

Chapter 3: Fitness Testing as a Debated and Contested PE-for-Health Practice

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Abstract

Fitness testing is arguably the most contested PE-for-health practice, especially in countries such as England, Australia and the United States of America. The testing of children within PE can be traced back to at least the early twentieth century, but common approaches to teaching in, though and about fitness testing continue to be debated. Such debates, for example, relate to educative purpose (i.e. the tendency to focus on fitness testing in isolation as opposed to being embedded within a broader fitness education unit, the placing of students 'on display' (i.e. so that it is very clear who the higher and lower performers are), and the presentation and use of test results. One way to respond to the debates related to fitness testing is to expand how we think fitness testing. That is to say, instead of focusing on 'what the body is' (e.g. underweight, flexible, strong) we can focus on 'what the body can do' (i.e. culturally, psychologically socially and physically). Doing so aligns more closely with contemporary and multi-dimensional understandings of health, and opens up opportunities for more inclusive and educative fitness testing, and PE-for- health practices more broadly.

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Introduction

There are a number of PE-for-health practices that have been the focus of debate, such as cross-country, but few are more contested than fitness testing. Whilst fitness is merely one component of health, research from England (Alfrey, Cale & Webb, 2012; Cale & Harris, 2009) and Australia (Alfrey & Gard, 2014) suggests fitness testing is the most frequently used context for learning about health within PE, and thus is classified as a 'PE-for-health' practice. To examine fitness testing, we draw on existing international research before sharing and analysing a case study which exemplifies how fitness testing, and PE more broadly, can affect the multiple dimensions of learners' bodies and health. While it is recognised the perspectives and approaches shared here could never apply to all teachers and learners, they do provide a basis for reflecting on fitness testing as a contested PE-for-health practice and explore alternative testing approaches.

The tendency to test, measure, describe and categorise childrens' bodies is not a new phenomenon. This tradition can be traced back to the start of the twentieth century (Kirk, 1998) where measuring children formed part of health inspection regimes that occurred across the Anglosphere (Alfrey & Gard, 2014). By the 1950s, links were made between health and physical activity and we saw the emergence of, for example, the President's Council on Youth Fitness in the United States of America (USA) (Freedson, Cureton, & Heath, 2000), the Australian Youth Fitness Survey (Willee, 1973), and the English National Child Measurement Programme (Public Health England, 2013).

Fitness testing as a PE-for-health practice remains a persistent feature of PE programmes internationally, especially in countries such as England, Australia and the USA. The popularity of fitness testing within PE, however, has been contested for decades, with the main arguments of the debate centered on a few key questions: i) why do teachers carry out fitness testing?; ii) how do teachers carry out fitness testing?; and iii) how are learners experiencing fitness testing? We now share some evidence-based responses to each of these questions to provide insight into why fitness testing continues to be a debated PE-for-health practice.

After reading this chapter, you will be able to:

- i) Articulate key debates concerning the teaching of fitness testing.
- ii) Reflect on and critique your own practices related to fitness testing.
- iii) Plan for educative and inclusive approaches to fitness testing within a broader fitness education unit.

Why do teachers carry out fitness testing?

In the USA, Keating and Silverman (2004) surveyed over 300 PE teachers and found three main reasons for including fitness testing in programmes: (1) promote physical activity and health; (2) record students' progress; and (3) assess and/or improve teachers' physical activity and fitness instruction. More recently, Alfrey and Gard (2014) surveyed (n=108) and interviewed (n=8) Australian PE teachers to understand why fitness testing was the main context/activity through which health was taught in PE. The findings revealed the three most popular reasons for carrying out

fitness testing were: (1) to motivate children to be physically active and promote health; (2) fitness testing is an 'easy' lesson to teach; (3) fitness testing is a traditional practice in PE.

