

A CRITICAL EXAMINATION INTO MOTIVATION AND
GENDER IN YOUTH PHYSICAL FITNESS TESTING

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EPIGRAPH

“For the master’s tools will never dismantle the master’s house.”

--Audre Lorde (1984, p. 114)

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PREFACE

This dissertation consists of three manuscripts that will be submitted for publication. The first and second manuscripts, Chapter 2 and Chapter 3, respectively are quantitative studies. The third manuscript, Chapter 4, is a qualitative study. All three of the manuscripts explore how 5th grade physical education students experienced physical fitness testing programs.

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ABSTRACT

Fitness testing in physical education classes has emerged as an important component in efforts to assess and address health concerns related to children's physical inactivity. To date, motivational aspects of fitness testing, especially in regard to students' future intention to participate in fitness-related activities, have not been closely examined. Fitness testing practices have been identified as a dominant discourse in physical education that continue to separate girls' and boys' physicalities along gendered lines. This lack of understanding about the motivational implications of fitness testing programs, coupled with concerns related to the gendered nature of fitness testing, emphasize the significance of this dissertation.

The purpose of this dissertation was to investigate motivational and gendered aspects of fitness testing in physical education. The first quantitative study investigated students' motivational orientations towards the President's Challenge Physical Fitness Test [PCPFT] by comparing students who received awards with those who did not. Students who completed the PCPFT and received an award reported higher levels of task-involvement, perceived competence, effort, enjoyment, and future intention to participate in fitness testing programs than those who did not. The second quantitative study explored students' motivation orientations, perceptions of the climate, and future intention to participate in fitness-related activities by comparing students who completed the PCPFT with those who completed FitnessGram. Students who participated in FitnessGram reported higher levels of task-involvement, perceived competence, and future intention to participate in fitness-related activities. The qualitative study investigated how students who participated in the two programs made sense of the gender disparities apparent across the tests, and two themes emerged. First, knowledge about gender-related conceptions of fitness was created by the students based on their schooling experiences, various modes of popular culture, familial expectations/roles, and historically-situated events that

served to establish and perpetuate boys and girls as essentially different. Second, the students' positioning within the two different testing programs allowed the students to produce knowledge and meaning that led to restricted bodily movements. This research extends the work of previous feminist and motivation scholars in the physical education domain and provides a basis for further study.

CHAPTER 1: INTRODUCTION

In the United States, researchers and practitioners in the physical education field are paying significant attention to data that highlight the relationship between decreases in of participation in regular physical activity and increases in health-related risks (i.e., cardiovascular disease, obesity) (United States Department of Health and Human Services [USDHHS], 2000). In their search for solutions to this problem, USDHHS has identified physical education classes in schools as a site to address these trends. Sallis et al. (2002) argued that due to the considerable amount of time children spend in schools, the potential for schools to have positive effects on children regarding health-related issues should not be overlooked.

The usage of fitness testing in physical education classes (Baumgartner, Jackson, Mahar, & Rowe, 2003) has emerged as an important component in efforts to assess and address health concerns related to children's physical inactivity. Currently, several physical fitness tests are being used to assess students' fitness levels. Such programs include the President's Challenge Physical Fitness Awards Program [PCPFAP], FitnessGram, and Physical Best. According to the President's Council for Physical Fitness and Sport [PCPFS] (2003), one objective of fitness testing is to encourage and motivate individuals to adopt and adhere to physical activity behaviors across the lifespan. Regardless of the intentions or purposes that physical education teachers identify when they implement fitness testing in their curriculums, research suggests that physical fitness is affected by participation in physical activities, while also playing a significant role in individuals' health in general (Bouchard, Shephard, & Stephens, 1994).

In their review of research related to fitness tests, Harris and Cale (2006) indicate that advocates for fitness tests argue that testing programs actually increase children's motivation to participate in regular physical activity. Other scholars, however, have argued that there has not been enough empirical investigation that assesses how students experience fitness tests and

motivational implications (Fox & Biddle, 1988; Jackson, 2000). These divergent perspectives highlight the need for research that pertains to how the structure of fitness testing and students' experiences are influenced by their motivational dispositions, especially when considering the implications of the gendered nature of fitness tests. In 2006, the PCPFS stated that "leading the nation toward these goals [e.g., healthy individuals and society] has been the Council's mission from the start and continues to be as the PCPFS motivates Americans to become—and stay—active" (p. 2). While this is recognized as an important purpose, as with any dominant discourse, it is essential for aspects of fitness tests to be investigated in terms of students' motivational orientations on the following motivation constructs: achievement goals (i.e., task, ego); intrinsic motivation (i.e., perceived competence, enjoyment, effort, pressure/tension), and future intention.

A fundamental assumption of achievement goal theory (Nicholls, 1984) is that individuals function in intentional, goal-directed ways, while adopting goals according to specific achievement contexts (Maehr & Nicholls, 1980; Nicholls, 1984, 1989). When individuals enter an achievement setting, goal theory proposes that they may approach the task from two different, non-related motivational directions, namely from task- and ego-orientations. A task-oriented individual is interested in achieving a specific goal with the intention of increasing competency (Maehr & Midgley, 1996; Nicholls, 1979). An individual with a high level of ego-involvement, however, is fixated on his or her performance relative to others or the norm. Nicholls (1989) argued that individuals who are ego-involved are at risk for maladaptive motivation patterns. That is, for ego-oriented individuals, effort is more likely to decrease, cumbersome tasks may be avoided, and failure may be attributed to a lack of ability when normative comparisons yield negative feedback. Task-involved individuals approach a task with the belief that with effort, ability can increase. With the limited amount of research pertaining to achievement goals and fitness testing, it is clear that further research is needed to consider how

normative-based physical fitness testing programs like the PCPFAP promote high levels of ego-involvement, while potentially minimizing the importance of adopting healthy fitness behaviors.

In achievement settings, intrinsic motivation must be taken into consideration, as it has been found to be positively associated with perceived competence (Ryan & Deci, 2000). White (1959) argued that individuals are intrinsically motivated to pursue and achieve competency. According to Ryan and Deci (2004), individuals are intrinsically motivated when they experience natural feelings of satisfaction apart from any external forms of reinforcement. However, when investigating physical activity settings, Treasure (2001) argued that extrinsic reward systems can potentially have a larger role in influencing behavior than intrinsic rewards that are linked to health-related benefits. The tenets of intrinsic motivation suggest that when there is a focus on competency and autonomy, intrinsic motivation will increase (Whitehead & Corbin, 1991). Conversely, when the focus is placed on individuals' incompetence, or they perceive a lack of control, intrinsic motivation will be challenged. Whitehead and Corbin found that when investigating motivation and fitness testing, positive feedback increased intrinsic motivation and negative feedback decreased intrinsic motivation. While individuals may have good intentions for providing extrinsic rewards in ego-oriented climates, such reward systems have been found to have negative affects on students' perceived competency (Nicholls, 1989) and level of self-worth (Covington, 1984), which may have implications for whether or not a person will attempt a task in the future.

As an individual reflects on a previous performance outcome, she or he begins to interpret the outcomes either as a success or failure (Schunk & Ertmer, 2000; Zimmerman, 2000). This personal assessment plays a significant role in decisions individuals make about whether or not to continue with the task or disengage completely. Previous research has revealed that children have affective and behavioral responses to outcomes that they label as a failure

(Heyman, Dweck, & Cain, 1993; Wigfield & Eccles, 2002). These findings emphasize that as students assess their successes and failures on fitness tests, some students may begin to disconnect themselves from physical education and physical activity in general. Such research emphasizes the need to consider how physical education students are experiencing fitness tests and the ramifications for future physical activity behaviors.

When considering physical fitness testing as a pedagogical practice in physical education, it is clearly one area of the physical education curriculum that continues to divide students along gender lines. Even prior to puberty, the performance expectations for girls are lower than those for boys. Previous research has not considered the implications of gendered fitness tests on how students come to understand their physical potentials. As with previous feminist-based research that has investigated gendered aspects of the physical education domain (e.g., Azzarito & Solmon 2006a; Azzarito & Solmon 2006b; Flintoff & Scraton 2001; Martino 1999; Wright 1995), close critical feminist attention needs to be paid to fitness testing. This is especially important as the gendering of fitness tests has been largely ignored in the literature. Thus, critical feminist theory provides an important framework to investigate how students experience fitness tests and how meaning is ascribed to the body, while looking closely at the motivational aspects of physical fitness testing.

Findings from Riddell's (1992) study the findings revealed that girls were actively using notions of femininity to maneuver through a physical education system with a definitive dominant cultural ideology. I argue that this may be happening in fitness testing discourses and this is an unequivocal reason to investigate motivation and the gendered nature of fitness testing. If all students are to learn and perform in ways consistent with being productive citizens, then all subject areas—including physical education— must be investigated critically in order to promote change for advancements in student learning and gender equity. The overall purpose of this

dissertation was to investigate motivational and gendered aspects of fitness testing, as a dominant discourse in physical education. Three studies, two using quantitative methods and the third using a qualitative method of inquiry, addressed this overall purpose. The first quantitative study (Chapter 2) investigated 5th grade students' motivational orientations (i.e., achievement goals, intrinsic motivation, future intention to participate in fitness testing) towards the President's Challenge Physical Fitness Test [PCPFT], a norm-referenced fitness testing program by comparing students who received awards with those who did not. The second quantitative study (Chapter 3) explored 5th grade students' motivation orientations, perceptions of the motivational climate, and future intention to participate in fitness-related activities by comparing students who completed a norm-referenced test (PCPFT) with those who completed a criterion-referenced test (FitnessGram). This study compared students' motivational orientations based on the fitness testing program their physical education teachers administered (i.e. PCPFT, FitnessGram) and fitness performance status. The qualitative study (Chapter 4) employed an open-ended interview protocol to investigate how students who participated in two different fitness testing programs (i.e., norm-referenced, criterion-referenced) made sense of the gender disparities that are apparent across the tests. Through the findings of these studies, I seek to extend the work of previous feminist and motivation scholars in the physical education domain.

CHAPTER 2: MOTIVATIONAL RESPONSES TO FITNESS TESTING BY AWARD STATUS AND GENDER

Introduction

Currently, a variety of physical fitness tests are available for physical education teachers to assess students' fitness levels. The two most prominent test batteries are the President's Challenge Physical Fitness Awards Program [PCPFAP] and FitnessGram. According to the President's Council for Physical Fitness and Sport [PCPFS] (2003), one objective of fitness testing is to encourage and motivate individuals to adopt and adhere to physical activity behaviors across the lifespan. In their review of research related to fitness tests, Harris and Cale (2006) indicate that advocates for fitness tests argue that testing programs increase children's motivation to participate in regular physical activity. Other scholars, however, have argued that there has not been sufficient empirical investigations concerning how students' experience fitness tests and their motivational implications (Fox & Biddle, 1988). The Physical Education Association [PEA] (1988) reported that there is not enough data-based evidence to support the notion that fitness testing motivates individuals. In fact, evidence suggests that the students who do well are the only ones that fitness tests motivate.

Harris and Cale (2006) suggested that these disparities provide justification for questioning how rigorously the findings, both from experimental and field based fitness tests, can be interpreted and generalized. These divergent perspectives and findings highlight the need for research studies that explore how the structure of fitness testing and students' experiences are influenced by their motivational dispositions, especially when considering the role of external reward systems and gender. Since the inception in 1966 of the President's Challenge, a norm-referenced test, approximately 55 million people have received awards as a result of their participation in the fitness program (PCPFS, 2006). The PCPFS explicitly stated, "Leading the

nation toward these goals [e.g., healthy individuals and society] has been the Council's mission from the start and continues to be as the PCPFS *motivates* Americans to become—and stay—active” (p. 2). While this is recognized as an important purpose, it is essential for aspects of fitness tests to continue to be investigated in terms of students' motivational orientations. Additionally, fitness testing is one area of the physical education curriculum that continues to divide students along gender lines based on biological sex differences (see Domangue & Solmon, 2008). Therefore research into the intersection of motivation constructs and gender in relation to fitness tests are needed to provide researchers, teachers, and test designers with important information concerning how students experience this specific aspect of the physical education curriculum.

Motivational Constructs

According to theoretical approaches to achievement motivation, an individual's motivation is based on how she or he evaluates competence within certain contexts, and how competence is related to achievement (Nicholls, 1984). Specifically, perceptions of competence are linked to achievement. Perceived competence refers to how individuals perceive their ability to engage in a particular task and/or their performances based on appropriate behavioral expectations (Nicholls & Miller, 1984). This is an important factor to consider as it is influential throughout one's life and plays a key role in affective personal development, regardless of one's cultural background. This approach to motivation proves to be significant when evaluating motivation and fitness testing (see Goudas, Biddle, & Fox, 1994). Thus, this section provides an overview that relates to three motivation constructs (i.e., achievement goals, intrinsic motivation, future intention) in terms of physical education and fitness testing when studies have addressed these topics.

Achievement Goals. Research related to achievement motivation ensued originally in psychological contexts (Elliot & Dweck, 2005). Findings have been used to address issues related to achievement motivation in various real-world settings including: educational, professional, business, and sports. The tenets of achievement goal theory presume that an individual functions intentionally in a lucid, goal-directed manner (Nicholls, 1984). Beliefs rooted in achievement goals direct an individual to make decisions and behave in response to specific achievement milieus (e.g., Nicholls, 1984, 1989). Research on achievement goal theory has dominated the achievement motivation literature over the past two decades (Roberts, 2001).

Achievement goal orientations are defined as the tendency for individuals to consider their success in terms of task and/or ego dimensions (Biddle, 2001).¹ A task-involved individual attempts to master a task while increasing competence. The focus of task-involvement is on self-improvement (Nicholls, 1989) and learning how to complete or perform a task successfully (Biddle, Wang, Kavussanu, & Spray, 2003). With ego-involvement, individuals endeavor to maximize positive aspects of their competence and lessen the emphasis on negative aspects of competence, relative to normative standards. An ego-involved individual is concerned with his or her performance compared to peers with the intention of achieving a higher social status (Biddle et al., 2003). Individuals become motivated when performance is considered to be superior to their counterparts, thus decreasing the probability of feeling incompetent.

According to Nicholls (1989), when individuals enter achievement climates where the focus is on ego-related goals, they will most likely perceive competence in relation to ability (e.g., low ability requires high effort). For individuals who seek ego goals, effort is likely to decrease, difficult tasks will be avoided, and ability will be identified as the reason for failure or success. Conversely, perceived competence will increase for those who focus on task goals. Those with task goals believe that with effort, their ability can increase, whereas, individuals

with ego goals maintain that ability causes success. When a physical education student is ego-involved, the allure to participate in a specific task is contingent on the individual's perceived ability and the normative involvement of the task (Biddle, 2001). It has been theorized that individuals who pursue task goals will exude adaptive and optimistic motivation behaviors, regardless of their level of perceived competence to complete the task (Nicholls, 1984; 1989). Likewise, individuals with ego goals and high perceptions of competence will potentially exhibit positive motivational behaviors. However, it becomes *problematic* when individuals with ego-oriented goals have low levels of perceived competence, that is, they may display maladaptive motivational patterns. Individuals interested in reaching goals associated with learning may increase competency through mastering new tasks and learning new skills (Solmon, 2006). Their focus is on competency rather than comparing their performance to others. Individuals who are focused on normative comparisons are likely to withdraw, fail to attempt difficult tasks, and display a decrease in performance when they do not compare favorably with their peers.

Intrinsic Motivation. Intrinsic motivation competencies is a construct that is interwoven with achievement goals and perceptions of competence (Wang, Chatzisarantis, Spray, & Biddle, 2003). According to Ryan and Deci (2004), "Intrinsically motivated behaviors are those whose motivation is based in the inherent satisfactions of the behaviors per se, rather than in contingencies or reinforcements that are operationally separable from those activities" (p. 10). Treasure (2001) suggested that extrinsic rewards frequently play a larger role in physical activity environments than the activity and/or any intrinsic health-related benefits students may gain. Individuals with task goals tend to be intrinsically motivated, whereas high ego goals are linked to extrinsic, controlling motivational regulations (Wang et al., 2002).

A central assumptions underlying theories of intrinsic motivation is that when the crux of an event is to endorse competency and personal control, intrinsic motivation will be enhanced

(Whitehead & Corbin, 1991). However, when an event promotes perceptions of incompetence and a lack of personal control, intrinsic motivation is weakened and challenged. Whitehead and Corbin investigated the effects of physical fitness testing on motivation. When the participants were given positive feedback, their intrinsic motivation increased, but negative feedback was associated with decreased intrinsic motivation. Frequently in ego-oriented environments, rewards are used in an attempt to motivate the students, but these climates may actually negatively affect students' self-worth (Covington, 1984) and perceptions of ability (Nicholls, 1989), and ultimately alienate rather than motivate students.

In regard to fitness testing, Goudas et al. (1994) found that children's motivational responses differed and responses were dependent on actual performance, perceptions of success, and achievement goal orientation. Children with high task/low ego goals reported the highest levels of enjoyment and effort. This finding is significant because even children with low-performance on the 20-m progressive shuttle run were still able to maintain intrinsic motivation. From a practical perspective, these students may need the most help and encouragement from their physical education teachers or peers in order to improve fitness performance. This study revealed that children's differences in goal orientations were clearly related to their motivational responses to the fitness test. Thus, the researchers argued that the implications for fitness testing on motivation cannot be ignored, especially since the PCPFT creates a motivational climate that is based on explicit extrinsic rewards.

Future Intention. As individuals reflect on their previous performances they begin to assess whether or not they will continue on with the activity or disconnect completely (Zimmerman, 2000). Of particular relevance to this study is previous research that revealed students with high perceptions of physical competence tended to be more prone to enjoy and continue to participate in physical activities than those with low perceived competence (Weiss &

Ferrer-Caja, 2002). Numerous findings from previous studies have reported that children react affectively and behaviorally to their failures (e.g., Heyman, Dweck, & Cain, 1993; Wigfield & Eccles, 2002). In physical education, failure on physical fitness tests may cause students to “check out” physically, emotionally, or behaviorally from activities in physical education or in daily life (Domangue & Solmon, 2008).

Gender and Motivation

Gender is included in this discussion of fitness tests because, as Ennis (1999) argued, in spite of the accomplishment of the United States Department of Education’s Office for Civil Rights to pass Title IX of the Education Amendments of 1972, physical education programs still fail to meet the needs of girls. Based on the norm-referenced standards for the PCPFT and the criterion-referenced standards used to assess fitness levels on the FitnessGram, it is clear that fitness expectations are drastically different across gender, age, and fitness test (e.g., Pacer, sit-and-reach, shuttle run, pull-ups, curl-ups). Gender differences in physical activity level have been documented during physical education (McKenzie, Marshall, Sallis, & Conway, 2000a), before school and at lunchtime (McKenzie, Marshall, Sallis, & Conway, 2000b), and during recess (Sarkin, McKenzie, & Sallis, 1997). These gendered physical activity-related findings are significant because physical fitness is affected by participation in physical activities (Bouchard, Shepard, & Stephens, 1994), and physical education contexts are frequently identified as male-dominated educational spaces (Griffin, 1989).

