating, & Phillips, 2008; Zhu, 2014). For example, to maximize physical activity during testing, using the one-mile run for lower-performing students would provide them about 1,000 extra steps, compared to the progressive aerobic cardiovascular-endurance run (PACER; Zhu, 2014). In the case of push-ups, physical educators are encouraged to use verbal encouragement and praise to help students do their best, as research has shown that verbal encouragement has a long-term motivating effect to engage students (Deci, Koestner, & Ryan, 1999).

Exemptions: Not Testing Students with Disabilities

In many school districts, particularly large school districts where teachers are expected to conduct fitness testing for thousands of students, teachers have the option to use an exemption for students with disabilities. This means that rather than engaging in fitness testing with the rest of their class, students with disabilities may complete only one or two simple evaluations (e.g., height and weight), or none at all. This poses several problems for students with disabilities. First, there is a lack of data available to track fitness scores throughout the students’ educational experience. Therefore, it is impossible for the physical educator to gauge the effectiveness of their program in promoting a healthy lifestyle for this group of children. More importantly, however, disengaging students with disabilities from fitness testing highlights the “difference” between those with and without disabilities, and research has demonstrated that, as a result, students with disabilities tend to experience ridicule, isolation or bullying from their peers (Obrusnikova & Dillon, 2012). Not being included in activities such as fitness testing has been identified as one of the most common aspects of physical education that those with disabilities describe as negative experiences (Bredahl, 2013), which can lead to lifelong disengagement from physical activity.

Several things can be done to ameliorate this inappropriate practice. First and foremost, physical education teachers must consider how to include all children, regardless of ability or disability, in fitness-testing activities. This may include making modifications to fitness-testing activities, when needed. Modifications should be individualized and based on the needs of each specific student. For example, while traditional fitness testing uses push-ups to test upper body strength, other activities such as an isometric push-up (i.e., timing how long a student can stay in a raised push-up position), dumbbell press (i.e., how many times a student can press 15 pounds), or seated push-up (i.e., timing how long a student can extend arms and remain static) may be used for those with disabilities (Winnick & Short, 2014). Teachers should feel encouraged to review the Brockport Physical Fitness Test (Winnick & Short, 2014) for more ideas on how to modify or adapt fitness testing for youth with various disabilities. Importantly, teachers should note the modifications in the testing form, in order to (1) keep track of successful modifications, while (2) ensuring that future teachers understand that the students’ scores were obtained with specific modifications.

Testing Students on Display

It may seem easier to schedule one or two classes for just fitness testing than to integrate fitness testing as a part of the instruction, but this practice coincides with the inappropriate teaching practice of “students on display” included in the PE Hall of Shame (Williams, 1996). Anecdotal evidence has shown that some physical educators not only reserve the whole class period for fitness testing, but also single out particular students and test them while the other students sit on the bleachers watching and talking.

While it is unlikely that most students benefit from being the center of attention during assessments, research has shown that it is particularly detrimental to students who are poor performers. Bejerot, Edgar and Humble (2010) found a strong correlation between lower performance in physical education settings and bullying, with 57 percent of students who reported having been low performers also reporting being bullied, compared to a 26 percent bullying rate among average performers. Further, because students with disabilities are often bullied because of their perceived differences and are also frequently lower performers, the effects of being tested on display may be even more traumatizing for them (Obrusnikova & Dillon, 2012).

Perhaps because of the importance placed on fitness testing, it can easily become a showcase for performance differences, especially when students are assessed one at a time as their peers act as an audience. In a display situation an anxious student may wait for his or her turn while watching a higher-performing peer execute pull-up after pull-up, knowing that in just a few minutes, he or she is unlikely to even be able to grip the bar long enough to perform the flexed arm hang. This low-performing student then faces a dilemma, to try his or her best and fail publicly, or to find a way to avoid testing altogether (Hopple & Graham, 1995).

To combat this issue, teachers may assign students to skill-building stations while pulling aside children individually for assessment. Though this approach may seem taxing from a managerial standpoint, teachers can distribute self-assessment skill checklists and peer teaching or reciprocal learning instructions to keep children engaged. If they are available, teachers should also enlist the help of paraprofessionals during these lessons to help with on-task behavior. In addition to mitigating the anxiety associated with be-

ing on display, the station approach has the added benefit of providing many students additional practice time, which would be lost when they simply wait for their turn to be assessed.

Compromising the Tests

Nowadays, fitness testing results are sometimes published in school report cards or are used as an accountability measure for teaching performance. In some states and districts physical educators may feel pressured by their administrators or legislators to improve their students' health-related fitness test scores between semesters. This pressure on physical educators could result in the practices of compromising the tests so that it would appear that more students are meeting the fitness test criteria.

Although fitness-testing guidelines delineate how each test item should be performed, physical educators may create some flexibility in conducting these various fitness tests. Compromising the tests is manifested in a number of ways. Based on observation of physical educators over the past decade, the most common exercises where physical educators accept questionable performance on a fitness test are pull-ups and push-ups. For example, some physical educators appear to be willing to accept a slight swing or leg kick to get those last few pull-ups in, or even accept a pull-up that does not quite get the chin all the way over the bar.

Although research has shown that the push-up test is a reliable and valid test for upper-body strength (Fernandez-Santois, Ruiz, Gonzelez-Montesinos, & Castro-Pinero, 2016), the administration protocol will have an effect on the accuracy of the test itself. In push-ups all sorts of body positions, from being excessively arched

to being extremely pike, have been observed, as well as the acceptance of various levels of height from the floor during the lowering phase of the push-up. Even when the testing protocol calls for a 90-degree bend in the elbow, this may be interpreted differently by different observers.