Thus, research suggests the most common rationale for PE teachers to carry out fitness testing include:

- *health/fitness/physical activity promotion* - This rationale is well-intentioned but there is no evidence to suggest fitness testing promotes health, fitness or physical activity. There is, however, evidence to suggest fitness testing can negatively impact future health, fitness and physical activity (Ladwig et al., 2018).
- *assessment* - In some schools, fitness testing results are used to assess achievement in PE. This is problematic given that fitness testing does not measure student learning.
- *tradition* - History is a powerful predictor of current and future practices in education. Tradition alone, however, is not a suitable rationale to continue such a contested practice that often lacks educative value.

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Reflect on your own knowledge and/or experiences of fitness testing in PE and consider the following questions:

1. To what extent does fitness testing feature in your school's PE curriculum? What are the reasons for your answer?
2. Why might you, as a PE teacher, need to assess students' fitness levels?
3. What knowledge and skills do you expect students to demonstrate after participating in fitness testing?

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Moving away from a focus on health/fitness/physical activity promotion and toward a focus on learning in, through and about fitness testing, would represent a stronger and more appropriate rationale for its inclusion within PE.

How do teachers implement fitness testing?

There is limited research on how teachers implement fitness testing, but most accounts suggest a typical lesson involves students completing a battery of fitness tests such as the beep test, sit and reach, Cooper 12-minute run and the Illinois agility test. When asked what a typical fitness testing lesson looked like in their school, one Australian secondary teacher stated,

I carry out fitness testing twice per year. I do the beep test, basketball throw, sit and reach, 1.6 km run, height, weight, shoulder stretch, sit ups. I do it because it is set out in our school's curriculum that students should do fitness testing at the beginning of term 1 and beginning of term 4. (Alfrey & Gard, 2014, p.10)

As the above quotation suggests, it is commonplace for fitness testing to occur at the start and end of the school year, with the expectation that improvement across different dimensions of fitness will occur in the interim. Such improvement is not always possible, however, due to a range of factors (e.g. genetics, geographical location, lack of social support etc.). Equally, if the students naturally grow, their scores are likely to improve.

Research internationally has problematised how fitness testing is taught. Some key debates concerning the teaching of fitness testing are:

- ***Fitness testing or fitness education?*** Fitness testing often occurs in a single lesson, disconnected from broader fitness education programs (Simonton, Mercier & Garn, 2019) and with unclear educative aims (Hopple & Graham, 1995; Placek et al., 2001). Embedding testing within a fitness education unit may support learners in planning, enacting, and evaluating a fitness program.
- ***Are students on display?*** When students participate in fitness tests in front of others, often for pragmatic and logistical reasons, this results in negative affect (emotions and feelings) – especially for learners who are considered ‘poor performers’ (Zhu et al., 2018).
- ***How are results used?*** Research suggests fitness test results are rarely used to support education (Simonton, Mercier & Garn, 2019). What happens with results is not always clear. This issue has become problematic in some places within the USA because data privacy laws protecting minors are stringent. In fact, parents in one state successfully argued against the implementation of third-party private fitness assessments (like FitnessGRAM®) because school districts shared personal student records and violated data protection laws.

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Reflect on previous fitness testing practices and consider the following questions:

1. What is the perceived value of understanding fitness and health concepts?
2. How could fitness and health concepts be taught without putting student bodies on display – or emphasizing progress on fitness scoring?
3. What are some of the reasons why using fitness test scores is not an appropriate way to assess student achievement in (non-examinable) PE?

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Having highlighted key debates as to why and how fitness testing is taught, we now shift focus to how learners experience fitness testing.

How do learners experience fitness testing?

All learners experience fitness testing in different ways. O’Keefe, MacDoncha and Donnelly (2021, p.53) suggest “analysing students’ attitudes and experiences (of fitness testing) is a critical step in developing evidence-based pedagogical approaches.” Their research from Ireland found learners, and particularly boys, tended to have positive attitudes toward fitness testing and viewed it as a useful part of PE. It seems two key factors contributed to these positive learner attitudes: (1) testing was one component of a broader fitness education unit, giving students an opportunity to learn in, through and about fitness testing; and (2) a student-centred approach to fitness testing, whereby learners with seniority facilitated the administration of fitness testing served to support the learning and process more broadly.