While schools have experienced dramatic changes in an attempt to follow the mandates of the law (Sadker & Sadker, 1994), critical consideration still needs to be given to all areas of physical education, including fitness testing (see Domangue & Solmon, 2008). Even though there has been a great deal of research investigating achievement goals in physical activity and education spheres, there has been limited focus on the intersection of achievement goals and

gender (Pintrich & Schunk, 1996). According to Midgley, Kaplan, and Middleton (2001), girls as compared to boys experienced negative consequences when they maintained normative-based achievement goals. Thus, it is important to consider goal orientations and gender when fitness testing programs continue to separate girls and boys (see Domangue & Solmon, 2008). Additionally, Wang and Liu (2007) found that when girls were intrinsically motivated, enjoyment of physical education increased. Xiang, McBride, Guan, and Solmon (2003) reported that girls in the fourth grade had lower expectancy-related beliefs and intentions to participate in physical education than younger children and fourth grade boys. This becomes an important indicator for educators to realize that as early as the fourth-grade, girls' motivation to participate in physical education already begins to decline. Such research emphasizes the need to consider how physical education students are experiencing fitness tests and the ramifications for future physical fitness and activity behaviors.

If all students are to learn and perform in ways consistent with being productive citizens, then all subject areas—including physical education—must be investigated critically in order to promote change for advancements in student learning for students of all abilities. Therefore, the purpose of this study was to investigate the relationships among physical education students' fitness award status and gender and three motivation constructs. The specific research questions were: a) What are the relationships among students' achievement goals, intrinsic motivation, and future intentions? and b) How do the three motivation constructs vary according to students' award statuses and gender?

Method

Participants and Setting

The participants were 123 fifth grade students (68 females, 55 males; 58 African American, 1 Asian American, 60 European American, 4 Hispanic American) at a public

elementary school situated in the Southeastern region of the United States. The University’s Institutional Review Board and the school district approved the study. The participants signed the child assent form and a parent or guardian provided informed consent.

Three physical education teachers taught the fifth grade students in 45-minute long class periods five times a week. The school was selected because the physical education teachers include the President’s Challenge Physical Fitness Awards Program in their curriculum. The teachers administered five tests (i.e., pull-ups, shuttle run, sit-and-reach, one-mile run, curl ups) at the beginning and end of the school year. Prior to collecting data, the researchers observed the teachers administering the fitness tests. The teachers followed the testing guidelines established in the President’s Challenge Physical Activity and Fitness Awards Program 2007-2008 brochure.

Instrumentation and Procedures

The researchers administered questionnaires after the participants completed the battery of fitness tests. Items are presented in Table 1. The questionnaires were completed in approximately 10-15 minutes, and the students were informed that their physical education teachers would not have access to their answers. The lead researcher read each item to the participants and answered their questions when clarification was needed.

Table 1. Instrument items.

Motivation Constructs	Subscales	Items
Achievement Goals		
	Task	<p>I improve my score because I have worked hard.</p> <p>I see improvements in my scores.</p> <p>I learn how to do the tests by trying hard.</p> <p>I work really hard.</p> <p>I do better on a fitness tests than I had previously done.</p> <p>I do a fitness test and it really feels right.</p>

(Table con'd.)

	Ego	<p>I do my very best.</p> <p>I am the only one who can do well on the fitness tests.</p> <p>I can do better than my friends.</p> <p>The others cannot do as well as me.</p> <p>Others mess up and I do not.</p> <p>I get the best score.</p> <p>I am the best</p>
Intrinsic Motivation	<p>Enjoyment</p> <p>Competence</p> <p>Effort</p> <p>Pressure</p>	<p>I enjoyed doing the fitness tests very much.</p> <p>The fitness tests were fun to do.</p> <p>I thought the fitness tests were boring activities.*</p> <p>I thought the fitness tests were quite enjoyable.</p> <p>I would describe the fitness tests as very interesting.</p> <p>I think I was pretty good at doing the fitness tests.</p> <p>I think that I did pretty well on the fitness tests compared to the other students.</p> <p>After doing the fitness tests I felt that I was pretty good at them.</p> <p>I put a lot of effort into the fitness tests.</p> <p>I didn't try very hard to do well on the fitness tests.*</p> <p>I tried very hard on the fitness tests.</p> <p>I didn't put much energy into the fitness tests.*</p> <p>I did not feel nervous at all while doing the fitness tests.*</p> <p>I felt very tense while doing the fitness tests.</p> <p>I was very relaxed while doing the fitness tests.</p> <p>I felt pressured while doing the fitness tests.</p>
Future Intention		<p>Pretend that every Friday in your physical education class is a free day. How likely would you be to choose to do fitness tests?</p> <p>Fitness testing will happen next year. If you had the chance to choose to participate, how likely would you be to do them again?</p>

*Reversal items.

Task and Ego Orientation Sport Questionnaire (TEOSQ). In this study a modified version (TEOSQ-modified) of the TEOSQ was used to evaluate the students' self-reported adoption of ego and task goal orientations in terms of the fitness tests included in the President's Challenge Physical Fitness Test. The instrument was adapted from the TEOSQ (Duda, 1989). The original TEOSQ is a 13-item questionnaire that was designed for athletes competing in competitive sports. Of the 13 items, seven items related to task orientation and six items pertained to ego orientation. The wording of the questions and stem were changed in order to better assess the students' goal orientations towards fitness testing. For example, "I am the only one who can do the play or skill" (ego) was changed to "I am the only one who can do well on the fitness test." The original stem (i.e., "I feel most successful in sport when...") was changed to "I feel most successful on the President's Challenge Physical Fitness Test when..." All of the items were not modified. For example, "I work really hard (task)" remained the same. Each item was rated on a 5-point scale from 1 (strongly disagree) to 5 (strongly agree). The mean score was calculated for each participant by summing all of the scores for the ego-oriented questions and dividing by six and doing the same for the task-oriented questions but dividing by seven. The mean scores for each orientation reflect low (1) to high (5) goal orientation. The modified TEOSQ was piloted with fifth-grade physical education students not involved in the study, and the revised version demonstrated sound psychometric properties.

Intrinsic Motivation Inventory (IMI). Students completed a modified version of Whitehead and Corbin's (1991) 16-item Intrinsic Motivation Inventory. Their instrument was adapted from Ryan's (1982) original version of the IMI. The IMI used in this study included the following subscales: perceived competence (3 items), effort (4 items), interest/enjoyment (5 items), and pressure/tension (4 items). There has been evidence that validity can be maintained when adapting the IMI for sport and other physical activity settings (e.g., McAuley, Duncan, &

Tammen, 1989). Each item was rated on a 7-point scale from 1 (not true at all) to 7 (very true). As with the task/ego instrument, the IMI was piloted with a sample of fifth grade students not in the study, and it demonstrated acceptable reliability coefficients.

Future Intention. The two future intention items were adapted from Xiang, McBride, and Bruene (2006). Each item is rated on a 5-point scale from 1 (not at all) to 5 (very much).

Students' Award Status. The physical education teachers provided the researchers with their students' award status. The teachers followed the President's Council's guidelines for providing the Presidential Award to those students who performed at or above the 85th percentile on the five tests. The National Award was given to the students who performed at or above the 50th percentile, but below the 85th percentile on the five fitness tests. Students who received either of these awards were classified as the "award" group (n=57). Students who did not reach the 50th percentile on all five tests did not receive a recognition award and were classified as the "no-award" group (n =66).

Data Analysis

Descriptive statistics, alpha coefficients, and correlations were calculated for all variables included in the study. A chi-square analysis was performed to examine whether the distributions of the two categorical variables (i.e., gender, award status) differed. Two separate 2 (Gender) × 2 (Award group) (i.e., award versus no-award) multivariate analyses of variance (MANOVA) were conducted. The dependent variables in the first MANOVA were goal orientations (i.e., ego and task). For the second MANOVA, the IMI subscales (i.e., perceived competence, effort, and interest/enjoyment) were dependent variables. A 2 (Gender) × 2 (Award group) analysis of variance (ANOVA) was also conducted to investigate group differences in future intention to participate in fitness testing.

Results

Simple correlations and Cronbach's alpha coefficients are presented in Table 2.

Reliability coefficients indicated that all of the motivation constructs demonstrated acceptable internal consistency except pressure/tension, which was removed from further analysis. The correlational analysis revealed that task-oriented goals were positively associated with ego-oriented goals, perceived competence, effort, interest/enjoyment, and future intention. Ego-oriented goals were associated with perceived competence, but were unrelated to effort, interest/enjoyment, and future intention. There was a pattern of positive associations. Perceived competence, effort and interest/enjoyment were all positively related. Effort was also positively associated to perceived competence and future intention. There was a positive relationship between ego-oriented achievement goals and perceived competence. The results of the chi-square analysis revealed that the distribution of participants in the award groups did not vary by gender ($\chi^2(1, n = 123) = 0.37, p = .544$) (see Table 3).

Table 2

Correlations and Cronbach's α among Study Variables (N = 123)

Variables	1	2	3	4	5	6	7
1. Task-involved	1.00						
2. Ego-involved	.26**	1.00					
3. Perceived competence	.52**	.37**	1.00				
4. Effort	.45**	.02	.43**	1.00			
5. Interest/ Enjoyment	.37**	.05	.51**	.49**	1.00		
6. Pressure	-.00	-.09	-.10	-.05	-.09	1.00	
7. Future Intention	.32**	.14	.46**	.37**	.43**	-.13	1.00
Cronbach's α	.74	.79	.79	.70	.78	.50	.78

* $p < .05$ (two-tailed); ** $P < .01$ (two-tailed)

Table 3

Observed and (Expected) Frequency Counts by Gender and Award Status

	Award	No Award
Males	31 (32.6)	42 (40.4)
Females	24 (22.4)	26 (27.6)
Total	55	68

The means and standard deviations for the motivation constructs by gender and award status are reported in Table 4. The MANOVA for goal orientations yielded significant main effects for award status [Wilks' Lambda = .899, $F = 6.60$ (2, 118), $p < 0.002$] and gender [Wilks' Lambda = .91, $F = 5.61$ (2, 118), $p < 0.005$]. The gender by award group interaction was not significant. Univariate follow-ups for award status revealed a significant effect for task-goals [$F(1, 122) = 3.80$, $p < .000$, $ES = .68$]. The students who received a fitness award reported higher levels of task-involvement. Ego goals did not differ for the award group. For gender, the effect for ego-goals was significant [$F(1, 122) = 5.19$, $p < .024$, $ES = .53$] while the effect for task-goals approached significance [$F(1, 122) = 3.18$, $p < .07$, $ES = .36$]. Males reported a higher level of ego-involvement than girls.

Table 4

Motivation Constructs Means and (Standard Deviations)

	Task	Ego	Perceived competence	Effort	Enjoyment	Intention
Gender						
Males (n=73)	4.14 (.64)	2.70 (.73)	4.64 (1.46)	5.85 (1.04)	4.16 (1.64)	2.92 (1.27)

(Table con'd.)

Females	4.35	2.39	4.53	6.01	4.26	3.12
(n=50)	(.45)	(.81)	(1.42)	(1.20)	(1.46)	(1.00)
Award Status						
Award	4.45	2.66	5.42	6.38	4.76	3.38
(n =55)	(.35)	(.71)	(.93)	(.80)	(1.30)	(1.11)
No award	4.05	2.50	3.93	5.54	3.75	2.69
(n = 68)	(.66)	(.82)	(1.44)	(1.18)	(1.63)	(1.13)
Total						
(N = 123)	4.22	2.57	4.60	5.91	4.20	3.00
	(.58)	(.77)	(1.44)	(1.11)	(1.56)	(1.17)

A second MANOVA was conducted to test for differences among award status and gender on the intrinsic motivation dependent variables (i.e., perceived competence, effort, interest/enjoyment). There was a significant main effect for award status [Wilks' Lambda = .72, $F = 15.51$ (3, 117), $p < .000$]. The main effect for gender and the gender by award interaction were not significant. Univariate follow-ups for award status yielded significant effects for enjoyment [F(1, 122) = 13.12, $p < .001$, $ES = .64$], perceived competence [F(1, 122) = 41.94, $p < .001$, $ES = 1.03$], and effort [F(1, 122) = 18.84, $p < .0001$, $ES = .75$]. Students who received awards reported higher levels of perceived competence, effort, and interest/enjoyment.

The ANOVA to test for differences on future intentions revealed a significant main effect for award status [F (1, 122) = 10.07, $p = .002$, $ES = .68$]. There was no gender main effect, and the gender by award status interaction was not significant. The students who received awards reported higher levels of future intention to select to participate in fitness testing.

Discussion

The purpose of this study was to examine the relationships among achievement goals, intrinsic motivation, and future intention, as well as how these motivation constructs differed according to physical education students' gender and award status on norm-referenced fitness tests. Consistent with previous research that has examined achievement goals and students' performances on a single fitness test (i.e., shuttle run), this study also highlighted the importance of considering how motivational factors are influenced by fitness testing (Goudas et al., 1994).

The positive correlation among task-goals and the three intrinsic motivation subscales suggests that task-involved individuals are more likely to adopt adaptive motivational patterns. Ego goals were positively related to perceived competence, but not related to effort and enjoyment. A task-oriented individual as opposed to an ego-oriented individual evaluates success based on effort and individual improvements (Nicholls, 1989). This is important because individuals who pursue task goals display adaptive motivation patterns, whereas, individuals who pursue ego goals are at risk to display maladaptive patterns. The adaptive patterns include seeking challenging situations, increased effort, and beliefs that success is a result of effort. Individuals who maintain ego goals are more likely to avoid challenging situations, refuse to put forth effort in challenging situations, and consider success a product of natural ability (Solmon, 2006). Significant correlations among achievement goals, intrinsic motivation subscales, and future intention clearly indicate that these motivation constructs are linked and influence how students experience fitness testing.

There has been a copious amount of research suggesting that evaluations based on norms, publicly administered, and linked to one's ability can have harmful effects on students' motivation (Nicholls, 1989). The President's Council for Physical Fitness and Sport has received extensive criticism for using normative-based standards to evaluate students' fitness tests

outcomes (Safrit & Looney, 1992). Treasure (2001) stated, “Evaluation systems that emphasize social comparison and normative standards of performance evoke a state of ego involvement that focuses children on evaluating their ability compared to their peers” (p. 92). With the current structure of the PCPFAP, students are focusing on how their performances compare to the normative standards, creating an ego-oriented assessment setting. Such evaluation systems have been shown to affect student’s self-worth (Covington, 1984), intrinsic motivation (Ryan & Deci, 2004), and perceived competence (Nicholls, 1989). Students who did not receive a fitness award reported lower levels of task-involvement, perceived competence, effort, enjoyment, and future intention than those who received recognition awards. This emphasizes the importance of considering students’ intrinsic motivation towards fitness testing, as students who received a fitness award reported higher levels of intrinsic motivation. When the physical education context encourages students to focus on personal competence, intrinsic motivation is enhanced (Whitehead & Corbin, 1991). Conversely, when experiences in physical education programs foster low perceptions of competence through norm-referenced performance standards or extrinsic award systems, intrinsic motivation will be inhibited. These findings support the notion that using norm-reference fitness tests may have negative motivational consequences for children who perform poorly, and that criterion-referenced fitness tests may be a preferable alternative to assess students’ physical fitness (Harris & Cale, 2006).

According to the findings, this normative-based fitness testing environment is an example of an educational climate where low achieving students’ future intentions were adversely affected. This suggests that the individuals who perceive their performance as successful (i.e., those who receive fitness awards) are the students who are more likely to self-select to participate in fitness testing in the future. Specifically, their experiences with the PCPFAP have facilitated a level of interest in future intention to self-select participation in fitness tests. It

makes sense that the low performing students who did not receive a fitness award would be less interested in participating in fitness testing in the future. For low performing students, this may result in wider performance, fitness, and physical activity gaps across time. Future intention is important to consider because as Sallis and McKenzie (1991) argued, students' interests and participation levels in physical education have been found to decrease in the teenage years.

Taken together, the findings suggest that the use of normative standards to determine award status for fitness testing can serve to decrease motivation and ultimately alienate low performing students. This is the group of students who need the most encouragement. Rather than sending messages that they have low competence and cannot be successful, physical education teachers need to direct attention to these students and encourage them to focus on personal achievements, regardless of performances relative to other students. This is especially important as it has been substantiated, in this study and numerous others, that an individual's level of task-involvement is positively related to intrinsic motivation (Biddle et al., 2003).

In addition to exploring how motivational constructs vary according to award status, examining gender differences was also a focus of this study. The proportion of girls and boys who received awards did not differ. Ego-involvement was the only motivation construct that revealed significant gender effects, as males reported higher levels of ego-involvement than girls. In Xiang and Lee's (2002) study that examined students' achievement goals in physical education settings, no significant gender differences were found. One possible explanation for the gender differences in ego-involvement, may be that the normative standards are presented in a way that positions boys to be physically superior to girls. Potentially, this fitness testing setting may have provided a climate that encouraged males to adopt ego-goals.

Adoption of ego goals may result in maladaptive motivational patterns, which can be problematic for both girls and boys, especially low-performing students with low levels of

perceived competence. In this particular fitness testing setting, the goal was to earn a fitness award determined on norm-referenced standards. The boys' ego goals were congruent with the structure of the PCPFAP. This gender difference is one reason researchers have argued that teachers and schools should create learning environments that de-emphasize ego goals (Maehr & Midgley, 1996). Students with high levels of ego-involvement and high perceived competence are less likely to display maladaptive patterns than those with low perceived competence. This may be the only group that benefits long-term from participating in norm-referenced fitness testing programs that recognizes performance outcomes with extrinsic rewards.

Conclusion and Future Directions

By design, the 85th percentile represents a standard that only 15% of children would be expected to attain. Whitehead and Corbin (1991), however, reported that typically less than 1% of children perform well enough to receive the Presidential Physical Fitness Award. Through investigating the intersections of physical education students' fitness award status and motivation constructs researchers can gain insight into the students' motivational dispositions and future intention to participate in fitness testing. This line of research is important to understanding how teachers can effectively use physical fitness testing so that all students can focus their attention to personal improvements (Fox & Biddle, 1988; Goudas et al., 1994). This study makes a significant contribution to the field of physical education as it investigated motivational constructs and gender in an aspect of the physical education curriculum that has been implemented in the United States since 1957. When considering the interactions of the motivation constructs in this study (i.e., achievement goals, intrinsic motivation, and future intention), the need for further research that addresses the implications of award/recognition programs is apparent. Continued investigation is needed in light of evidence that ego-involvement for less mature children can hinder perceptions of ability, when high ability is

something that only few can achieve or demonstrate (Nicholls, 1989). Future studies can be structured with a larger sample size that would allow an award group by goal group (see Goudas et al., 1994) interaction to be investigated.