Another fitness test category in which the test score may be "stretched" is the hip or hamstring flexibility test. This test is often referred to as the sit-and-reach test or the back-saver sit-and-reach. Although testing manuals state that the knee should remain straight (Meredith & Welk, 2013), often physical educators are willing to accept a slight bend in the knees as students are performing the test. Additionally, it has been observed that some physical educators are even willing to provide some external push on the back to obtain a desirable score. These practices show the eagerness of the physical educator to "help" students pass the test, and they may create scores that look better than the true performance and that do not reflect accurate measurement of the student's range of motion.

Finally, some physical educators permit students to supervise their classmates as they perform the fitness tests. This is an understandable practice, since physical educators often have classes of over 30 students and limited time to administer the fitness tests. However, without close supervision, students may not correctly count the exercises or make sure that their partners are performing the exercise correctly, thus compromising the testing procedure. Physical educators must provide sufficient instruction about the fitness tests to ensure that the tests are being conducted and scored correctly, or else students will receive scores that are inaccurate.



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To minimize compromising the test results, physical educators should stay updated with current best practices in fitness testing through professional development opportunities or reading the updated guidelines and references (e.g., Meredith & Welk, 2013; PYFP, 2013), which are often posted online, and then apply them faithfully. Additionally, when using students to help with supervising testing procedures or recording test scores, physical educators should not just throw the task or test at them; instead, they should teach the students explicitly about the tests and their procedures and make sure that the students understand these procedures and are competent to carry out the task.

Testing without Teaching

While fitness testing in physical education has been practiced for decades, teaching fitness has ample room to improve. Research evidence shows that in many cases students are confused about the fitness tests, do not understand why they have to go through such an ordeal, and have misconceptions about basic health-related fitness concepts (Hopple & Graham, 1995; Placek et al., 2001). These issues result in part from the practice of testing without teaching the fitness content. In other words, physical educators in this situation would often go through a few sports and games during the semester, and then suddenly require students to complete the fitness test and/or reporting requirements.

If students have not been taught about fitness content, fitness tests, and their implications, then it is only normal that they will feel confused about the fitness concepts and tests (Placek et al., 2001). Some even dislike the test (Hopple & Graham, 1995). A science teacher cannot simply give the students a test without first teaching the content. Physical educators should not do so either, because health-related fitness content is an important part of the SHAPE America National Standards for K–12 Physical Education (SHAPE America – Society of Health and Physical Educators, 2014).

The National Standards emphasize that students need to learn important health-related fitness concepts and achieve and maintain a health-enhancing level of physical fitness (SHAPE America, 2014). To this end, a variety of programs have been shown to improve students' physical fitness performance (Kriemler et al., 2011), as well as students' health-related fitness knowledge (Leonetti, Zhu, & Chen, 2017; Sun, Chen, Zhu, & Ennis, 2012). While these interventions may not produce identical effects in all contexts, physical educators are encouraged to seek out and try these tested curricula in their programs.

Fabricating the Results

Falsifying test scores that are too high or too uniform is a practice that is apparent to researchers while examining student fitness scores as reported by physical educators from multiple districts.



The fabrication of results is obvious when looking at a specific fitness score and the age of the student who supposedly achieved the score. In one case the results of the 20-meter PACER were being examined, and there were scores regularly reported above 75 laps. These scores exceed the cardiorespiratory fitness criteria for students at the late middle or high school level. It is very unlikely for all 10-year-old, fourth-grade students in a school to uniformly score that many laps for the 20-meter PACER test.

The researchers also noticed large groups of students (> 60) from the same school and grade who received the same scores for the fitness tests reported, and the scores all happen to be right in the “healthy fitness zone.” For instance, a large group of middle school students, all from the same school and grade level, and most likely students of the same physical education teacher, all scored an 18 for curl-ups, 12 for trunk lift, and 40 for the PACER. These scores that all the students received are right in the healthy fitness zone for their age. The concept of an entire middle school population being physically fit is the ultimate goal for many physical educators; however, with the current trend of increasing physical inactivity for youth (Centers for Disease Control and Prevention, 2014), it is hard to conceive this notion as reality.

A final “hall of shame” practice that was observed by the researchers was the appearance of scores that were completely fabricated to simply fill in the spreadsheet. There were some instances where the same physical educator reported random numbers for all the fitness tests for all students in the same school. For example, “1234” or “1111” were the scores reported for all fitness tests. Those scores are not plausible for any of the tests, let alone all of them. It was clear that the physical educator or whoever was responsible for reporting the fitness scores just wanted to fill in the spreadsheet. With the total fabrication of results, it is unknown whether the students were tested at all. Even though fitness testing hundreds of students can be a daunting task, physical educators should understand the value and importance of the tests and the accuracy of the reported scores.


The alternative practice for fabricating the test results is simple: Do not do it! It is hard to imagine a mathematics or reading teacher doing this without receiving any consequence. No teacher, physical educators included, should falsely report or fabricate test results.

Conclusion

The purpose of this article was to describe a number of inappropriate practices that the authors have observed through field observation and laboratory analysis of reported fitness data. The list of practices presented here does not target any specific physical educator or region. It is hoped that physical educators and physical education teacher educators will find the information useful and follow the recommendations for avoiding these inappropriate practices.

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