O’Keefe and colleagues’ (2021) study highlights the importance of considering pedagogical approaches to fitness testing. Other research suggests more common pedagogical approaches to fitness testing (e.g. whole-class beep test, public displayed scoring) can cause distress for some students. Lodewyk and Sullivan (2016) argued fitness testing can negatively impact learner body image, anxiety and self-esteem. Similarly, Ladwig et al. (2018, p.127) reported negative affective experiences from fitness testing during childhood lasted into adulthood, thus negatively impacting lifelong physical activity. This should perhaps come as no surprise as we have been historically warned this may be the case for some learners. In 2008, Garrett and Wrench (2008) claimed ‘the continuing and unproblematic use of fitness testing in schools and universities might actually contribute to narrow learning outcomes that cause more pain than pleasure’ (2008, p. 21).

As teachers, we need to be mindful of the impact our practices have on learners and work with them to develop safe, educative and pleasurable experiences. To think about the influence of our practice, we next rethink how ‘health’ is understood in PE by sharing a case study. We then conclude the chapter by providing alternative approaches to fitness testing.

Rethinking ‘health’ in PE: ‘what can the body do’

In rethinking ‘health’ in PE, we suggest moving beyond describing ‘what the body is’ (e.g. underweight, flexible, strong) and instead focus on ‘what the body can do’ (Fox, 2012). This approach helps us to reconsider the role of fitness testing in PE and respond to the above debates examining its practices. The shift in focus (to thinking about ‘what the body can do’) allows for our learners to be seen from a multidimensional and holistic perspective.

Historically, the word ‘health’ in PE has referred to processes of ‘schooling bodies’ (Kirk, 1998) to: (a) reproduce privileged body types (Tinning, 1985); (b) increase public health outcomes (McKenzie & Lounsbery, 2009); and (c) promote attainment of motor and sport skills (Tucker, Bebeley & Conteh, 2017). As such, young bodies have been reduced to, and restricted by, labels that describe their body type (e.g., skinny, obese), level of physical activity (e.g. low, moderate, vigorous), or skill development (e.g. basic, intermediate, advanced). Rather than seeing ‘health’ as a description of ‘what the body is’ (e.g., ‘at-risk’), we shift our understanding of health toward ‘what can the body do’.

There are several benefits to moving away from *describing* bodies and toward focusing on *'what bodies can do'*. First, our field can shift away from pathologising and categorising bodies as 'healthy', 'unhealthy', 'fit' or 'at-risk' and instead value and include all bodies. Second, descriptions often focus on and over-emphasise the biological/physical body. The body, however, can be understood from a range of perspectives including sociological, psychological, political, and anthropological (Fox, 2012). These perspectives of the body are interconnected, and just as important as, the physical body. By re-imagining health as 'what the body can do' in PE, we can consider the body's capability across different dimensions (e.g., psychological, social, physical). Historically, PE has siloed different dimensions but we recognise 'what the body can do' is dependent on the network of relations *between* these dimensions. In other words, the relations between the physical, social, psychological, emotional, and so forth empower and limit 'what the body can do' in PE.

From this multi-dimensional perspective, if cultural, social, psychological and physical aspects of the body have *positive* relationships with each other during movement, then these will enhance the body's ability and motivation to move and learn. If one of these relationships falters however (e.g. through injury or stress), these negative relationships limit the body's ability to move and learn. The body's capacities (what it can do) therefore, are both enhanced and limited by a network of relationships both internal and external to the body.

If we understand health and the body as multi-dimensional, then PE should be concerned with learning experiences that promote positive relationships between the different dimensions of the body. 'Health' from this perspective, and in the context of PE, goes beyond pathology (free from disease) and is evaluated by the body's ability to enter into as many new positive relationships as possible (e.g., learning new skills, learning fitness concepts). Therefore, the goal of PE (and health) is to expand 'what the body can do'.

We now share a case study of Elena¹ and her experiences of PE and fitness testing, before sharing a brief analysis that responds to the question 'How did Elena's PE experiences affect what her body could do?'