It is important to consider how students' performances on the physical fitness tests can have lasting effects on whether or not the students will attempt future physical activities. Longitudinal studies investigating how students' physical fitness behaviors and motivational dispositions change over time would be beneficial. This research can provide insight into which students will be more or less likely to adopt or abandon participation in physical activities later in life. The findings could provide researchers and physical educators with empirical evidence necessary to reconsider ways to motivate and enhance students' learning experiences. It would be beneficial for future studies to track the students over an extended period of time, especially in regard to their intention to participate in fitness testing. Researchers need to consider how intention varies according to whether or not students received awards and how intention changes over time. Specific emphasis needs to be directed towards the resistance students may exhibit concerning motivation before, during, and after participation in fitness tests, especially low-achieving students.

Finally, qualitative approaches are needed to provide a clearer understanding of students' perceptions of fitness testing, and the meanings that they attach to their experiences (see Domangue & Solmon, in review). Although significant gender differences were not evident in the survey based data in this study, there are gender disparities evident in the norms for girls and boys, and it is important to use research methodologies that are suitable to explore how those disparities enhance or constrain children's decisions to be physically active. Considering the role of discursive constructs in contributing to students' goal orientations, intrinsic motivation, and future intention could be an important step in feminist-based research investigating gendered

aspects of the physical education domain (Azzarito & Solmon 2006). Feminist-based research can provide insight into how the construction and administration of fitness tests potentially reinforces hierarchical notions of gender (Domangue & Solmon, 2008).

Endnote

¹We acknowledge the significance of the more recent achievement goal frameworks (i.e., trichotomous, 2×2), in understanding how individuals' goal-orientations contribute to how achievement-related information is received and processed. However, during the piloting stages of this study we found that the majority of the students' maintained task- and/or ego-related goals, without mention of approaching tasks to demonstrate competency or avoiding incompetence.

CHAPTER 3: AN INVESTIGATION INTO MOTIVATIONAL RESPONSES TO A NORM-REFERENCED AND A CRITERION-REFERENCED FITNESS TESTING PROGRAM

Introduction

Fox and Biddle (1988) suggested that the fitness testing programs physical education teachers select to administer can have a significant affect on how students perceive their fitness levels and abilities. This is especially important as Keating (2003) pointed out that students' experiences with fitness testing contributed greatly to their negative attitudes towards physical education, in general. Keating identified three important problems with the administration of fitness testing, including: (1) students are tested in the presence of their peers, (2) students' results do not remain confidential, and (3) fitness testing requires a significant amount of time to administer. On a separate note, researchers have argued against teachers using fitness testing results to assign course grades (Corbin, 2002; Corbin, Pangrazi, & Welk, 1995). Such arguments center around several concerns, including: students may become uninterested in regular participation in physical activity or physical education, teachers may be structuring their curriculum around the fitness tests, and fear that students' self confidence might be affected negatively (Harris & Cale, 2006). These concerns are the primary reason many researchers question whether fitness testing practices, in their current forms, should continue to be used in the physical education setting (Domangue & Solmon, 2008; Rowland, 1995; Pate, 1991).

Fitness testing programs, according to Keating (2003), should be included in the physical education context for the promotion of lifetime involvement in physical activity rather than for the purpose of assessing students' fitness levels and making normative comparisons. However, as the results in the previous chapter reveal, this may not be the case. Therefore, the purpose of this study was to compare motivational dispositions on two different fitness testing programs by test and performance status. The three motivation constructs (i.e. Achievement Goal Theory,

intrinsic motivation, future intention) discussed in Chapter 2 are the same motivational constructs assessed in this study. See Chapter 2 and/or Appendix A for a complete discussion of these previously mentioned motivation constructs. This study also investigated how the dependent variable, perceived climate, differed according the testing programs and students' fitness statuses.

The two fitness testing programs under investigation in this study are the President's Challenge Physical Fitness Test (PCPFT) and FitnessGram. The PCPFT, which was discussed in great length in Chapter 2 and Appendix A, is a fitness testing program that is based on norm-referenced outcomes. Students receive fitness awards according to how they perform relative to the established norms. The second fitness testing program, FitnessGram, is criterion-referenced and performance relative to peers is not considered.

For norm-referenced standards, normative data are used to set standards based on percentiles that represent a specific group (i.e., 17-year-old girls; 17-year-old boys) (Welk, Morrow, & Falls, 2002). When norm-referenced standards are used, the students receive feedback that allows them to know how their performances compare to other students in the same group based on age and gender. One measurement concern that researchers maintain when discussing norm-referenced standards is that the standards focus primarily on the current performance rather than a level of achievement that would be considered appropriate or feasible for the student (Welk et al., 2002). Corbin (1987) argued that problems associated with the use of norm-referenced standards also include a failure to recognize the role of genetics and maturity in students' fitness testing outcomes.

Criterion-referenced standards, on the other hand, provide information to teachers, students and parents about how students' fitness testing outcomes relate to specific health standards, that is, with a minimal score/outcome needed in order for the students' fitness to be

considered at a healthy level (Welk et al., 2002). FitnessGram was developed in 1982 by The Cooper Institute and has been used in schools across the world (Ernst, Corbin, Beighle, & Pangrazi, 2006). FitnessGram is designed to assess health-related fitness in four specific categories: (1) body composition (i.e., percent body fat, body mass index), (2) aerobic fitness (i.e., pacer test, one mile walk/run, walk test), (3) flexibility (i.e., shoulder stretch, back-saver sit-and-reach), and (4) muscular strength and endurance (i.e., curl-up, trunk lift, flexed arm hang, modified pull-up, push-up). The students who participate in FitnessGram receive feedback about their fitness levels in terms of whether their performance falls within a “Healthy Fitness Zone” (HFZ) or “Needs Improvement” (NI). According to Keating (2003), the HFZ represents the minimal fitness level needed to maintain good health.

In theory, criterion-referenced standards are designed to inform individuals about their fitness in terms of health-related standards and not based on their performances as related to their peers. Pangrazi and Corbin (1993) argued that fitness testing programs that use criterion-referenced standards should be used rather than those that focus on norm-referenced standards. Criterion-based fitness testing programs like FitnessGram have also been endorsed by American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD, 1999). In spite of the lack of empirical research on criterion-referenced testing programs and motivational outcomes, researchers have argued that criterion-referenced health-related testing programs can provide experiences that motivate individuals to participate in regular physical activity (Koebel, Swank, & Shelburne, 1992; McKenzie & Sallis, 1996). However, Keating, Silverman, and Kulinna (2002) argued that it is not safe to assume that just because a fitness testing program is based on criterion-referenced standards that students will have more positive motivational dispositions or experiences than if they were involved in norm-referenced fitness testing programs. Whitehead and Corbin (1991) found no differences when they assessed students’

intrinsic motivation and self-worth there were no differences, regardless if the students were involved in the PCPFT or FitnessGram.

Students' perceptions of the fitness testing climate were included in this study as this motivation construct has not previously been investigated. Understanding students' perceptions of the climate is a critical component in learning about how students experience fitness testing in terms of their personal motivational dispositions (Wigfield & Eccles, 2000). In the rather public physical education domain, ability and effort are at the forefront of performance (Biddle, 2001). Effort is demanded more explicitly in physical education than in any other areas of schools' curricula due to the nature of the tasks. According to Treasure (2001), "Research from an achievement goal perspective in the context of youth has revealed that dispositional goals and perceptions of the motivational climate are relevant to the ongoing stream of achievement behavior, cognition, and affect" (p. 88).

Teachers are a significant factor in how children perceive the motivation climate in educational settings (Treasure & Roberts, 1995). Teachers' motivational orientations ultimately affect how children are motivated, as the way that a teacher structures a motivational climate can promote a specific state of achievement involvement (Ames & Maehr, 1989). The structure of the motivational climate therefore leads to how children construct their physical education experiences. Elementary-aged children's perceptions of the physical education climate as task-oriented were positively correlated to modifications in motivational processes (Xiang et al., 2006). Cury and colleagues (1996) found that in regard to students' perceived ability and interest in physical education that perceptions of the motivational climate were more influential than achievement goal orientations.

Additionally, Lloyd and Fox (1992) investigated the task/ego binary motivation climate goals to teach an aerobics/fitness course. Their results revealed that the participants who were

where taught from the task-oriented perspective were more motivated to continue with aerobics than those who were part of the performance-oriented group. This particular study is essential to understanding fitness testing experiences as these findings imply that ego orientation for less mature children can hinder perceptions of ability when high ability is something that only a few can achieve (Nicholls, 1989).

These concerns about both norm-referenced and criterion-referenced fitness testing program designs highlight the importance of conducting research that focuses on how students are actually experiencing the tests and the implications they have on students' future intentions to participate in fitness-related activities. These two tests (i.e., PCPFT, FitnessGram) vary in which specific fitness tests are administered, which fitness components are assessed, and how the students are provided with information about their performance outcomes. Therefore, the purpose of this study was to examine how students' motivational orientations and perceptions of the motivation climate varied according to the fitness testing program¹ (i.e., PCPFT, FitnessGram) their teachers selected to administer and students' fitness status² (i.e., "Fit", "Non-fit"). An additional focus was directed towards how these motivation constructs differed according to the students' fitness group³ (i.e., award group, no award group, Healthy Fitness Zone [HFZ], Needs Improvement [NI]).

Method

Participants and Settings

The participants in this study were 281 5th grade students from 4 different elementary schools where the physical education teachers included either the PCPFT or FitnessGram as part of their regular curricular plans. See Table 5 for a complete description of the demographics (i.e., gender, race, fitness group) of the students by schools. The only students involved in this study are those who provided assent, and their parents or guardians provide informed consent. This

study was approved by the Institutional Review Board, and permission to collect data in the schools was granted by the school districts' administration, principals, and physical educators.

Table 5. Number of students, gender and race at each school.

	Students	Gender	Race	Fitness Status
Troy Elementary (PCPFT)	n = 89	Females = 42 Males = 47	Black = 28 Asian-American = 0 White = 58 Hispanic American = 1 Other = 2	Award = 42 No Award = 47
Ferndale Elementary (PCPFT)	n = 89	Females = 38 Males = 30	Black = 26 Asian-American = 8 White = 24 Hispanic American = 1 Other = 9	Award = 28 No Award = 40
Lakeshore Elementary (FitnessGram)	n = 100	Females = 53 Males = 47	Black = 10 Asian-American = 2 White = 83 Hispanic American = 1 Other = 4	HFZ = 60 NI = 40
Magnolia Elementary (FitnessGram)	n = 24	Females = 11 Males = 13	Black = 20 Asian-American = 0 White = 4 Hispanic American = 0 Other = 0	HFZ = 14 NI = 10
Total PCPFT = 157 FitnessGram = 124	N = 281	Females = 144 Males = 137	Black = 84 Asian-American = 10 White = 169 Hispanic American = 3 Other = 15	Award = 70 No Award = 87 HFZ = 74 NI = 50

Troy Elementary is a public school that serves students in 2nd - 5th grade. The student population is composed of 53% White and 46% Black students with approximately 51% enrolled in the free or reduced-price lunch program. At Troy Elementary, there are three full-time physical education teachers (1 male, 2 females) who having been teaching for an average of 13.5 years. The students attend their physical education classes everyday for 45-minute sessions and participate in the PCPFT.

Ferndale Elementary is also public elementary school that serves students in Kindergarten through 5th grade. The student population is composed of 57% Black, 36% White, 6% Asian, and 2% Latino-identified students, with approximately 46% of the students enrolled in the free or reduced-priced lunch program. There is only one physical education teacher for the entire student population. She has been a physical educator for 20 years. The fifth graders at Ferndale Elementary attend their physical education class three times a week for 25-minute long sessions and participate in the PCPFT.

Lakeshore Elementary is a school that is associated with a public 4-year university that serves students in Kindergarten through 5th grade. There are two full-time physical education teachers who teach the students in 5th grade. One teacher (female) has taught for 30 years, and the other (female) has been teaching for 10 years. The students attend physical education classes everyday for 30-minute sessions and participate in FitnessGram to assess their fitness levels.

Magnolia Elementary, a public school, educates students in Kindergarten through 5th grade. The student population is composed of 72% Black, 23 % White, 3 % Asian, and 2% Latino, with approximately 79% of the students enrolled in the free or reduced-price lunch program. There is only one teacher who uses the FitnessGram to assess her students' fitness levels. She has been a physical education teacher for three years. The students attend their physical education classes everyday for 45-minute sessions.

Instrumentation

After the students completed all aspects of the fitness testing programs, they were asked to complete a questionnaire that included versions of the TEOSQ, IMI, and future intention items as described in the first study. Only minor changes were made to the questionnaire used in the first study. For example, in the TEOSQ, “I feel most successful on the President’s Challenge Physical Fitness Test” was changed to “I feel most successful on FitnessGram when....” An additional set of questions was added to assess students’ future intentions to participate in fitness-related activities. These two items were similar to the two questions that related to students’ future intention to participate in fitness testing items that were originally adapted from Xiang, McBride, and Bruene (2006). One item stated, “Pretend that every Friday in your physical education class is a free day. How likely would you be to choose to do fitness-related activities?” Each item was rated on a 5-point scale from 1 (not at all) to 5 (very much). The students also completed items related to their perceptions of the fitness testing climate.

The perceived climate instrument included 9-items (4 ego, 5 task). The instrument used in this study was a modified version of the instrument used by Xiang, McBride, and Solmon (2003). For example, “My teacher feels happy when I learn something new” represents a task-involved item, and “My teacher feels happy when I do better than other students” represents an ego-involved item. Students responded to the items using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The wording of the original stem was changed to “During fitness testing....” in order to better direct the students to considering their previous experiences with the fitness testing climate.

Procedures

The students were informed that the teachers would not have access to their responses on the questionnaires. The researchers read all items to the students to ensure that they had the same

testing experiences. This allowed the researchers to answer any questions the students may have had while completing the questionnaire. The physical education teachers provided the researchers with the students' overall outcomes on the fitness tests. That is, the teachers who administer the PCPFA supplied the researchers with information about which students received the Presidential or National Awards. In these two particular public schools (i.e., Troy Elementary, Ferndale Elementary), the teachers do not acknowledge the students who receive the Participant Award. This decision was made due to the schools' budget limitations. The teachers who administered the FitnessGram (i.e., Lakeshore Elementary, Magnolia Elementary) supplied the researchers with information about which students performed in the "Healthy Fitness Zone" and those who "Need Improvement." While the nature of FitnessGram is that a student can perform in the HFZ on one test and NI in another or multiple tests, for the purpose of this study, if a student performed in the NI range on one of the tests, they were assigned to the NI performance group.

Data Analysis

A simple correlational analysis was conducted in order to examine the relationships between the motivation constructs included in the questionnaires. This study included four different fitness status groups, including: a) award (at or above the 50th percentile on five fitness tests in the PCPFT and at or above the 85th percentile on five fitness tests in the PCPFT); b) no award (attempted the five fitness tests); c) "Healthy Fitness Zone" (performance in healthy zone for five fitness tests); and d) "Needs Improvement" (one or more performances are below the "Healthy Fitness Zone). For the analysis, students who received an award, and those who were in the HFZ, were categorized as "high fit," while those who did not receive an award and those who were in the NI zone were classified as "low fit." Three 2 (Testing Program) \times 2 (Performance Group) MANOVAs were conducted to determine if group differences existed on the motivation

constructs. In the first MANOVA, the dependent variables were goal orientations (i.e., ego, task). In the second MANOVA, the dependent variables perceived climate (i.e., ego-climate, task-climate). For the third MANOVA, the intrinsic motivation subscales were the dependent variables. A 2 (Testing Program) \times 2 (Performance Group) ANOVA was conducted to determine if differences existed according to the students' future intentions to participate in fitness testing. Additionally, a 2 (Testing Program) \times 2 (Performance Group) ANOVA was conducted to determine if differences existed according to the students' future intentions to participate in fitness-related activities.

Results

Simple correlations and Cronbach's alpha coefficients are presented in Table 6.

Reliability coefficients indicated that all of the motivation constructs demonstrated acceptable internal consistency. The correlational analysis revealed that task-oriented goals were positively associated with ego-oriented goals, task-climate, perceived competence, effort, interest/enjoyment, future intention to select to participate in the fitness test, and future intention to participate in fitness-related activities and was unrelated to pressure. Ego-oriented goals were associated with ego-climate, perceived competence, interest/enjoyment, future intention to participate in the fitness tests, future intention to participate in fitness-related activities, but were unrelated to effort and pressure. There was a pattern of positive associations between task-climate, perceived competence, effort, and interest/enjoyment. For the pressure/tension subscale of the IMI there was a negative association with perceived competence and interest/enjoyment. Future intention to self-select to participate in fitness testing was positively associated with task-climate, ego-climate, perceived competence, interest/enjoyment, and effort, while negatively associated with pressure. Future intention to self-select to participate in fitness-related activities was positively associated with task-climate, perceived competence, interest/enjoyment, and

effort, while negatively associated with pressure. Future intention to participate in fitness testing was positively associated with future intention to participate in fitness-related activities. The results of the chi-square analysis revealed that the distribution of participants in the status groups did vary by fitness testing program ($\chi^2(1, n = 281) = 6.315, p = .012$). The means and standard deviations for the motivation constructs by fitness status are reported in Table 7 and by testing program in Table 8.