Case Study: Elena, PE and Fitness Testing

Elena is a 15-year-old Spanish girl who lives in Aotearoa New Zealand. She identifies as a cisgender woman with a queer sexuality. She is an active young person who plays competitive volleyball and netball at her school. Despite being a sportsperson, she expressed *'hatred'* for PE. She says her dislike of PE is due to the monotonous, repetitive nature of the content, focus on fitness, and how she feels about her body (*'fat'* and *'slow'*). Elena describes herself as a *'bigger'* girl with *'Spanish hips'* and *'Rugby thighs'*, although she readily admits to never playing (or wanting to play) rugby.

In PE, Elena had to weigh herself, calculate and track her BMI using graphs and tables. To improve her fitness scores, Elena participated in daily runs in class where she was instructed to run laps at her own pace. Doing the laps generated an emotional

¹ Elena is a participant from Landi's (2019) study examining LGBTQIA+ experiences in health, physical activity, and educational settings.

response for Elena. She commented *“People are overtaking and lapping you and you are like ‘OK’. I get you’re not supposed to compare, but come on. It’s horrible because I don’t want to think about myself in bad ways but everyone is always better than me.”*

Elena described doing a battery of fitness tests in PE (e.g. beep test, sit and reach). She noted it was obvious who was going to do well (or not) during testing. As such, Elena worked with girls of similar fitness levels, and they agreed to leave the beep test at the same time to avoid being bullied. After exiting the tests early, they hung out together, bonded over being *‘not as fit as the rest of the class.’* Elena is required to wear a uniform for PE; she stated, *‘Oh my god, the uniforms are tight fitting, and I don’t want my classmates seeing me.’* One of the reasons she didn’t want to wear uniforms was because of gender norms. She said, *‘As a girl I am supposed to look a certain way and wear certain clothes and have a certain body in PE.’* What’s worse is that when some girls did not *‘fit in’* to gender norms - they were ridiculed by classmates. *“They won’t say anything to your face, but they will call you a lesbian behind your back.”* Such comments made Elena feel bad about her body, fitness, and identity.

In discussing PE and her teachers, Elena stated, *“They want people to be sporty and active. They want us to care about things like fitness and stuff. But they don’t understand that health is more than just like running and keeping physically fit. It’s about so much more than that.”* Elena went on to explain that in her family, being healthy means being able to dance and celebrate during events. It also meant expressing who you are and feeling good about yourself. Or, as she stated, *“It’s about being in a community where you don’t have to feel isolated. You can feel safe, meet people, play games, be who you are, and learn from others.”*

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Reflect on the above story:

1. Do Elena’s feelings and experiences toward PE surprise you? Do you think other young people may feel similarly about PE?
2. How might Elena’s experiences in fitness testing and PE impact ‘what her body can do’ within and beyond school?
3. If you were Elena’s PE teacher, what might you do differently?

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In the next section we reflect on Elena’s experiences of PE. We do not pass comment on whether these experiences were ‘good or bad’, ‘healthy or unhealthy’, or ‘positive or negative’. Rather, we consider the following question: How did Elena’s PE experiences impact what her body could do? We consider the ways these experiences enhanced Elena’s body in PE, and in what ways they limited her body. To reflect on this case study, we examine the question via the cultural, psychological, social and physical dimensions of the body and health.

What can the cultural body do?

In our case study, Elena identified as a Spanish, queer 'thick' female athlete. Elena felt out of place and disenfranchised during fitness testing in PE. To start, the knowledge that underpins fitness testing comes from Western biomedical perspectives around exercise as a tool for 'optimal' physical health. This often ran at odds with her Spanish cultural background where movement was aligned to bodily expressions, emotions and family relations. For Elena, fitness testing was detached from her culture and placed in a Western 'biomedical health' context that focused on the individual.

Elena's ethnic identity also intersected with her other identities. For example, these tests often split learners by perceived gender. Elena explained how being a woman meant having lower testing expectations and specific clothing mandates. Such practices were aligned with cultural expectations placed on women's bodies, often limiting what they can do. When we consider the intersectionality of this situation the big-hipped female body that is celebrated in Spanish and queer cultures are at-odds with Western biomedical expectations within PE that value skinny bodies. The 'skinny' and 'toned' cultural expectations reinforced through fitness testing often made Elena feel like she did not 'fit in' to clothing or PE. Ultimately, this misalignment between Elena's identities and fitness testing practices and cultural norms limited what her body could do in PE.

What can the social body do?

The social body reflects the interpersonal relationships someone can enter into during PE. During her fitness testing experiences in PE, Elena's social body was limited because her relationships were reduced to working with specific people. In other words, based on grouping and scoring, Elena entered into social relationships with other learners who were either women and/or 'poor test performers'. From a teaching perspective this not only genders students but also works to 'classify' and 'track' them into hierarchical groups based on fitness levels. This grouping limited Elena's body's ability to enter into interpersonal relationships to just a few classmates (female, low-skilled). Therefore, she may not have had similar experiences as boys and/or 'high performing' students.

The impact on Elena's social body was not all negative, her relations with a few peers could be considered positive. Despite being subjugated to lower status via cultural bodies (e.g., body size, gender, sexuality, test scores), the young women in Elena's story did not passively accept being treated poorly. Rather, they used their social relationships together to collude, drop out of and resist participating in fitness testing. Thus, whilst from one perspective it is clear these young diverse women did not learn much about fitness or enjoy fitness testing, from another perspective it could be argued they learned how to work together to resist fitness testing practices. So, Elena's body may not have been able to enter into relationships that progressed her fitness knowledge or ability, but she was able to enhance her ability to work with others and protest against dominant and discriminatory practices.

What can the psychological body do?

Through Elena's case study we see a range of ways in which traditional approaches to fitness testing in PE can impact the 'psychological body'. Elena referred to her 'hate' for PE which seemed to have multiple roots and possible psychological effects. The ways in which PE was taught made her feel embarrassed of her 'big' and 'slow' body. Despite efforts by the teacher to protect students from comparison during fitness testing, this activity still prompted a psychological response for Elena because her performance was visible and comparable to both other classmates and scoring norms. Thus, she was forced to think of herself in 'negative ways'. As noted above, however, Elena also built relationships with young girls in her class and these relationships had a positive effect on her sense of self. Thus, Elena experienced an enhancement of her psychological body through the relationships she built with friends in opposition to fitness testing.

Looking beyond fitness testing, Elena's experiences prompts us to reconsider other contested practices such as compulsory uniforms. For Elena, the uniform she was forced to wear made her feel embarrassed because her body deviated from 'the norm'. Moreover, her psychological body was harmed via the bullying she experienced, and which reinforced her feelings of shame and embarrassment, as well as threatened her identity as a cisgender Spanish, queer woman.

What can the physical body do?

Elena referred to the way in which her experiences of fitness tests (e.g. beep test, Cooper run) were administered (i.e. exposed in front of the class) and we could see how her experiences impacted what her physical body could do. Elena's physical body was weighed and tracked under the gaze of her teacher and peers. Based on her physical body she was categorised as a deviant, not conforming to gender or fitness norms. She was also required to cover her physical body with a compulsory and ill-fitting uniform. Further, she did not improve her fitness nor did she feel physically good participating in exercise. These are examples of how fitness testing affected what Elena's physical body could do in PE.

Re-thinking approaches to fitness testing: Expanding what the body can do

In terms of alternatives to traditional fitness testing approaches, Vazou, Mischo and Ladwig et al. (2019) suggest simple modifications to teaching could improve students' experiences of fitness testing. Drawing on research that focuses on fitness testing, what follows are some recommended approaches to teaching in, through and about fitness that can be educative, meaningful and safe for learners. When conducting fitness testing, we recommend teachers ensure they address all the dimensions of the body. Notably, these suggestions may be labeled in 'one' dimension but many of these practices address multiple dimensions.