Table 6

Correlations and Cronbach's α among Study Variables (N = 123)

Variables	1	2	3	4	5	6	7	8	9	10
1. Task-involved	1.00									
2. Ego-involved	.233**	1.00								
3. Task-involved climate	.326**	.124**	1.00							
4. Ego-involved climate	.115	.449**	.096	1.00						
5. Perceived competence	.309**	.436**	.302**	.152*	1.00					
6. Effort	.274**	.053	.273**	-.094	.463**	1.00				
7. Interest/ Enjoyment	.232**	.256**	.374**	.148*	.598**	.360**	1.00			
8. Pressure	.033	-.020	-.022	-.024	-.232**	-.091	-.126**	1.00		
9. Future Intention-Test	.240**	.211**	.276**	.158**	.446**	.255**	.598**	-.135*	1.00	
10. Future Intention-Fitness-related activities	.278**	.181**	.397**	.004	.362**	.343**	.507**	-.118*	.555*	1.00
Cronbach's α	.731	.794	.756	.689	.821	.684	.744	.664	.670	.728

- $p < .05$ (two-tailed); ** $p < .01$ (two-tailed)

Table 7

Motivation Constructs Means and Standard Deviations by Fitness Status

	Task	Ego	Task-climate	Ego-climate	Perceived competence	Effort	Enjoy	Pressure	Future Intention-Testing	Future Intention-Fitness-related activities
Fitness Status										
Fit	4.42	2.88*	4.08	2.56	5.28*	6.36*	4.39*	3.29	3.66*	3.94*
(n=144)	(.58)	(.84)	(.81)	(.93)	(1.18)	(.81)	(1.09)	(1.67)	(.98)	(.99)
Low Fit	4.29	2.46	4.01	2.53	4.09	6.09	4.05	3.76	3.23	3.64
(n=137)	(.49)	(.88)	(.72)	(.91)	(1.61)	(.87)	(1.13)	(1.87)	(1.06)	(1.02)
Total										
(N = 281)	4.36	2.68	4.04	2.55	4.70	6.23	4.22	3.52	3.45	3.79
	(.54)	(.88)	(.77)	(.91)	(1.52)	(.85)	(1.12)	(1.79)	(1.04)	(1.01)

* p < .05

Table 8

Motivation Constructs Means and Standard Deviations by Fitness Testing Program

	Task	Ego	Task-climate	Ego-climate	Perceived competence	Effort	Enjoy	Pressure	Future Intention-Testing	Future Intention-Fitness-related activities
Testing Program										
PCPFT	4.29	2.67	3.91	2.72*	4.44	6.14	4.13	3.63	3.43	3.64
(n=157)	(.57)	(.83)	(.82)	(.92)	(1.61)	(.87)	(1.17)	(1.78)	(1.06)	(1.03)
FitnessGram	4.44*	2.68	4.21*	2.32	5.05*	6.35	4.35	3.37	3.47	3.99*
(n=137)	(.49)	(.96)	(.67)	(.86)	(1.34)	(.81)	(1.06)	(1.79)	(1.02)	(.96)
Total										
(N = 281)	4.36	2.68	4.04	2.55	4.70	6.23	4.22	3.51	3.45	3.79
	(.54)	(.88)	(.77)	(.91)	(1.52)	(.85)	(1.13)	(1.79)	(1.04)	(1.01)

* p < .05

The MANOVA for goal orientations yielded significant main effects for fitness status [Wilks' Lambda = .945, $F = 8.035$ (2, 276), $p < 0.000$] and testing program [Wilks' Lambda = .980, $F = 2.793$ (2, 276), $p < 0.051$]. The fitness status by testing program interaction was not significant. Univariate follow-ups for fitness status revealed a significant effect for ego-goals [$F(1, 280) = 15.327$, $p < .000$, $ES = .477$]. The students in the "Fit" group, those who received a fitness award or performed in the HFZ, reported higher levels of ego-involvement. For testing program, the effect for task-goals was significant [$F(1, 280) = 4.572$, $p < .033$, $ES = .278$]. Regardless of the fitness status, students who participated in FitnessGram reported a higher level of task-involvement than those who participated in the PCPFT.

The second MANOVA tested for differences among fitness status and testing program on the perceived climate dependent variables (i.e., task-climate, ego-climate). There was significant main effect for testing program [Wilks' Lambda = .905, $F = 14.424$ (2, 276), $p < .000$], but not for fitness status. The fitness status by testing program interaction was not significant. Univariate follow-ups for testing program yielded significant effects for task-climate [$F(1, 280) = 10.331$, $p < .001$, $ES = .90$] and ego-climate [$F(1, 280) = 13.787$, $p < .000$, $ES = .440$]. Students who participated in FitnessGram reported higher perceptions of a task-involved climate, while those who participated in the PCPFT reported higher perceptions of an ego-involved climate.

A third MANOVA was conducted to test for differences among fitness status and testing program on the intrinsic motivation dependent variables (i.e., perceived competence, effort, interest/enjoyment, pressure/tension). There was a significant main effect for fitness status [Wilks' Lambda = .859, $F = 11.210$ (4, 274), $p < .000$], but not for testing program. The fitness status by testing program interaction was not significant. Univariate follow-ups for fitness status yielded significant effects for perceived competence [$F(1, 280) = 41.587$, $p < .000$, $ES = .782$], effort [$F(1, 280) = 5.668$, $p < .018$, $ES = .318$], and enjoyment [$F(1, 280) = 5.459$, $p < .020$, ES

=.304] Students who either received a fitness award or performed in the HFZ reported higher levels of perceived competence, effort, and interest/enjoyment. Additionally, the univariate follow-up for fitness status approached significance for pressure/tension [$F(1, 280) = 3.528, p < .061, ES = .262$]. Students who did not receive an award or performed in the NI group reported higher levels of pressure/tension. Univariate follow-up for testing program yielded significant effects for perceived competence [$F(1, 280) = 7.101, p < .008, ES = .401$]. Students who completed FitnessGram reported the highest levels of perceived competence.

The ANOVA to test for differences on future intentions to participate in fitness testing revealed a significant main effect for fitness status [$F(1, 280) = 11.752, p = .001, ES = .413$]. There was no testing program main effect, and the fitness status by testing program interaction was not significant. The students who received awards or performed in the HFZ reported higher levels of future intention to select to participate in fitness testing.

The ANOVA to test for differences on future intentions to participate in fitness-related activities revealed a significant main effect for fitness status [$F(1, 280) = 3.698, p < .05, ES = .297$], and testing program [$F(1, 280) = 7.167, p < .008, ES = .346$]. The fitness status by testing program interaction was not significant. The students who received an award or performed in the HFZ reported higher levels and those who participated in FitnessGram reported higher levels of future intention to participate in fitness-related activities.

Discussion

The purpose of this study was to examine the relationships between achievement goals, perceived motivational climate, intrinsic motivation, and future intention along with the how these three motivation constructs differed according to the 5th grade students' fitness statuses, fitness testing program they participated in during their physical education classes, and fitness group as defined by the testing programs conceptions of fitness. The significance and

contribution of this study are important for understanding how students' fitness levels, based on two different fitness testing programs, provide insight into the actual motivational implications of fitness testing, which previously have not been investigated. Of particular importance are the findings that pertain to students' future intentions to participate in fitness-related activities, especially as the President's Council for Physical Fitness and Sport (2003) argues that a specific purpose of fitness testing is to motivate and encourage individuals to participate in regular physical activity. Based on the findings in this study, this is not necessarily the case.

The students who were categorized in the "fit" group reported the higher levels of ego-goals, perceived competence, effort, enjoyment, future intention to self-select to participate in fitness testing, and future intention to participate in fitness-related activities than those who were categorized as "low fit." As previous researchers have shown (e.g., Weiss & Ebbeck, 1996; Weiss & Ferrer-Caja, 2002), the students in this study who had high levels of perceived competence also maintained higher levels of enjoyment and were more likely to participate in the future. It is of interest to note that there was not a significant difference for task-goals. The fit individuals reported higher levels of ego-goals, but not task-goals. This may suggest that students who are "fit" may maintain higher ego-goals, always wanting to do better than others, especially when they experience success in the competitive environment. The trend for the pressure/tension subscale highlights a concern that was discussed by Rowland (1995). Rowland argued that the benefits of fitness testing are negated when children have experiences that are embarrassing and humiliating when the tasks are clearly too difficult for them to be successful. This perspective coupled with the findings in this study sheds light on the importance of considering how the plight of children who do not perform well on fitness tests. Specifically, the results suggest that students in the low fit group reported lower levels of ego-goals, perceived competence, effort, enjoyment, future intention to self-select to participate in fitness testing, and

future intention to participate in fitness-related activities. This is the group for whom Rowland and many other scholars express the most concern.

The results pertaining to the specific fitness testing program that the students participated in reveal significant differences on task-goals, perceived climate, perceived competence, and future intention to complete fitness-related activities, with FitnessGram participants reporting higher levels. This finding is important for understanding how a testing environment that is created with criterion-referenced tests that promote self-improvement may contribute to the adoption of task-related goals. When individuals maintain task-goals the focus is on increasing competency through mastering a specific task (Nicholls & Miller, 1984; Treasure & Roberts, 1995). The focus is then placed on their competencies rather than others' performances or abilities. In this study, the individuals who participated in the PCPFT, regardless of fitness status, reported lower levels of task-goals, perceived competence, and future intention to self-select to participate in fitness-related activities. As Solmon (2006) discussed, when the emphasis is on normative comparisons, individuals are more likely to withdraw from the activity, fail to attempt tasks that are perceived as difficult. Performance may decrease when it is not viewed as favorable when compared to their peers' performances, because individuals may withdraw effort. It is especially important to note that students in classes where FitnessGram was used perceived a more task (and less ego) involved motivational climate, and also indicated they intended to engage in activities that promote fitness in the future.

A limitation of this study is that students were not randomly assigned to different fitness testing programs. An additional limitation is that teachers self-selected which fitness program their students completed. The lack of interaction by fitness status and testing program on the three motivation constructs may have been a result of the relatively small sample size. Future studies should include an experimental design with a larger sample size that will allow for a

more complete understanding of the affects of fitness testing programs on students' motivation. Additionally, a larger sample will allow researchers to investigate the interaction between fitness status, testing program, gender, and other social constructs (e.g., race, class, religion).

Treasure (2001) stated, "Evaluation systems that emphasize social comparison and normative standards of performance evoke a state of ego involvement that focuses children on evaluating their ability compared to their peers" (p. 92). This is significant because previous scholars have argued that when the crux of an evaluation is rooted in normative comparisons, publicly administered, and primarily associated with individual abilities that the assessments can have detrimental affects on individuals' motivation (Nicholls, 1989). In the past, the President's Council for Physical Fitness and Sport has experienced strong criticism for promoting fitness testing practices that focus on normative-based standards for evaluating students' fitness levels (Safrit & Looney, 1992). In spite of the fact that FitnessGram is a criterion-referenced assessment program, it is also important to note that it too needs to be considered and investigated critically. The results from this study provide further evidence for reconsidering how fitness should and can be assessed without negatively affecting individuals' future intention to participate in regular physical activities that contribute to increases in health-related fitness.

Endnotes

¹ The independent variable, testing program, is composed of two groups that included students who participated in the PCPFT or FitnessGram.

² The independent variable, fitness status, is composed of two groups. The students who received an award (i.e., Presidential, National) and those who performed in the HFZ were combined to form one group (i.e., Fit) based on their fitness testing outcomes according to the specific normative- and criterion-referenced standards. The students who did not receive an award and those who performed in the NI were combined to form the other group (i.e., Low Fit) based on their fitness testing outcomes.

³ The independent variable, fitness group, is composed of four groups (i.e., Award, No Award, HFZ, NI). These groups were looked at separately in order to see how the groups varied on the three motivation constructs.

CHAPTER 4: STUDENTS' GENDERED CONSTRUCTIONS OF FITNESS KNOWLEDGE THROUGH FITNESS TESTING EXPERIENCES

Introduction

As children learn the discursive practices of their society, they learn to correctly position themselves as male or female, since that is what is required of them to have a recognizable identity... We need to recognize the extent to which it is a gendered world that students are required to make sense of. That sense is not just a cognitive sense. It is as well, apprehended bodily, each person's body takes on the knowledge of maleness or femaleness through its practices (Davies, 1989, p. 5-6).

Through this perspective, the role of gender and gendering in the practice of schooling is one that has implications beyond class experiences that will continue to inform students' conceptions of themselves and their abilities across the lifespan. These discursive practices contribute to how students come to understand the cultural expectations for their bodies and physical abilities, and such learning experiences provide opportunities for students to construct meaning and knowledge. Taylor (1995) specifically addresses concerns about the significance and "importance of cultural practices and the role of discourses and ideologies in the re-production of gender relations, and their analyses place issues concerning the construction of femininity and masculinity at the heart of the matter" (p. 4). Using critical feminist theories, this chapter focuses primarily on how gender-related fitness knowledge is constructed when students participate in fitness testing practices that have been identified as a dominant discourse in physical education that has consistently perpetuated ideologies of difference (Domangue & Solmon, 2008). Crawley, Lewis and Mayberry (2008) argued,

Although feminism is, in substance, always attentive to power differences that create inequalities, particularly those that create differential opportunities for women and men (but also those that create racial and ethnic, class-based, or sexuality-based inequalities), feminism is also an epistemological shift away from a history of androcentric bias in the sciences, social sciences, and humanities" (p. 1).

The androcentric bias that is apparent in fitness testing is clearly linked to the origins of fitness testing program. They were initially designed out of concern about the lack of men who were physically prepared to be drafted to fight in World War II and the Korean War (President's Council on Physical Fitness and Sports, [PCPFS], 2006). This definition of feminism, coupled with the explicit androcentric bias in fitness testing (Domangue & Solmon, 2008), provides a rationale for deconstructing fitness testing programs through listening to how elementary-aged physical education students construct meaning through this specific schooling experience. The gender differences and androcentric bias linked to the fact that the norms and standards are lower for girls and boys prior to puberty. This form of assessment, that overtly situates girls and boys as different, is one that is unique to the physical education domain.

The apparent and subversive relationships between cultures and societal structures are clearly linked to the re-production¹ of the formation of meaning through systems of power and reinforcement of power relations (Hollway, 1984). This chapter draws heavily from Fiske's (1987) theoretical articulation of culture, that is,

Culture is concerned with meanings and pleasures: our culture consists of the meanings we make of our social experience and of our social relations, and therefore the sense we have of our "selves." It also situates those meanings within the social system, for a social system can only be held in place by the meanings that people make of it. Culture is deeply inscribed by the differential distribution of power within a society, for power relations can only be stabilized or destabilized by the meanings that people make of them. (p. 20).

It is through this meaning that culture produces and reproduces binary systems that target one group against the other group as essentially different. This conceptualization of culture highlights the undeniable importance of exploring and attempting to understand how institutionalized practices can be challenged and changed.

In this way, fitness testing programs, as other dominant discourses, are never void of power dynamics. Discourse, according to Fiske (1987), is "a language or system of

representation that has developed socially in order to make and circulate a coherent set of meanings about an important area” (p. 14). Fitness testing programs like the President’s Challenge Physical Fitness Test [PCPFT] and FitnessGram, therefore, do not operate solely as fitness assessment tools, but also as a discourse that plays a role in socially constructed ideologies and conceptions of the body that are rooted in biological male and female differences.

Such gendered ideologies are not created in isolation, but instead through various systems that intersect to create and/or produce meaning through discursive chains (Hall, 1985). Thus, fitness testing is not the only way that individuals construct gendered conceptions of fitness in the physical education context. Such formation of meaning is created through specific pedagogies that reinforce gender-typed ideas of the body through curricular practices (i.e., football is for boys, dance is for girls), language (i.e., you throw/run/play like a girl, man-to-man defense), students’ roles/performativities (i.e., boys as aggressive, girls as compliant). Likewise, the creation of gendered meanings are clearly connected to discursive formations in gendered schooling experiences, familial and peer interactions that reinforce or perpetuate gender expectations, various forms of popular culture, and societies, in general, that have an overt gender order with the primary purpose to maintain power (Connell, 1987).

Taylor (1995) wrote, “Cultural texts are part of a network of meanings which constitute the social world and which may be viewed as a series of sites of struggle over meaning” (p. 5). Therefore, the purpose of this qualitative study was to investigate how physical education students who participated in two different types of fitness testing programs (i.e., norm-referenced, criterion-referenced) construct meanings about fitness through fitness testing programs that continue to divide students across gendered fitness lines. In this study, the following question related to the epistemology of fitness and fitness testing practices were addressed: a) What is the level of students’ cognizance of the discrepant gender expectations? b)

How do students construct their knowledge of the gendered conceptions of fitness and physicality through experiences with two different fitness testing discourses? Through research methodologies that consider how knowledge about gender is created there can be a revealing of the role of discourses in contributing to the “gender regime” (Connell, 1987, p. 120).

Method

Participants and Setting

Twenty-four 5th grade students (12 girls, 12 boys) were purposively selected to participate in this qualitative study. Figure 1 is a graphic representations the participants by fitness testing program, school, fitness status (i.e., award, no award, Healthy Fitness Zone [HFZ], Needs Improvement) and gender.

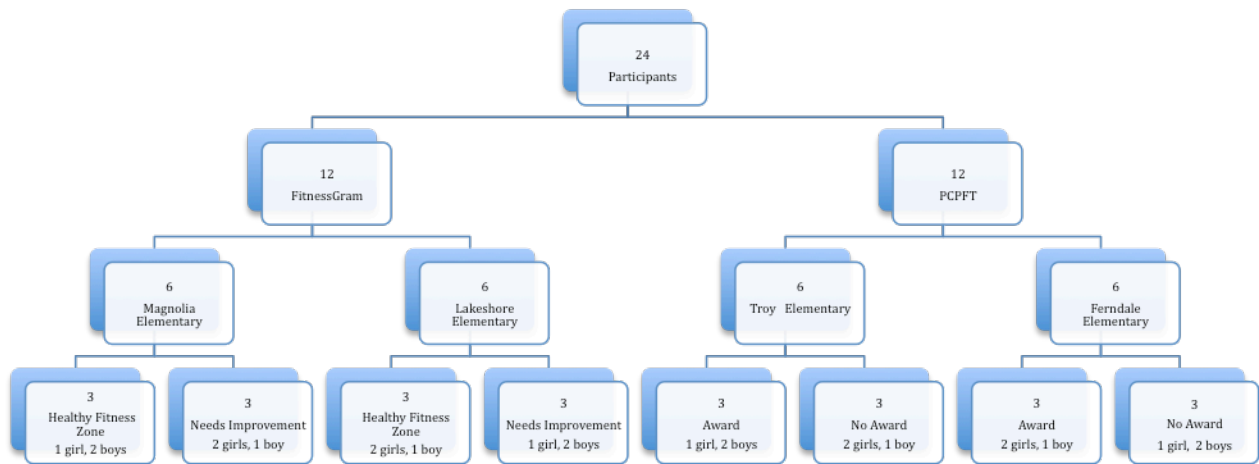


Figure 1. Graphic representation of students by testing program, school, fitness status, gender.

Six students, three girls and three boys, from each school site were selected to participate in this study. The students attended one of four schools where either the PCPFT or FitnessGram was administered as part of the physical education programs’ regular curricular plan. The same teachers, schools, and pool of students included in the study discussed in Chapter 3 were

involved in this qualitative study. The names of the students, teachers, and schools have been replaced with pseudonyms in order to preserve the anonymity of all individuals involved in this study. All schools are located in the southeastern portion of the United States.

Participants included three students from each school who were classified as “high fit”² based on the fitness testing program they completed. That is, students were considered “high fit” if they received a fitness award (i.e., Presidential, National) on the PCPFT or performed in HFZ on FitnessGram. Three students classified as “low fit” were also selected from each school. “Low fit” students were those who did not receive an award on the PCPFT or fitness performances fell within the NI category on FitnessGram. Prior to participating in the study, the students provided assent, and the students’ parents/guardians provided informed consent.

Instrumentation and Procedures

Following the completion of all fitness tests, the students participated in a 20-30 minute audiotaped interview. A combination of the standardized, open-ended interview protocol and interview guide approach was used (Patton, 2002). The interview protocol, along with the additional prompts, is presented in Figure 2.

Interview Questions/Comments	Related Prompts
What is your name and how old are you?	
For how many years have you been a student at Troy Elementary?	
Can you talk a little bit about your thoughts and experiences in physical education?	-Likes? Why do you like that aspect? -Dislikes? Why do you dislike that aspect?
During this interview, I will ask you several questions that relate to fitness testing?	
Do you know what I am talking about when I say fitness testing?	
What do you think is the purpose of fitness testing?	

Figure 2. Interview protocol with questions and prompts.

(Figure, con'd.)

What have been your experiences with fitness testing in your physical education classes at Troy Elementary?	-Any specific memories related to fitness testing?
Did you receive a fitness award this year?	-How did you feel when you received/did not receive a fitness award? -What were you thinking?
What are you thinking about while you are completing or watching other students complete the fitness tests?	-Goals? -Comparing yourself to others? -Personal improvements?
Do you like one fitness test more than the others?	-Which one? -Why?
Do you dislike one fitness test more than the others?	-Which one? -Why?
Do you think girls or boys have higher expectations on the sit-and-reach test?	-Why do you think ____ have higher expectations? -Girls are actually expected to stretch further than boys. What do you think about this fitness expectation? -Would it be okay for a boy to outstretch a girl?
Do you think girls or boys high higher performance expectations on the pull-up test?	-Why do you think ____ have higher expectations? -Boys are actually expected to complete more than girls. What do you think about this fitness expectation? -What would happen if a girl did more pull-ups than a boy?
Do you think girls or boys have higher expectations on the mile run test?	-Why do you think ____ have higher expectations? -Boys are actually expected to run faster than girls. What do you think about this fitness expectation? -Would it be okay for a girl to outrun a boy?
Before this interview, did you ever think about the different expectations for boys and girls?	-Why do you think you have thought about this? Or, why do you think you never thought about this aspect of fitness testing?
Is there anything else you would like to add about your experiences or thoughts related to fitness testing in physical education?	
Thank you for your time. I appreciate your participation in this study.	

This particular combination interview protocol was selected because it ensures that all participants are asked the same questions, while allowing for the researcher to probe more deeply when further information may be obtained or relevant to the research question. Sample questions included: Do you think girls or boys have higher expectations on the mile run test?; Why do you think girls/boys have higher expectations?; Boys are actually expected to run faster than girls. What do you think about this fitness expectation?; and Would it be okay for a girl to outrun a boy? The interview questions allowed the researchers to assess students' perceptions of the PCPFAP in terms of gender and bodily physicality, while investigating the implications of the gendered performance outcomes on how students construct knowledge about fitness abilities and movement potentials. The interviewer asked similar questions for each of the fitness tests included in the specific fitness testing program. As it is clearly apparent that the interview questions were constructed to address issues related to the gendered nature of fitness tests, the interviewer's perspective was neutral throughout the interviews. This was accomplished by following the interview protocol closely and asking additional questions when clarification or further elaboration contributed to a thick description of the students' experiences with fitness testing. An outsider-positioning, as defined by Reinharz (1992), was established by interviewing the students without expressing the research questions being addressed.

Data Analysis

All interviews were transcribed verbatim. Analysis rooted in critical feminist theory provided a framework helped to understand how specific gendered aspects of fitness testing constitute, replicate, and contest gender interactions. According to Crawley et al. (2008), "A standard premise of feminist work is that the researcher cannot be separated from the research. Research is never objective in the sense of being devoid of power relations" (p. 3). The

interviewer maintained a reflective journal while conducting the interviews, transcribing, and analyzing the data. Crawley et al. (2008) stated, “So the feminist scholar should always strive toward considering her/his own role in the research process. That is, feminist research...requires reflexivity” (p. 3).³ This was an important process because as Haraway argued, feminist scholars must strive to reveal their own affiliations and personal connections to the research, specifically with the purpose of making power relations transparent and how power is potentially reproduced.

The data were initially analyzed inductively with the primary research questions in mind (Patton, 2002). All interviews were read carefully and a line-by-line analysis was conducted. In this analysis phase, data were coded in the margins of the interview transcripts. Following the initial coding, an individual with expertise in qualitative analysis, gender studies, and feminist theory was asked to read and comment on the original codes. This process aided in reducing any researcher biases that may have emerged in the original coding. Finally, the data were reduced into prevailing themes. Trustworthiness was maintained through including member checks with participants, acknowledgement of researcher bias, and triangulation (Patton, 2002; Rossman & Rallis, 1998). Member check occurred after the interviews were transcribed. Questions posed to the students included: “What did you mean when you said...?” and “Can you talk more about this...?” The interviewer returned to the school to ask participants for clarification when meaning was unclear.

Results and Discussion

This study addressed two research questions that previously have not been addressed in the physical education pedagogical studies related to fitness testing programs. First, are students who participate in two different fitness testing programs cognizant of the discrepant gender expectations? Second, how do students construct their knowledge of the gendered conceptions of fitness and physicality through experiences with fitness testing programs? This section is

structured so that both questions are addressed separately, but this is not to suggest that these findings are separate or operate in isolation of each other.

Question #1: Are Students Cognizant of the Discrepant Gender Expectations?

The students in this study revealed varying gendered responses to this research question. Two themes emerged suggesting that, regardless of the fitness testing program, some students were aware of the different gender expectations, while others were not. Figure 3 represents all students in the study by testing program and fitness status (i.e., award, no award, HFZ, NI).

Name	School	Gender	Testing program	Fitness Status
Laurie	Ferndale	F	President's	No Award
Wayne	Ferndale	M	President's	No Award
Stephen	Ferndale	M	President's	No Award
Julia	Ferndale	F	President's	National
Turena	Ferndale	F	President's	Presidential
Roderick	Ferndale	M	President's	National
Makayla	Troy	F	President's	No Award
Anna	Troy	F	President's	No Award
Lance	Troy	M	President's	No Award
Tessa	Troy	F	President's	Presidential
Jeremy	Troy	M	President's	Presidential
Kanye	Troy	M	President's	Presidential
Shannon	Lakeshore	F	FitnessGram	NI
William	Lakeshore	M	FitnessGram	NI
Malik	Lakeshore	M	FitnessGram	NI

Figure 3. All students in the study by school, gender, testing program, and fitness status.

(Figure, con'd.)

Ellen	Lakeshore	F	FitnessGram	HFZ
Courtney	Lakeshore	F	FitnessGram	HFZ
Justin	Lakeshore	M	FitnessGram	HFZ
Mariah	Magnolia	F	FitnessGram	NI
Christina	Magnolia	F	FitnessGram	NI
Samuel	Magnolia	M	FitnessGram	NI
Elise	Magnolia	F	FitnessGram	HFZ
Brice	Magnolia	M	FitnessGram	HFZ
Stanley	Magnolia	M	FitnessGram	HFZ

NI = Needs improvement. HFZ = Healthy Fitness Zone.

“Yea, I’ve Thought about It.”: Realized Gender Differences. Out of the twenty-four students interviewed, eight students (all girls; i.e., 8 of the 12 girls who participated in the study) were aware of the discrepant fitness expectations for girls and boys. Figure 4 shows the eight students by fitness testing program along with their fitness status according to the tests.

Testing Program	Student	Fitness Status
FitnessGram	Ellen	Healthy Zone
	Elise	Healthy Zone
	Courtney	Healthy Zone
	Christina	Not Healthy Zone
President’s Challenge	Tessa	Award
	Julia	Award
	Turena	Award
	Laurie	No Award

Figure 4. Students who thought about gender differences prior to participating in interview.

In both the PCPFT and FitnessGram, three female students who received an award and three female students who performed in the HFZ, discussed their previously internalized thoughts about the differences. Elise, a student in the HFZ, stated, “Yea, I’ve thought about it. For the boys, they have to run more and they do more push-ups, but some of the girls can run a lot more than some of the boys. That’s just comparing the boys to the girls.” When asked how she felt about this, she said, “I think it’s kind of unfair that the boys have higher expectations than girls because the people who make up the Pacer test probably have higher expectations for [boys], but I think girls can do anything boys can do.” Julia became aware of the gender differences when the “boys rub it in your face.” She said, “It’s not nice and that’s when I think about it.” Tessa, while aware of the gender differences, was aware for another reason and with a different affective response. Her tone changed. That is, she shyly became smaller in her chair.

Interviewer (I): When did you become aware of these differences?

Tessa: Uhm...ever since second grade.

I: And why during second grade, what happened?

Tessa: Well, I didn’t really notice anything in first grade because it was my first year.

Then in second grade I started to get a little bit more active and so then I started to notice things.

I: How did you feel when you started noticing these things?

Tessa: Uhm...it made me feel a little bit upset.

This student’s response is a significant and undeniable reason to challenge dominant discourses that continue to place students, especially males and female, in opposition to one another (Domangue & Solmon, 2008; Domangue & Solmon, in review).

Turena said she thought about the different gendered fitness expectations outside of the context of school and related it to gendered experiences at home.

R: Have you thought about these gender issues in the past?

Turena: Yeah, when I was playing football with my cousins or when I'm sitting down with my brothers, my stepbrothers, playing video games. I think about it.

R: What do you think about?

Turena: I think about when I was with my grandma. I barely got anything because I couldn't keep my room because I would shove everything in the closet and under the bed. My brothers did the same thing and got more.

While Turena, was not speaking directly about her gendered experiences with fitness testing, this internal dialogue represents a fitness metaphor. That is, she is cognizant of gender-related issues in multiple contexts and the multiple implications of such gender expectations.

One student who did not receive an award and one student who did not perform in the HFZ were also cognizant. After Laurie, responded to the questions about the specific fitness tests, the lead researcher asked, "Have you ever thought about those different expectations for boys and girls prior to this interview. Laurie stated, "I have realized that. I've realized that in the sit-and-reach, Mrs. Reed says that like 33 inches makes Presidential for girls and 30 inches makes Presidential for boys." For this student, she provided a concrete example of when she thought about the gendered nature of fitness testing. When asked the same question, Christina expressed a different response to the gendered expectations. She stated, "Yes, I have because we had a girl who went over 60 [laps in the Pacer test] before and all the boys were like 70 laps. That's how I try to see, I try to see another girl go over 60." The researcher then asked, "Why do you want to see that happen?" Christina responded:

Because the boys think they're better than girls, cause the girls didn't go over 60. So that's like a chance to prove them wrong. And without us feeling bad, and without them

feeling bad either, but just to prove them wrong and tell them that girls can do just as well as boys can.

In this discussion, it was as though Christina was searching and hoping for a girl to outperform the boys as this is the “gold standard” of fitness and ability.

The previous students’ responses seem to represent negative meanings associated with the discrepant expectations, but Courtney had a different response. She stated, “Yes, I’ve thought about this before today. I think it’s good, because most of the time boys are stronger than girls. They do football and basketball and girls do gymnastics and dance.” This student’s response highlights the need for researchers to address the second question posed in this study.

“Because No One Ever Asked Before.”: A Place of Privilege. Prior to being interviewed, the 12 males, regardless of their performance on the fitness tests, did not consider the apparent gender differences. For these 12 students, their responses varied greatly when asked the question “Before this interview, did you ever think about the different expectations for boys and girls?” Below are a few of the students’ responses to this question:

“No, I’m just thinking about my goals and what I’m gonna do.” (Stephen)

“No, most of the time I’m just having fun.” (Kanye)

“No.” (William)

“Never.” (Stanley)

However, Jeremy had a response that still reflected a non-recognition of the divergent expectations, but instead mentioned a different gendered cognition. That is, he said, “Boys have more confidence than girls.” Jeremy’s and the other students’ statements reveal that students are consciously aware and interpreting their physical education experiences from multiple perspectives with multiple meanings and some through gendered lenses.

When Samuel was asked the same question he quickly said, “No. Because no one ever asked before.” Even though Samuel was a student who did not perform within the Healthy Zone, his response highlights one problem associated with gendered dominant discourses. Evidence of this is apparent in this specific context with boys being in a place of higher expectations with different privileges associated with being male in a physical education setting. Samuel’s thoughts, however point to a different concern. Specifically, how are low-fit students experiencing fitness testing and what are the implications for these students when there are such high expectations for boys as an essentialist category? Additionally, for the four girls who did not receive an award or did not perform within the HZ, these questions are also significant. These students had similar responses as the boys. For example, Markayla stated, “Umm, no, not really.” Similarly, Shannon replied, “No, not really.” Insight into this concerns/questions, from the students’ interviews, appears in the following section of the results that addresses the second research question.

Question #2: How Do Students Construct Their Knowledge of the Gendered Conceptions of Fitness and Physicality through Experiences with Two Different Fitness Testing Discourses?

Two themes emerged that represent how the students constructed ideologies about fitness through their fitness testing experiences. First, knowledge about fitness was apparent as a result of students receiving gender-related information both inside and outside of the school environment from modes of popular culture, familial expectations, information from peers and teachers, and historically-situated events. Second, fitness-related knowledge evolved as a result of their gendered positioning within the specific context of fitness testing which led to students’ articulations of their restricted ambitions as a result of negotiating through a discourse of difference. One of the most significant aspects of these themes is that the findings transcended

fitness testing programs. That is, students who participated in both types of testing programs expressed similar constructions of knowledge.

Cultural Scripts: Informing Gendered Constructions of Fitness Knowledge

“Have You Seen The Incredibles?": The Role of Popular Culture. It was clear from the interviews with the students that meaning about fitness was gained through exposure to various forms of popular culture. After speaking with Jeremy about why he thought that boys could do more pull-ups than girls, he described how watching the Pixar movie *The Incredibles* (2004) contributed to his knowledge-construction. He asked the interviewer, “Have you seen *The Incredibles*?” The interviewer responded, “Yes, I have. What do you remember about that movie?” Jeremy responded,

The strong person, who is the dad, could pick up a truck. He has more back strength than the girls. And the girl can stretch all the way. This is why I knew that boys should be able to do more pull-ups than girls.

This was an insightful observation by Jeremy, one that sheds light on not only how the characters’ superpowers were gendered, but also how the language used to define the characters produced a power differentiation between the mother and father characters. That is, the father is referred to as “Mr. Incredible” and the mother is referred to as “Elastigirl.” Additionally, one of the sons is “Dash—The fastest kid on earth” and he can run incredibly fast; the daughter is known as “Violet.” A Wikipedia (n.d.) entry described Violet as,

A junior high school teenager stuck at the crossroads between girl and woman, Violet desperately wants to be like everyone else, to blend in with normal people, and to not stand out. Appropriately, her superpowers allow her to turn instantly invisible, and to generate spherical force fields to protect herself (and also to levitate extremely heavy objects; the interiors of the force fields have an anti-gravitational effect, allowing Violet

to levitate inside), but it appears that energy consumption by those same force fields is her Achilles' heel, as she can be stunned temporarily if the field is struck by a sufficiently large force.

The role of this film and others that create and perpetuate gender stereotypes cannot be ignored, especially due to the fact that children are obviously being influenced by the messages being presented, and in this case overt examples of normalized conceptions of masculinity and femininity (Azzarito & Solmon, 2006a).

Kanye also provided a specific illustration of a commercial that was influential on how he came to understand fitness. He stated, "I saw this commercial that, it's called something like the GoFit. It's the pull-up thing where there was a doorway and there was a frame where you could pull up. I remember that the commercial showed boys, not girls doing the pull-ups. So, boys have more back strength than girls because girls have more flexibility." Through this specific form of media, Kanye began conceptualizing boys' and girls' fitness abilities as essentially different. Samuel also mentioned the role of popular culture. He said, "I like to watch movies and every movie I see there's usually, if it's a gymnastics movie I see only the girls are doing it." This non-representation of girls or women doing the fitness exercise/activity in the commercial and non-representation of boys or men in movies with gymnastics storylines contributed to these students' gendered construction of knowledge (see Azzarito & Solmon, 2006a; Martino & Pallotta-Chiaroli, 2003).

"Because My Mom is Really Flexible." The Role of Significant Individuals. Eight of the 24 students discussed the role their parents or family members played in contributing in their gendered constructions. Kanye stated, "I know that girls are more flexible than boys because my mom is really flexible." Malik, like all of the boys in this study, had not thought about the gendered differences on the fitness tests before the interview. During his interview, he elaborated

on why he thought the gender differences were appropriate. He said, “Well, I never really thought about it, but my mom was telling me that girls have better ability with their little muscles, like fingers, so generally they have better handwriting. And, boys have larger muscles, like triceps and biceps, so I guess I kind of knew it all along that boys and girls are different.” Later in the interview, Malik talked about one girl in his class who was the last person (the person who could run the most laps) in the Pacer test. He attributed her success or ability as an inherited ability because he knew that her mother’s abilities. Malik said, “Well, actually I think a girl was the last person doing the Pacer test, and her mom was really good in track, so I think she kind of inherited that (sic).” These two very different knowledge constructions reveal how students are receiving information from various perspectives and sources that contribute to their personal ideologies concerning fitness as essentialist and socially constructed, thus complicating the formations of knowledge (Malson, 1998).

Historically-situated: Girls as Different. There were four girls, one from each of the fitness categories, who constructed knowledge about the gendering of fitness based on their perceptions of how girls have been historically-situated as inferior and in opposition to boys. For example, Laurie expressed frustrations with the fact that the tests continue to divide boys and girls along essentialist fitness lines. She stated, “It kind of upsets me that some people think that since, you know, boys were stronger in the past that they must be stronger in the future. And I think that’s kind of discriminating against, you know, boys and girls.” Her insights are important because they illustrate the problems that can occur when discourses reinforce the notion that all individuals of a group (i.e., boys, girls) have the same lived experiences. Turena also expressed frustration with the gendered expectations, arguing, “I don’t think it’s right. I don’t think this is really fair to the girls because like before we couldn’t vote.” Similarly, Mariah said, “I don’t agree with that. I guess that it is the fault of the people that [sic] came before us. They didn’t give

girls the same rights as they gave boys.” Courtney suggested that the differences resulted because “[girls] never had to do the same types of things that [boys] do in school.” She astutely noted that the differences are a result of schooling experiences that treat boys and girls as different and unequal (see Wright, 1995).

Restricted Bodies/Ambitions: Gendered Conceptions of Fitness through Fitness Testing

Many of the students accurately selected which group, girls or boys, had higher expectations on the specific fitness tests as a result of observing their peers’ performances. For example, Tessa stated, “Because usually when I look up in the front I mostly see a bunch of boys but there are a few girls in the front, too.” Similarly Ellen, a student in the HFZ, said, “I think it’s pretty normal for boys to have higher scores than girls.” Both of these girls performed better than a majority of the students in their classes, and their gendered observations are consistent with the normative- and criterion-referenced standards. However, this specific theme emerged as students repeatedly articulated concerns and fears of moving their bodies freely without having their gender identity challenged or questioning and through formation of self-esteems. These three subthemes are discussed in more detail below.

Challenging Constructions of Femininities and Masculinities. Laurie voiced specific thoughts about how the current structure of fitness tests creates a discourse of difference that led to gendered confrontations in her physical education class that have significant implications on students’ constructions of their individual gender identities. The following extended excerpt of Laurie’s interview provides an example of a stream of thought that reveals how she experienced fitness testing and how she constructed knowledge about other students’ gendered embodiments.