- The cultural body:
 - Ensure tests being used are meaningful to the students' lives, identities, and diverse cultures (e.g., youth culture, ethnic culture, gender culture).
 - Work with students to develop new assessments that are embedded by and teach about diverse cultural groups that comprise the community.
- The psychological body

- Provide students the space to discuss the role fitness testing plays on how learners feel about themselves, their bodies and movement.
- Have students analyse which forms of movement enhance their self-esteem and attitudes toward physical activity.
- The social body
 - Provide fitness testing opportunities that require students to work together, collaborate and develop meaningful connections with others.
 - Have students analyse how fitness testing practices may make other students – that do not look like themselves – feel in PE.
- The physical body
 - Have students engage in fitness testing and consider how it can enhance different parts of their body (e.g., muscles, cardiovascular system).
 - Have students develop one minor fitness goal and have them consider how their body changed as a result of that process.
- The learning body:
 - Make testing part of a broader fitness education curriculum/unit of work where emphasis is placed on learning health and fitness concepts.
 - Do not rush fitness testing and provide time for students to explore, critique and learn about fitness testing through movement.

In addition to the aforementioned bodily dimensions, we also advocate paying attention to the 'reflective body'. You could do this by providing students the opportunity to reflect on their fitness testing experience by focusing on: (a) how testing makes them feel about their body and movement (psychological); (b) how their physical body feels and responds to movement (physical body); (c) what they have learnt (learning body), (d) the relevance of this practice in their lives (cultural), and (e) how movement can enhance personal relationships (social).

In terms of how tests are conducted, students suggested they would appreciate having an opportunity to choose:

- Where they are tested (e.g., at home, in school).
- Testing partners (e.g., 3-5 peers, friends).
- The tests they engage in, so they are relevant to their lives.
- The ability to develop their own tests.

Students we have worked with have also been very clear that they:

- Want to know the purpose/ learning goals of fitness testing.
- Do not want the results to be publicised.
- Want to know what happens to the results.
- Focus should not be placed on the scores of the tests.

Conclusion

This chapter examined fitness testing as a pervasive but contested feature of PE. Specifically, it has exemplified how fitness testing, and PE more broadly, can impact the multiple dimensions of students' bodies and health. We explored the value of moving beyond describing 'what the body is' and instead focusing on 'what the body can do'. Doing so, we argue, aligns more closely with multi-dimensional

understandings of health, and opens up opportunities for more inclusive PE-for-health practices. In response to ongoing debates related to fitness testing, we have shared some recommendations for the future of fitness testing in PE, with the view to making it a more educative and inclusive experience for all students.

Summary and Recommendations

- There are a number of PE-for-health practices that have been the focus of debate, such as cross-country, but few are more contested than fitness testing.
- Fitness testing is the most frequently used context for learning about health within PE, and thus is classified as a 'PE-for-health' practice.
- The tendency to test, measure, describe and categorise childrens' bodies is not a new phenomenon. This tradition can be traced back to the start of the twentieth century.
- Teachers cite a range of reasons for including fitness testing in their PE programmes, including to motivate students to be more physically active, to assess students' fitness, because it's easy and it's a traditional component of most PE programmes.
- Fitness testing often occurs in a single lesson, disconnected from broader fitness education programs and with unclear educative aims
- While some students enjoy fitness testing, this practice can have a negative affect on some students.
- In rethinking 'health' in PE, we suggest moving beyond describing 'what the body is' and instead focus on what the multiple dimensions of the body can do.
- We recommend, for example, embedding testing within a broader fitness education curriculum/unit of work, let students make decisions that impact their experiences of fitness testing and education, and not publicising the results.

Concluding Activity

Based on the content of this chapter and with respect to fitness testing, do the following:

1. Create a fitness education unit plan, with clear learning intentions, comprising 5-10 lessons that responds to some of the debates shared in this chapter.
2. Within your unit plan, include one lesson that addresses each of the dimensions of the body using fitness related activities (Cultural, Social, Learning, Physical, Psychological).
3. Be sure to integrate the reflective body across all of these lessons.
4. Consider the ways in which your lesson can 'expand' what the learner's body can do in PE.

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