Laurie: And I know that [fitness testing has] caused a lot of fights in my grade. Like, oh boys are stronger so they should have higher expectations. And the girls say, “You think girls can’t do this?” Or blah, blah, blah. And I’m not very comfortable with it, I know

that some of the other girls aren't very comfortable with it because when they do better than some of the boys they get upset and embarrassed.

Interviewer: Why do you think they get embarrassed if they do better?

Laurie: Because everyone says, "Your expectations are *supposed* to be that low, so why don't you do it, or otherwise you're like a boy." I know I tried harder on the sit-n-reach if Trey did better on the sit-n-reach. The girls would feel embarrassed and everyone would be like, "Oh, Trey you're so flexible, you're like a girl."

Interviewer: What did Trey say to the students?

Laurie: He just ignored it. He has a really strong character so he didn't really mind it. I don't think it affected him at all. But some other boys who are maybe a little more sensitive to *it*, and I know that some of the boys here are sensitive to it.

Interviewer: What do you mean sensitive to *it*?

Laurie: Some boys care about what other people think and they say, "Maybe I do have the body of a girl, or, you know, something like that. Like they do well on the sit-n-reach but then they don't get as many pull-ups, they think well everyone thinks I'm a girl then maybe I do have the body of a girl. Or maybe I'm just *weird* or something. And I understand that some people feel like that sometimes.

Interviewer: Do you think there are long-term effects of such experiences?

Laurie: I think that most of the kids here will just kind of get over it as they get older, some of them might not. And it might make some kids, you know, want to do not as well as they have been doing, but it also might make some of the other kids do better....And I think it could create a competitive wall between them, like girls are better than boys, no boys are better than girls.

This dialogue between Laurie and the interviewer clearly demonstrates why it is important to explore how students experience fitness testing and other gendered discourses in the physical education context (Domangue & Solmon, 2008). That is, during this segment of the interview she expressed ideations of frustration, gendered confrontations, learned helplessness, the role of self-esteem in overcoming gender stereotypes, students' sensitivities to gender expectations, and the potential long-term implications on constructions of fitness and ability. These expressions of boys being "sensitive" and feelings of being "weird" suggest that such questioning of masculinities or femininities may result in questions of sexuality, especially as gendered expectations are rooted in heteronormativity (see Domangue & Solmon, 2008; Gorely, Holroyd, & Kirk, 2003).

Stephen expressed similar types of questioning of boys' gender identities when asked about the expectations for girls and boys on flexibility tests. He said, "If a boy reached further than a girl then they would think he was a girl. They would call him a girl." Examples of this questioning became apparent in how the students interacted with each other. Markayla also discussed the flexibility dilemma that boys may experience. She stated,

Boys might not be as flexible because they might not take stretching as serious. They might think like when you stretch it's like, 'Oh, no! I don't want to stretch because the girls might think I take ballet because I stretch very well.

This restricted bodily ambition, for Markayla, relates directly to dominant discourses about masculinities and how students try to negotiate such positionings that are contrary to their personal interests or physical abilities (Young, 1990).

Turena described a specific fitness testing situation when a girl outran a boy on the mile run. When the test was complete, students yelled, "'Ryan! Skillet! You just got that \$5 foot long with meat!' Because he just got out ran or outsmarted by a girl." When Turena was asked about

these statements, she said it meant that “you just got told by a girl” that “smoked a boy.” The fifth grade students may not have been aware of the obvious sexualized connotation that such a phrase maintains, but through a critical feminist lens this particular language usage provides considerable insight into how students knowingly or unknowingly reproduce gendered discourses.

When asked about how she feels when she outperforms male students who have higher expectations, Courtney presented a different, but similar gendered perspective of how her experiences contributed to the construction of knowledge.

Courtney: It makes me feel good that I can catch up with the boys and some of the girls can't. I also feel kind of *weird*. Like I am proud of myself, but I think it's kind of weird that I am the only person that [sic] can catch up with boys.

I: Why do you feel “weird?”

Courtney: Because I feel like a boy or something. Like one time when we did the Pacer. The boys and girls were separated and there were more girls so I had to go with the boys. That made me feel *weird* because some of the boys stopped before me and some of the boys went ahead of me.

I: Did it motivate you more or less to run with the boys?

Courtney: Kind of less because all of the girls thought that it was kind of *weird* that I was faster than a lot of boys.

This dialogue provides a concrete example of how highly fit or skilled girls may restrict their abilities or efforts for fear of performing a gender identity that is not consistent with what is expected from her peers, which may potentially lead to a gendered fitness identity conflict for some or withdrawal from specific fitness-related activities for others. Courtney's experience also sheds light on the implications for separating students based on their sex.

Two high-performing female students discussed how being a labeled a “tomboy”⁴ or assigning themselves a “tomboy” label influenced how they situated themselves as physically fit individuals and how such labels contributed to their fitness knowledge. Turena is an example of a student who spoke openly about her “tomboy” status.

Turena: All I know is that I like being competitive because like for the life I have now, everything that I do now is competitive because I have all these brothers. So, I’m like a tomboy.

I: What does that mean “tomboy”?

Turena: Tomboy, it’s like you’re a girl but you don’t like the frilly nails pink stuffy things that other girls like, but you like more boy things like basketball and football. I like the word “tomboy” because it’s not like a girl acting like a girl, more like a girl acting like a boy.

I: What does that mean “acting like a boy”?

Turena: Like you don’t want to wear dresses. They want to wear the ripped jeans or ripped shorts and like to get dirty.

For Turena, by identifying as a “tomboy,” such labeling created a gender category that allows her to perform her physicality and name it specifically. This dialogue is significant because the gendered nature of sports cannot be stripped from its patriarchal roots, thus reinforcing a male/female dichotomy. Courtney is another student who discussed her status as a self-identified “tomboy.” She stated, “It’s kind of like I am not as girly as some girls and I am more tomboyish.” For these students, usage of the word “tomboy” provided them with the language to describe their interests in physicality in a context that has low expectations for their fitness abilities.

Productions of Self and Self-esteem. Stephen, a student who did not receive an award, described how fitness testing is hard for him “when he was not feeling well” or when he got “scared about getting picked on.” He described one instance when he was aware other students laughed at him when he was trying to do his pull-ups. It is not clear why the students were laughing at Stephen, but it is clear that as a low fit student, he had a negative experience with fitness testing that made him feel “sad.” William, another student who performed in the “Needs Improvement Zone,” expressed feelings of being sad. During the interview, he sat in the chair and initially only provided one-word responses. After a few minutes, he began speaking more openly about his experiences. He said, “It affects me because I think that I’m not good, so why should I even try.” After William made this statement, he returned to his more subdued affect, one-word responses, and tears slowly welling in his eyes. At this point, the researcher ended the interview, as it was clearly eliciting emotions that were strongly connected to his perceptions of his ability or specific experiences. While this may not seem to be an overtly gendered experience, a gendered reading of the student’s responses cannot be ignored. That is, William may have confronted his own ideals of the performance of masculinities, especially those masculinities that he may not actually maintain or want to perform. William’s responses (linguistically, affectively, physically) reveal the importance of considering how all students experience educational discourses, especially due to the fact that individuals do not operate in sexed-less or gendered-less bubbles. For this student, it is possible that his feelings of sadness may have been a result of not conforming to, possessing, or performing privileged masculinities that are promoted in the physical education context (Gorely et al., 2003).

Lance provided a different perspective about how the different expectations for boys and girls may make girls feel about themselves. He said, “It probably makes them feel real bad inside because they are not showing their abilities.” James suggested that boys have higher expectations

because “[boys] have more confidence than girls.” Kanye is another example of a student who explained the differences through an essentialist lens. That is, he stated, “Boys don’t panic when they are running. They stay steady. Girls get real hot and then they will want to slow down or throw up or something. Boys will just slow down and just keep running.” Kanye’s comments do not acknowledge that several girls finished before several boys. Mariah stated, “It’s not that fun when the other people, mostly the guys, are gloating. Like, ‘Ha, ha. I got whatever and you got whatever.’” As a student who performed in the “Needs Improvement Zone,” she revealed how the testing environment created a situation that allowed students to compare their scores, and student positioning was a salient memory for her that was not “fun.” This begs the question, “Why would a student who does not experience success and feels like she or he is being made fun of want to continue an activity?” This is a feminist-based question, as feminism is not a solely female/woman/girl framework, but more concerned with the intersections of the social constructions of gender, race, sexuality, religion, class, ability, and a multitude of other identity markers.

Conclusion

According to Taylor (1995), “Schooling is a site where gender ideologies are transmitted via the gender regime, and recent research suggests that this hidden curriculum is both powerful and pervasive and makes the task of changing gender relations very difficult” (p. 7). While the initial purpose of this study was to understand the gendered nature of students who participated in a norm-referenced or criterion-referenced fitness testing program, the data also revealed that these testing programs, regardless of the structure, are in fact a gendered discourse with implications for all students, regardless of their gender or abilities. The lack of differences between the two tests concerning how students constructed gendered conceptions of fitness through their experiences with fitness testing is a finding that, while not statistically significant

by quantitative methodologies, is in fact significant for understanding fitness testing as a dominant discourse that perpetuates ideologies of difference across girls and boys. While the criterion-referenced nature of FitnessGram is to focus on self-improvement, the students' responses to the interview questions suggest that regardless of the structure of the tests, students are cognizant of gender performances and social comparisons based on the fitness testing programs' gendered expectations. This is consistent with the findings reported in the pilot study included in Appendix D.

Initially we were not going to interview boys; however, we quickly realized that their constructions of fitness-related knowledge could provide significant insight into the gendered fitness testing phenomenon. Specifically the girls' and boys' perspectives of their experiences are important to understanding how the fitness testing environment creates an environment of difference for some, an environment that supports the gendered norms for others, and a environment of indifference for the rest of the students. The fact that none of the boys discussed cognitions about the different gender expectations, regardless of fitness status, highlights the concerns that feminist scholars have consistently been theorizing about in schooling. That is, when individuals are in a power position that maintains specific privileges, such positioning becomes invisible to the dominant group. Thus, this type of research can have significant implications for initiating dialogue about how individuals who are a part the dominant group can recognize their subject positioning. Obviously this type of informed or engaged pedagogy (bell hooks, 1989) cannot occur during a 15-minute interview, but with time and conscious investment in the students' lives, pedagogues can create a physical education context that minimizes the emphasis on gender difference and maximizes the importance of students' individual fitness-related successes and acknowledges similarities across genders.

Sexism according to bell hooks (1989) is a process by which the group being oppressed is infallibly expected to maintain an unquestionable admiration for their oppressors. While I am not attempting to argue that the division between girls and boys on fitness expectations is solely an issue of sexism, this is one aspect of discourse that does play a role in the construction of knowledge. This is clear from the highly fit girls who were cognizant of the differences. The implications of the differences on how they saw their bodies restricted their ambitions due to fear of being ascribed a gender- or sexualized-label that they did not want to or were not prepared to experience in a cultural context that maintains ideologies of difference and superiority. This was also apparent through the discussions of the boys and fears of being perceived as flexible with “girl bodies.” The goal of this research was not to identify the fifth grade boys as the oppressors responsible for the fitness disparities. In fact, their lack of critically thinking about the differences, prior to this study, provide a specific example of how dominant discourses, when unchallenged, maintain power and positioning of one group over another group. The low fit male students experiences of feeling sadness and shame provide an example of how we cannot make boys and girls essentially the same or different. That is, the variation of experience is so variable that when we think about this critically it becomes impossible to maintain the current socially constructed expectations for groups of individuals who maintain sex, gender identities, sexualities, ethnicities, religious affiliations or nationalities, to name a few.

Copp and Kleinman (2008) argued, “Consequently, sexism becomes mastered and normalized in ways that racism (for instance) does not” (p. 102). However, this is not to reduce or diminish the problems associated with racial oppression (or any other type of socially constructed oppression), or to make racism and sexism as fundamentally different, but to acknowledge that oppression is used in various ways to keep such positioning. For example, at one of the schools where I collected the data for these studies, during my initial observations of

the classes, one pedagogical practice stood out so vividly. I was there to understand and observe the interactions of the teachers and students, the structure of the class, and overall routines and procedures. As I walked up to the teaching space, a large concrete area with four basketball goals, I noticed something spray-painted on the ground. Two long lines were drawn, one in red and the other in blue. At one end of each line, there, clearly marked were the letters “G” in red and “B” in blue. This division of boys and girls has nothing to do with fitness testing practices, but it highlights teachers’ desires to stratify and compartmentalize boys and girls (Solmon & Carter, 1995). Would teachers be unquestionably permitted to spray paint, in lines, the letter “W” in white, “B” in black, “A” in yellow? This would not and should not be allowed, nor supported, in the same way that the girls’/boys’ lines are equally as divisive. I argue, as Toni Morrison did about “writers’ assumptions of the ‘whiteness’ of American fiction readers” (Miller, p. 227), that current conceptions of gendered fitness ignores a long tradition of physically fit and athletic girls and women. Thus, such assumptions of girls lack of fitness “have sabotaged” (Miller, p. 227) girls’, boys’, men’s, women’s, and teachers’ imaginations of the potential of all students.

Endnotes

¹ The hyphen in “re-production” is used to denote an emphasis on the role of agency as a process that acknowledges subject positioning and uncovers the potential that change may have in order that change can occur (Hollway, 1984).

² The terms “high fit” and “low fit” were used to represent a binary layer of fitness testing, that is, on the level of fit bodies versus non-fit bodies. This is a structure of the tests that, as with gender and regardless if the tests are criterion- or norm-referenced, creates an environment that situates students in opposition to one another.

³ As the primary researcher, I feel deeply connected to this research on multiple levels. My interests in promoting gender equity through pedagogy and scholarship are clearly significant aspects of my personal identities (e.g., female, teacher, athlete, researcher, activist). The critical lenses I look through are always focused on the intersectionality and interactionality of individuals’ multiple identities.

⁴ The word “tomboy” when not used in a direct quote by the students is always placed in quotation marks. This punctuation is used to denote my personal bias about such language in the

classroom. More importantly, the word “tomboy” becomes another gender as a result of language that is based on cultural practices that do not allow for individuals’ genders to be fluid and non-linear, but instead a specific label must be ascribed.

CHAPTER 5: GENERAL DISCUSSION

Acts of curriculum theorizing and construction always begin where they are needed, most often at varied points of tension, discontinuity, exclusion and rupture. It is in the rough spots, the breaches, where there is still critical and imaginative work to be done (Miller, 2005, p. 208).

These “breaches,” when considering fitness testing practices, are crucial in that the breach represents a weak point in a structure that is designed specifically to maintain the status quo. This breach is a sign of uneasiness and can lead to drastic changes in the way fitness is conceived, specifically for fitness testing programs, reconceptualizing ideologies surrounding health-related fitness, and the gendered nature of physical education—in general. Maxine Greene (1995) wrote, “... action always signifies a new beginning, a new initiative, so that fixed and final frameworks remain inconceivable” (p. 197). Without recognizing and attempting to understand how students experience and create bodily meaning through dominant physical education discourses, such change can and will not occur.

The major findings across the studies provide substantial reason for continued investigation into the motivational and gendered aspects of fitness testing programs. In the first study (Chapter 2), students who participated in the PCPFT and received an award (i.e., Presidential, National) reported higher levels of task-involvement, perceived competence, effort, enjoyment, and future intention to participate in fitness testing programs than those who did not. In the second study (Chapter 3), students who participated in FitnessGram, regardless of fitness status, reported higher levels of task-involvement, perceived competence, and future intention to participate in fitness-related activities. Additionally, those students who performed in the “Fit” group (i.e., award group, HFZ group) reported higher levels of ego-involvement, perceived competence, effort, enjoyment, and future intention to participate in fitness testing and fitness-related activities than those categorized as low fit. These findings are important for considering

the long-term and potentially detrimental impact of fitness testing on students' future interests in fitness-related activities. The possibility of physical disengagement and reduced intention is counter to overall goal of quality physical education programs.

In the last study (Chapter 4), one of the most significant findings was that girls were the only students who were cognizant of the different gender expectations prior to participating in the interviews. All of the girls in the study were not aware of the different normative- and criterion-based standards. Two themes emerged that revealed gendered experiences occurred across testing programs. First, knowledge about gender-related conceptions of fitness was created by the students based on their schooling experiences, various modes of popular culture, familial expectations/roles, and historically-situated events that served to establish and perpetuate boys and girls as essentially different. Second, the students' positioning within the two different testing programs allowed the students to produce knowledge and meaning that led to restricted bodily movements. These articulations of restricted bodily movements and the motivational findings related to future intention to participate in fitness-related activities are clearly a line of research that needs further attention—in terms of pedagogy, theory, and critical change (i.e., social justice through activism).

I argue, like Miller (2005), that unless fitness testing practices and fitness conceptions they are reconsidered, these pedagogical practices “maintain the status quo and reinscribe already known situations and identities as fixed, immutable, and locked into normalized conceptions of what and who are possible” (p. 220). By looking at fitness testing programs through motivational and feminist frameworks, the results of the three studies included in this dissertation reveal significant findings that serve to extend the concerns related to fitness testing. Anke Finger and Victoria Rosner (2001) argue that through interdisciplinary approaches to research, feminist scholars will have opportunities to “challenge the forms knowledge takes in

the disciplines, to search for omissions, gaps, and erasures, and to pursue investigations that disciplinary structures may preclude” (p. 499). Through this lens, the field of physical education and kinesiology, in general, can begin to reconsider the ways in which such fields as sociology, psychology, exercise physiology, critical pedagogy and human geographies can allow for a more holistic perception of fitness and ability. Kirk (2001) proposed that

...by seeking out the connections between these practices and other related practices, by taking seriously the effects of these practices on young people, and by providing means of educating teachers, policy makers and the general public about the whole range of consequences of school practices, perhaps the process of schooling bodies may be less likely to be negative and alienating, and more likely to be fulfilling, enabling and in the most hopeful sense of the world, liberating. (p. 486)

This reconceptualizing can only be made possible when the lived experiences of all individuals are considered as valued and real.

By listening to the students’ reflect on how gendered fitness-related knowledge was and is constructed, an essential element of feminist pedagogies is reinforced, that is, there is always an attempt to understand how students are experiencing their teachers, peers, content, specific aspects of the curriculum or schooling. Without critical reflection coupled with didactic pedagogies, by students, teachers, and researchers, fitness regimes will remain in place that do not allow for change to ensue. The goal and importance of such research is to acknowledge/reveal dominant discourses with the intention to create learning environments where all students can experience individual, meaningful, and significant improvements. In the physical education context, this may include improvements in fitness abilities (i.e., muscular strength, muscular endurance, flexibility), knowledge about how bodies move, cultural practices and how such cultural practices are socially constructed, the development of mature movement patterns, and their personal adoption of regular physical activity behaviors. I agree with Wright (2000),

My point in this paper is not necessarily to reject all that we do or believe in the name of physical education, but in the best poststructuralist mode to suggest alternative ways of thinking, to point to the relativity of what we believe to hold true and to promote questioning about the consequences of those truths and the practices which follow from them (p. 36).

These “alternative ways of thinking” will have to include the students who are experiencing the physical education context and the physical educators who are teaching the students. The situated agency that both the teacher and the students maintain can provide new ways of considering, revising and update the current conceptions of fitness. The purpose of this dissertation was not to support or discredit a specific fitness testing program or fitness testing practices, but the goal was to open the door for conversations that will serve to create physical education experiences that are more closely linked to the current needs and concerns of students, teachers, schools and communities.

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APPENDIX A: EXTENDED REVIEW OF LITERATURE—MOTIVATION

Examining Motivation in Youth Physical Fitness Testing

Within the field of physical education, both practitioners and researchers have become increasingly concerned with the rise in health-related risks associated with decreased levels of participation in physical activity (United States Department of Health and Human Services [USDHHS], 2000). Schools are regarded as a setting that can potentially have a positive effect on health-related issues due to the fact that the majority of children attend school and spend a significant proportion of their time there (Sallis et al., 2002). The USDHHS (2000) has recognized physical education in schools as an essential element in efforts to address children's current low levels of physical activity. The role of schools in children's lives cannot be ignored considering the amount of time that children spend in school.

The purpose of this literature review is to synthesize the research that focuses on as related to a physical education discourse (viz., President's Challenge Physical Fitness Awards Program, [PCPFAP]). The first section provides a summary of the current incidence of obesity and physical inactivity trends for girls in the United States, while outlining fitness tests as a tool used in physical education classes to combat such trends. Additionally, it serves to provide an overview of previous research that has explored the gendered nature of physical education. Relevant findings from research studies concerning motivational factors that influence students' performances on tests of physical fitness are presented in the second section. The paper concludes with a summary of motivation in physical fitness tests, implications for practice, and future research directions.

Current Trends: Girls and Physical Education

Various government organizations have recognized the physical education context as a significant site to battle current health-related problems (i.e., diabetes, obesity) that have surfaced

in disturbing percentages across the United States (United States Department of Health and Human Services [USDHHS], 2000; Centers for Disease Control and Prevention [CDC], 2000; National Institute for Child Health and Human Development [NICHD], 2003). Additionally, physical education has been identified as a primary venue for physical activity to be endorsed (Sallis & McKenzie, 1991; USDHHS, 1996). According to Ross and Townsend (2002), “Public education efforts need to address the specific barriers that inhibit the adoption and maintenance of physical activity by different population groups” (p. 516). Numerous researchers have concluded that girls in adolescence are less likely to participate in physical activity than boys of the same age (see Pratt, Macera, & Blanton, 1999; Vescio, Wilde, & Crosswhite, 2005). This finding emphasizes the need to understand the multiple layers of gender in physical education.

Motivation, Gender, and Fitness Testing

The physical education environment provides a unique opportunity for research that relates to girls and motivation (Biddle, 2001) as this is a context where issues surrounding girls’ motivation to be physically (in)active can be directly observed and investigated. In physical education classes students demonstrate divergent motivational responses and there is currently a deficit in research pertaining to girls’ motivational behaviors in physical education (Wang & Liu, 2007). Some students distinguish their physical education class as the best part of school while others have reported that they refrain from attending school for the exclusive reason that they want to avoid their physical education classes. The former reaction to physical education suggests that those children are highly motivated whereas the latter implies amotivation toward physical education (Biddle, 2001).

It is essential for researchers and practitioners to understand what factors in physical education contribute to students’ motivation or lack of it. Thus, this theoretical framework provides tools to understand how, through motivational aspects of fitness testing, students as

agents, especially girls, negotiate their positioning within dominant discourses in physical education (see Azzarito et. al, 2006). There is evidence that different and unequal teaching strategies for boys and girls promote environments where girls are less motivated than boys in physical education classes, ultimately resulting in the silencing and alienation of girls (Santina et al., 1998).

The PCPFS (2006b) explicitly states that “leading the nation toward these goals [e.g., healthy individuals and society] has been the Council’s mission from the start and continues to be as the PCPFS *motivates* Americans to become—and stay—active” (p. 2). While the road to improving fitness in the United States may have been paved with good intentions, we must investigate how the President’s Challenge affects the ways in which students come to understand their ability and motivation to be physically fit and active. In order for this to be accomplished, this inquiry focuses on how gender surfaced in studies that relate to individuals’ conceptions of ability (Nicholls, 1989; Dweck, 1999), perceptions of ability (Nicholls & Miller, 1984), achievement goal orientations (Nicholls, 1984b), and evaluation systems (Butler, 1987; Treasure, 2001). Additionally, the synthesis of literature includes research related to feminist poststructuralism and motivation in the physical education context.

Research on fitness testing and motivational factors has become increasingly more important as the number of obese people in the United States is on the rise (see CDC, 2004). Proponents for fitness testing suggest that the tests actually sustain and enhance children’s motivation to be active and physically fit, while developing knowledge and positive thoughts about physical activity (Harris & Cale, 2006). Nevertheless, various researchers have argued that there has been inadequate consideration for children’s perceptions of fitness tests in terms of motivational-related implications (Fox & Biddle, 1988; Jackson, 2000). Similarly, the Physical Education Association (PEA, 1988) reported that there are no data that support the notion that

individuals are motivated by fitness testing. In fact, evidence suggests that the students who do well are the only ones that fitness tests motivate.

The majority of motivation research in physical activity settings has utilized a social cognitive approach (Roberts, 2001). This approach implies that motivation and/or amotivation is a result of individuals' evaluations of competencies within specific contexts (e.g., physical education classes) and personal meanings assigned to such contexts. Specifically, perceptions of competence are linked to achievement (see Belcher, Lee, Solmon, & Harrison, 2003). Particular emphasis needs to be directed towards the resistance students may exhibit concerning motivation before, during, and after participation in fitness tests, especially since gender has been largely ignored. This section provides an overview that relates to four motivation constructs (i.e., conceptions of ability, perceptions of ability, achievement goals, intrinsic motivation) in terms of gender, physical education, activity, fitness, and fitness testing, when studies have addressed these issues.

Conceptions of Ability

Conceptions of ability are reflected in students' cognitions about differentiating between ability and effort (Nicholls, 1992). Dweck and colleagues characterized two types of conceptions of ability (Dweck, 1999; Dweck & Elliot, 1983; Dweck & Leggett, 1988; Elliot & Dweck, 1988). When a person believes that ability is fixed and dependent on natural talent, the person is considered to have an *entity* conception of ability. A person who believes that ability is malleable and can be enhanced with sufficient practice and effort possesses an *incremental* conception of ability (Li, Lee, & Solmon, 2006). Nicholls (1989) proposed two types of conceptions of ability that parallel Dweck's work, differentiated and undifferentiated conceptions. In order to maintain consistency, Dweck's terminology (i.e., entity, incremental) is used throughout this paper.

Entity theorists assume that ability should be regarded as a comparison of their performance relative to others (Dweck, 1999). This assumption often leads to an adoption of ego- or performance-oriented goals. People with entity theories have a preference for selecting tasks where they will excel and rejecting tasks that reveal inadequacies. Thus, low effort to excel is viewed as high ability. Incremental theorists view learning as a series of mistakes that ultimately allow individuals to show increases in competency and skills. Incremental theorists adopt task- or mastery-oriented goals. Children who possess incremental beliefs about ability display motivational patterns that are adaptive in nature (e.g., positive affect, perseverance in practice) (Dweck, 1986; Wang & Biddle, 2001). Conversely, those who maintain entity beliefs about ability are at risk to demonstrate maladaptive motivational responses (e.g., negative affect) when they encounter difficulties. Entity/incremental beliefs about ability are a dichotomous situation that establishes a binary system of considering ability (see Dweck & Elliott, 1983; Nicholls, 1984a).

Wang and Liu (2007) investigated Singaporean girls' enjoyment of physical education. When considering the relationships between beliefs about sport ability, self-determination, and goal orientations, they found incremental beliefs about ability predicted task goal orientation. The participants in Wang and Biddle's (2001) study who displayed a less adaptive motivational profile were characterized by low perceived competence, low incremental beliefs about ability, high entity beliefs, low mastery-goal orientation, high amotivation and low autonomy. The adaptive (high) motivation profile reflected a reversal of those motivational characteristics. There were clear differences in the motivation profiles based on gender, in that girls were overrepresented in the less adaptive groups and underrepresented in the adaptive profile. Specifically, 63% of the "amotivation" group and 66.3 % of the "poorly motivated" group were girls, but 66.8% of the "highly motivated" group were boys. They argued that children's and

youths' beliefs about ability play a significant motivational role in influencing individuals to be physically active or inactive. According to Dweck (2002), girls maintain normative beliefs about ability and tend to shortchange their ability when comparing themselves to boys. Additionally, when failure is experienced, girls impute the failure to an absence of ability.

Biddle (2001) suggested that there is a degree of difference between a child's beliefs about his/her ability and effort as compared to how a child defines success in a physical education context. Children's beliefs about their abilities stem from assessments of competency in different areas (Wigfield & Eccles, 2002). Wright (1996) revealed that students maintained essentialist notion of girls' and boys' bodies. For example, girls' bodies were perceived as delicate, nurturant, and *lacking in physical ability*, whereas, boys' bodies were muscular, self-sufficient, and *physically able*. Students negotiated constructions of boys' and girls' bodies based on their gendered perceptions of ability. These findings highlight why it is critical to understand how gendered perceptions of ability influence students' actual levels of competence.

Perceptions of Ability

Perceptions of ability are distinctly different from conceptions of ability. Perceptions are individuals' thoughts about their actual ability to perform a specific skill or task (Nicholls & Miller, 1984), whereas the latter construct emphasizes the nature of ability (Dweck, 1999). Lee (2002) stated that physical education students' perceptions of ability are inundated with stereotypical beliefs that fundamentally contribute to "their pattern of participation" (p. 122). It is this pattern of participation that is particularly important to consider in achievement motivation. For example, one student's comment in the study by Azzarito and colleagues' (2006) sheds light on the implications of students' gendered perceptions of motivation in physical education. Melissa told the interviewer,

...The girls, like, we lack motivation more, and they kind of want to show they are the best...here [in this physical education class] it's fun, because it's fun to watch the guys. They are so funny; they get so competitive, and it is so much fun to watch them, and the interaction is so much fun! (p. 231).

This student's assumption that all girls "lack motivation" serves to emphasize how students perpetuate gendered stereotypes without realizing the implications for self. Wang and Liu (2007) pointed out that girls' thoughts about participating in physical activity may be negatively affected if they maintain gendered perceptions of physical ability. Perceptions of ability are frequently referred to as perceived competence and the remainder of this paper will use this terminology².

Perceived competence. Perceptions of competence refer to how individuals perceive their ability to engage in a particular task and/or their performances based on appropriate behavioral expectations (Nicholls & Miller, 1984; Treasure & Roberts, 1995). Competency has been identified as a basic psychological need that serves to promote individual growth and development in specific contexts (Elliot & Dweck, 2005). This is an important factor to consider as it is essential throughout one's life and plays a key role in affective personal development, regardless of one's cultural background. Of particular relevance to this review are studies that show students with high perceptions of physical competence tend to be more prone to enjoy and continue to participate in physical activities than those with low perceived competence (Weiss & Ebbeck, 1996; Weiss & Ferrer-Caja, 2002). Individuals interested in reaching goals associated with learning may increase competency through mastering new tasks and learning new skills. Their focus is on competency rather than comparing their performance to others. Individuals who are focused on normative comparisons are likely to withdraw³, fail to attempt/complete difficult tasks, and display a decrease in performance when they do not compare favorably with their peers.

According to Wigfield, Battle, Solomon, & Eccles (2002), from childhood through adolescence there are gender differences in beliefs about competency, specifically for tasks that are stereotyped as being appropriate for only females or males. Numerous researchers have reported that individuals' expectations for success are related to their perceptions of the physical activity in terms of gender-appropriateness (Lee, Fredenburg, Belcher, & Cleveland, 1999; Lirgg, George, Chase, & Ferguson, 1996). Griffin (1985) suggested that when given a choice, the middle school students in her study selected physical education units based on the perceived gender-appropriateness of the units (e.g., boys selected football; girls selected gymnastics). This is consistent with Chepyator-Thomson and Ennis's (1997) findings that middle school students chose to enroll in classes along gender lines. For example, 92% of the students enrolled in aerobics classes were girls, whereas 62% of the students in weight training classes were boys. As students conform to the culture's conceptions of masculine- and feminine-identified activities, the reproduction of gender order ensued. However, not all students accepted such gender stereotypes, therefore implying a shift in possible feminine and masculine identities.

Motivation in gendered-domains. Wigfield, Battle, Solomon, and Eccles (2002) reported that during early childhood and into adolescence, competence-related beliefs were apparent across females and males. Those differences were especially noticed in domains that were stereotyped as more appropriate for a specific gender and on tasks that were considered to be novel. These gender differences are important to address in terms of how females' and males' perceived competence relates to their performance on specific gendered-tasks. Wigfield and Eccles (2002) found that early elementary school aged children reported "distinct beliefs about what they [were] good at and what they value in different domains" (p. 96). Through investigating the relationship of perceived competence to students' gendered perspectives of specific tests with the PCPFT and specific physical fitness tests, researchers can understand more

about performance-outcomes relative to performance expectations for boys and girls. Wigfield and Eccles (2002) noted that beliefs about competence to perform various activities were different across males and females. It is crucial for these competence-related gender differences to be addressed, as this is an indicator for future performance and selection of activity (Bandura, 1997; Eccles et al., 1983; Meece, Wigfield, & Eccles, 1990).

Across specific domains there remain notable differences across females' and males' self-beliefs (e.g., Eccles, Wigfield, Harold, & Blumenfeld, 1993; Marsh, 1993; Marsh & Yeung, 1998). Lee, Nelson, and Nelson (1988) found gendered cues (i.e., "hike, jump"; "ready, leap") influenced the 3rd and 7th grade boys' and girls' expectations for success when completing the Nelson Reaction Time Test. Specifically, when considering expectations for success, the results revealed a relationship between students' gender to the gendered cue. Boys expressed more confidence in successfully completing the reaction task when the researchers told the boys the task was important in measuring ability in football. While the girls in the study had lower expectations for success, their performance outcomes were not lower than the boys.

There is evidence that when young girls uphold gender-appropriate beliefs about physical activities such beliefs become implanted in their perceptions of competence (Meece & Courtney, 1992). That is, they will have decreased expectations for being successful in non-gender-appropriate activities, while valuing gender-appropriate movement activities. This is significant because as Maehr and Nicholls (1980) argued, "Success and failure are not concrete events" (p. 228). They are, however, psychological dispositions that are the result of individuals' perceptions of whether or not a goal was achieved.

Achievement Goals

Research related to achievement motivation ensued originally in psychological contexts (Elliot & Dweck, 2005). Findings have been used to address issues related to achievement

motivation in various real-world settings including: educational, professional, business, and sports. The tenets of achievement goal theory presume that an individual functions intentionally in a lucid, goal-directed manner (Nicholls, 1984b). Furthermore, beliefs rooted in achievement goals direct an individual to make decisions and behave in response to specific achievement milieus (e.g., Maehr & Nicholls, 1980; Nicholls, 1984b, 1989). Research on achievement goal theory has dominated the achievement motivation literature over the past two decades (Roberts, 2001).

Achievement goal orientations are defined as the tendency for individuals to consider their success in terms of task and/or ego dimensions (Biddle, 2001). A task-involved individual attempts to master a task while increasing competence (Maehr & Midgley, 1996; Nicholls, 1979; Nicholls, Cobb, Yackel, Wood, & Wheatley, 1990). The focus of task-involvement is on self-improvement (Nicholls, 1989) and learning how to complete or perform a task successfully (Biddle, Wang, Kavussanu, Spray, 2003). With ego-involvement, individuals endeavor to maximize positive aspects of their competence and lessen the emphasis on negative aspects of competence, relative to normative standards (Nicholls, 1992). An ego-involved individual is concerned with his or her performance compared to peers with the intention of achieving a higher social status (Biddle et al., 2003). Individuals become motivated when performance is considered to be superior to their counterparts, thus increasing the probability of feeling incompetent.

Nicholls (1978) argues that in order to investigate individuals' understandings of ability, it is necessary to look closely at the following constructs: effort, luck, ability, and task difficulty. Ability plays a significant role because children who believe they possess the ability to be successful at completing a task perform better and select tasks that are more difficult (Bandura, 1995). A task-oriented individual as opposed to an ego-oriented individual evaluates success

based on effort and individual improvements (Nicholls, 1989). Research that focused on elementary students' motivation levels and achievement goals in the physical education context revealed similar findings (Spray & Biddle, 1997; Xiang & Lee, 1998).

According to Nicholls (1989), when students enter into contexts where they focus on ego goals they will most likely perceive competence in relation to ability (e.g., low ability requires high effort). For individuals who seek ego goals, effort is likely to decrease, difficult tasks will be avoided, and ability will be identified as the reason for failure or success. Conversely, competence will increase for those who focus on task goals. In their review of motivation literature, Biddle, Wang, Kavussanu, and Spray (2003) concluded that conceptions of ability (i.e., entity, incremental) predicted goal orientations (i.e., ego, task), correspondingly. Likewise, various achievement motivation scholars have proposed beliefs about ability in sport serve as precursors for achievements goals (Dweck, 1999; Dweck & Leggett, 1988; Spray, Wang, Biddle, Chatzisarantis, & Warburton, 2006). Those with task goals believe that with effort, their ability can increase, whereas, individuals with ego goals maintain that ability causes success. When a physical education student is ego-involved, the allure to participate in a specific task is contingent on the individual's perceived ability and the normative involvement of the task (Biddle, 2001).

It has been theorized that individuals who pursue task goals will exude adaptive and optimistic motivation behaviors, regardless of their level of perceived competence to complete the task (Nicholls, 1984b; 1989). Likewise, individuals with ego goals and high perceptions of competence will potentially exhibit positive motivational behaviors. However, it becomes *problematic* when individuals with ego-oriented goals have low levels of perceived competence, that is, they may display maladaptive motivational patterns. As mentioned earlier in this review,

such maladaptive motivational patterns include “avoiding challenge, refusing to exert effort when difficulty is encountered, and attributing success to ability” (Solomon, 2006, p. 326).

Achievement goals as gendered discourse. Discourse has been defined as an interconnected “system of statements which cohere around common meanings and values [that] are a product of social factors, of powers and practices, rather than an individual’s set of ideas” (Hollway, 1983, p. 231). If achievement motivation research is regarded as discourse, then this information can and needs to be reconsidered. Such reconsidering or discourse analysis can be made possible through scholarship that aims to understand how physical education students selectively position themselves into such motivational orientations. Thus, reconceptualization of achievement motivation in the physical education or activity context may take on a different perspective that potentially does not view such motivational orientations as completely maladaptive, but as adaptive by rejecting dominant discourses. Achievement goals have statistically been found to be orthogonal or uncorrelated constructs (Duda & Whitehead, 1998; Nicholls, Patashnick, & Nolen, 1985; Roberts, Treasure, & Balague, 1998). It is important to deconstruct achievement goals as this framework allows for a reconsidering of motivation. This analysis of the literature will attempt to present current findings, but through a lens that will challenge taken-for-granted notions of motivation.

Despite the widespread usage of the achievement goal framework, a modest amount of research has been completed that focuses on achievement goals and gender (Pintrich & Schunk, 1996). Based on their findings, Midgley, Kaplan, and Middleton (2001) suggested that girls may experience more negative implications of normative-based goals than boys. Interestingly enough, when considering achievement goals and gender in academic setting, significant differences were not present across the genders (Nicholls, 1989). This finding was substantiated when Fry and Duda (1997) investigated the academic and physical domains.

Achievement goals and fitness testing. Achievement goal orientations are important to this literature review as the PCPFAP currently focuses on ego orientation rather than task orientation, which ultimately can lead to a minimizing of the health-related benefits of the individual fitness tests. In regard to fitness testing, Goudas, Biddle, and Fox (1994) found that children's motivational responses differ and responses are dependent on actual performance, perceptions of success, and achievement goal orientation. Children with high task/low ego goals scored the highest on enjoyment and effort. This finding is significant because even children with low-performance on the 20-m progressive shuttle run were still able to maintain intrinsic motivation. From a practical perspective, these students may need the most help from their physical education teachers or peers in order to improve fitness performance. This study revealed that children's differences in goal orientations were clearly related to their motivational responses to the fitness test. Thus, the researchers argued that the implications for fitness testing on motivation cannot be ignored. In its current state, the PCPFAP creates a motivational climate that emphasizes an ego-based motivational orientation which affects a specific motivation construct (i.e., intrinsic motivation).

Intrinsic Motivation

“Intrinsically motivated behaviors are those whose motivation is based in the inherent satisfactions of the behaviors per se, rather than in contingencies or reinforcements that are operationally separable from those activities” (Ryan & Deci, 2004, p. 10). Intrinsic motivation is an important construct to consider as it is positively related to perceived competence (Harter 1978; Ryan & Deci, 2000). According to White (1959), individuals are intrinsically motivated to pursue competency. Treasure (2001) suggested that extrinsic rewards frequently play a larger role in physical activity environments than the activity and/or any intrinsic health-related benefits the students may gain. Self-determination theory proposes that the more intrinsically motivated

an individual is the more likely he or she will be to adhere to a specific program (Ryan & Deci, 2000). There is evidence that suggests achievement goal theory is strongly linked with self-determination theory (see Ntoumanis, 2001). Different achievement goals are relevant to the various degrees of self-determination. That is, individuals with task goals tend to be intrinsically motivated, whereas high ego goals are linked to extrinsic, controlling motivational regulations (Duda, Chi, Newton, Walling, & Catley, 1995; Spray et al., 2006; Wang, Chatzisarantis, Spray, Biddle, 2002). In Wang and Biddle's (2001) study, the researchers found intrinsic motivation to participate in physical education was directly affected by high incremental beliefs about ability. Similarly, Wang and Liu (2007) found that when girls were intrinsically motivated, enjoyment of physical education increased.

Central to the assumptions underlining theories of intrinsic motivation is that when the crux of an event is to endorse competency and personal control, intrinsic motivation will be enhanced (Whitehead & Corbin, 1991). However, when an event is positioned so that there is a promotion of incompetence and no personal control, intrinsic motivation is weakened and challenged. Whitehead and Corbin's study focused on the effects of physical fitness testing on motivation. When the participants were given positive feedback, their intrinsic motivation increased and with negative feedback intrinsic motivation decreased. Frequently in ego-oriented environments, rewards will be used in an attempt to motivate the students, but these climates actually negatively affect students' self-worth (Covington, 1984) and perceptions of ability (Nicholls, 1989).

Evaluation Systems

When considering the interactions of the previously discussed motivation constructs (i.e., conceptions of ability, perceived competence, goal orientations, intrinsic motivation), the need to understand the implications of award/recognition programs becomes apparent. That is, would it

be more beneficial for children to focus on self-improvement relative to personal goals than on how they perform relative to their peers or normative standards (e.g., Ames & Maehr (1989))? This question should be addressed in light of evidence that an ego orientation for less mature children can hinder perceptions of ability when high ability is something that only a few can achieve or demonstrate (Nicholls, 1989). This may be the experience for those students who participate in the PCPFAP, but never achieve the 85th percentile⁴. By design, the 85th percentile represents a standard that only 15% of children would be expected to attain. Whitehead and Corbin (1991) reported that typically less than 1% of children will perform well enough to receive the Presidential Physical Fitness Award.

Thus, normative testing creates a climate that fosters failure and can potentially affect future participation in physical activity. An ego-oriented focus like that which can be seen with the PCPFAP may foster a physical education environment that encourages children to adopt maladaptive behaviors, thus resulting in withdrawal from participation in physical activities (Treasure, 2001). According to Connell, Ashenden, Kessler, and Dowsett (1982), women have been socialized into positions of dependency, thus resulting in women being less achievement-oriented than men. In patriarchal-dominant domains like the PCPFAP, students receive mixed messages about physical fitness/ability and expectations for success that do not conform to the more systemic socialization process.

Norm-referenced evaluation systems. There has been a copious amount of research suggesting that evaluations based on norms, publicly administered, and linked to one's ability can have harmful effects on students' motivation (Butler, 1987, 1988; Covington & Omelich, 1984; Jagacinski & Nicholls, 1984b; Nicholls, 1989). The President's Council for Physical Fitness and Sport has received extensive criticism for using normative-based standards to evaluate students' fitness tests outcomes (Safrit & Looney, 1992). Treasure (2001) stated,

“Evaluation systems that emphasize social comparison and normative standards of performance evoke a state of ego involvement that focuses children on evaluating their ability compared to their peers” (p. 92). With the PCPFAP, students are focusing on how they measure up to the gendered normative standards therefore emphasizing an ego orientation. As a result, such evaluation systems affect student’s self-worth (Covington, 1984), interest on intrinsic levels (Butler, 1987, 1988), and perceptions of their ability (Nicholls, 1989).

The PCPFAP, like many fitness tests, presents the normative evaluation standards in binary girl/boy terms. Researchers frequently focus on the differences between females and males, while failing to recognize the within-group differences. Social scientists interested in gender-roles are frequently concerned with defining gender differences using achievement-related performance indices (see Eccles, 1987). These studies have yielded various gender outcomes pertaining to achievement-related behaviors ranging from “nonoverlapping distributions” to no significant differences and a variety of other outcomes that prove to be inconclusive. Eccles wrote,

Many theories of presumed differences have been offered. Unfortunately, because the theoretical work and the empirical work have not always proceeded hand in hand, theoretical explanations have emerged for presumed differences without solid evidence that the differences being explained actually exist (see Frieze, Parsons, Johnson, Ruble, & Zellman, 1978; Maccoby & Jacklin, 1974). (p. 240)

There may be differences between males and females, but those differences typically account for a small portion of the variance (Marsh, 1989). This small portion translates into large gender differences that are emphasized and reinforced through such discursive practices a normative-based fitness tests.

Additionally, by assuming that all girls of the same age and all boys of the same age are the same, therefore comparable, is problematic. Evidence of this assumption is apparent in Safrit and Looney’s (1992) comment that norm-referenced standards convey a student’s status on an

array of fitness tests “relative to a like group of people...” (p. 124). The like groups are based solely on age and gender, thus ignoring other aspects of individuals (i.e., ethnicity,

**The Presidential Physical Fitness Award
(This represents the 85th percentile.)**

	Age	Curl-Ups	Partial*	Shuttle	Y-Sit	Sit &	One-Mile	Distance Option**		Pull-Ups	Rt. Angle*
		(# one minute)	or Curl-Ups (#)	Run (sec.)	Reach (inches)	or Reach (cm)	Run (min:sec)	(min:sec) 1/4 mile	(min:sec) 1/2 mile	(#)	or Push-Ups (#)
BOYS	6	33	22	12.1	+3.5	31	10:15	1:55		2	9
	7	36	24	11.5	+3.5	30	9:22	1:48		4	14
	8	40	30	11.1	+3.0	31	8:48		3:30	5	17
	9	41	37	10.9	+3.0	31	8:31		3:30	5	18
	10	45	35	10.3	+4.0	30	7:57			6	22
	11	47	43	10.0	+4.0	31	7:32			6	27
	12	50	64	9.8	+4.0	31	7:11			7	31
	13	53	59	9.5	+3.5	33	6:50			7	39
	14	56	62	9.1	+4.5	36	6:26			10	40
	15	57	75	9.0	+5.0	37	6:20			11	42
16	56	73	8.7	+6.0	38	6:08			11	44	
17	55	66	8.7	+7.0	41	6:06			13	53	
GIRLS	6	32	22	12.4	+5.5	32	11:20	2:00		2	9
	7	34	24	12.1	+5.0	32	10:36	1:55		2	14
	8	38	30	11.8	+4.5	33	10:02		3:58	2	17
	9	39	37	11.1	+5.5	33	9:30		3:53	2	18
	10	40	33	10.8	+6.0	33	9:19			3	20
	11	42	43	10.5	+6.5	34	9:02			3	19
	12	45	50	10.4	+7.0	36	8:23			2	20
	13	46	59	10.2	+7.0	38	8:13			2	21
	14	47	48	10.1	+8.0	40	7:59			2	20
	15	48	38	10.0	+8.0	43	8:08			2	21
16	45	49	10.1	+9.0	42	8:23			1	24	
17	44	58	10.0	+8.0	42	8:15			1	25	

Figure 1. Award Standards for the 85th Percentile of the President’s Challenge Physical Fitness Award Program across all Fitness Tests.

socioeconomic status, body type, motivation dispositions) that may contribute to physical ability or fitness. Using normative standards for fitness testing is further complicated by the fact that norms do not always equal desirable outcomes (Baumgartner et al., 2003). For example, 12-year-old girls are expected to complete 2 pull-ups in order to perform at the 85th percentile, whereas, 12-year-old boys are expected to complete 7 (see Figure 1). The difference in performance expectations increases significantly with age, so that, at age 17 girls are expected to complete 1

pull-up and boys are expected to complete 13. These normative-based disparities reinforce the notion that norms are not necessarily the preferred outcomes.

Students' results on the physical fitness tests may also have lasting effects on whether or not the students will attempt future physical activities. As an individual reflects on his or her previous performances they begin to assess whether or not they will continue on with the activity or disconnect completely (Schunk & Ertmer, 2000; Zimmerman, 2000). Numerous findings from previous studies have reported that children react affectively and behaviorally to their failures (Heyman, Dweck, & Cain, 1993; Wigfield & Eccles, 2002; Stipek, Recchia, & McClintic, 1992).

In physical education, failure on physical fitness tests may cause students to "check out" physically, emotionally, or behaviorally from activities in physical education or in daily life. The physical education setting should be designed so that students can experience individual successes. Xiang, McBride, Guan, and Solmon's (2003) found that girls in the fourth grade scored lower on expectancy-related beliefs, and their intention to participate in physical education was less than younger children and fourth grade boys. This becomes an important indicator for educators to realize that as early as the fourth-grade, girls' motivation to participate in physical education already begins to decline. It is essential for practitioners, researchers, and the organizations like the President's Council to recognize the potential negative attitudes students may have towards physical activity due to their perceptions of their short fallings on the physical fitness tests.

Rewards/awards. Motivation theories also attempt to understand the role that rewards and incentives play in children's motivational levels to be physically active. While the various award levels of the PCPFAP may have been developed with good motivational intentions, this type of reward system becomes problematic when group norms are established without accounting for varying abilities and interests (Lepper & Hodell, 1989). As with other rewards, students may (or

may not) receive their fitness awards in a public context, which ultimately leads to social comparison (Treasure, 2001). Treasure suggested, “When recognition for accomplishment or progress is private, however, between the teacher or coach and the child, feelings of pride and satisfaction do not derive from doing better than others and are likely to foster a mastery-oriented perception of the motivational climate” (p. 91). Flintoff and Scraton (2001) provided evidence that the young women who participated in their study, which focused on the students’ attitudes and perceptions of participation in physical education and activity, were interested in receiving recognition when progress in the development of skills was noticeable. Acceptable forms of acknowledgment included receiving awards, documentation of skill development, or through placement on teams for competition.

Evaluations based on personal improvement. Teachers have been encouraged to use fitness tests with criterion-referenced standards (American College of Sports Medicine [ACSM], 1988; Pangrazi, 2003; Updyke, 1992). When students complete personal evaluations that are based on improvement, level of participation/effort, and progress in relation to specific goals, the motivational goal shifts to task-orientation (Ames, 1984; Cury, Biddle, Sarrazin, & Famose, 1997; Hall, 1990). However, according to Ross, Pate, Delpy, Gold, and Svilar (1987), despite the argument that criterion-referenced standards should be used, norm-referenced standards “will always be a critical tool in describing and monitoring changes in the fitness status of American youth” (p. 66). While the normative standards may be beneficial in mapping the fitness abilities of American youth, one cannot ignore the current separation of girls and boys.

The PEA (1988) argues that, if done correctly, fitness testing coupled with appropriate monitoring can provide a valuable component to physical education programs through the promotion of the positive aspects of health-related fitness throughout the lifespan and enhanced knowledge about health-related fitness principles. According to Cale and Harris (2005), fitness

tests based on criterion-referenced standards are appropriate due to the fact that the standards are achievable by a large proportion of children. This reinforces the notion that children can be fit and healthy without performing as an elite athlete or a student in the 85th percentile would be expected to perform.

Conclusions

It was established early in this paper that fitness testing is one pedagogical practice or discourse implemented in physical education programs. The goal of physical fitness testing is to motivate youth to sustain or increase physical fitness levels and participation in regular physical activity (Harris & Cale, 2006). The limited amount of research pertaining to youths' responses to fitness testing coupled with the perspective that schools are social sites that reinforce patriarchal ideologies is the primary reason for this literature review

Through investigating the relationships between fitness testing, motivation, and gender, scholars, teachers, and test designers can begin to understand how students come to realize gender and physicality in terms of culture and society. Therefore, it is important to understand what the PCPFAP represents for students and teachers. This understanding is especially significant as the CDC (1997) has argued that physical education programs need to improve, as this can be a crucial site for educating children in the United States about the health-related benefits of being physically active.

Physical educators should consider students' intrinsic motivation towards fitness tests, physical fitness, and physical activity. When the physical education context promotes students to focus on personal competence, intrinsic motivation will be enhanced (Whitehead & Corbin, 1991). Conversely, when physical education programs promote incompetence, through norm-referenced performance standards or extrinsic award systems, intrinsic motivation will be

inhibited. This emphasizes the need for teachers to consider using criterion-referenced fitness tests to assess their students' fitness abilities in specific domains.

According to Safrit and Looney (1992), schools frequently have end-of-the-year programs that recognize students for exceptional achievement in a variety of academic content areas. They recommend that if physical education teachers desire to recognize outstanding students for their performances on fitness tests, emphasis should be placed on their ability to attain desirable health-related fitness standards as opposed to interpersonal comparisons. They also suggest that teachers do not necessarily have to disclose the students' scores, but could use an interpretation of the scores to plan their physical education classes. The scores become a pedagogical tool to provide physical education programming that effectively meets the health-related needs of individual students. However, looking at this pedagogical practice through a poststructuralist lens reinforces the need to consider how the body is becoming normalized (Azzarito & Solmon, 2006a) and possible implications for such normalization. From a feminist perspective, researchers can begin to understand why girls are adopting and maintaining such positions on beliefs about their bodies, conceptions of ability, perceptions of ability, goal orientations, and intrinsic motivation.

Endnotes

¹ The President's Council on Youth Fitness was later changed to the President's Council on Physical Fitness. The current title is the President's Council on Physical Fitness and Sports.

² Bandura's (1994) usage of the term self-efficacy is a motivation construct that is similar to perceptions of ability, perceived ability, and perceived competence. Self-efficacy is defined as "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (Bandura, 1994, p. 71). According to Bandura, self-efficacy is situationally-specific.

³ Withdraw is an important term in motivation literature. It is typically viewed as a negative outcome since the goal of many physical education programs or exercise/wellness programs is to get the students/participants to adhere to a specific program. When we start to acknowledge that withdrawal is an active process, we can begin to have a better understanding about ways to create inclusive physical education classes. This active withdrawal can be

problematic for students who want to be physically active, but the context is not conducive to their learning interests.

⁴ It is important to differentiate between norm-referenced data and norm-referenced standards. Norm-referenced data are used to establish standards that are used to judge an individual's performance in relation to the performance of other members of a distinct cohort. According to Safrit and Looney (1992), the usefulness of normative-based data cannot be ignored. Specifically, in the physical education context, such data can be used to: (a) evaluate a specific program, (b) identify superiority in achievement, and (c) identify the status of individuals on a local or national level. Normative standards are used to identify excellence in achievement.

⁵ Fredrickson and Roberts (1997) defined self-objectification as a socialization process that encourages girls and women to internalize an objectifying view of their personal bodies. Overtime, this internalization process causes girls and women to become fixated on how their bodies look. Self-objectification implies a focus on the body from a third-person point-of-view (e.g., Do I look okay?), instead of from a first-person viewpoint (e.g., How am I feeling today?).

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APPENDIX B: EXTENDED REVIEW OF LITERATURE—GENDER

A Feminist Poststructuralist Examination

into the President's Challenge Physical Fitness Awards Program^{*}

Within the field of physical education, both practitioners and researchers have become increasingly concerned with the rise in health-related risks associated with decreased levels of participation in physical activity (United States Department of Health and Human Services [USDHHS] 2000). Schools are regarded as a setting that can potentially have a positive effect on health-related issues due to the fact that the majority of children attend school and spend a significant proportion of their time there (Sallis et al. 1992). The USDHHS (2000) has recognized physical education in schools as an essential element in efforts to address children's current low levels of physical activity. Thus, the role of schools in children's lives cannot be ignored considering the amount of time that children spend in school. Various government organizations have recognized the physical education context as a significant site to battle current health-related problems (i.e., diabetes, obesity) that have surfaced in disturbing percentages across the United States (United States Department of Health and Human Services [USDHHS] 2000; Centers for Disease Control and Prevention [CDC] 2000; National Institute for Child Health and Human Development [NICHD] 2003). Additionally, physical education has been identified as a primary venue for the endorsement of physical activity (Sallis and McKenzie 1991; USDHHS 1996).

According to Ross and Townsend (2002), 'Public education efforts need to address the specific barriers that inhibit the adoption and maintenance of physical activity by different

^{*} Reprinted by permission of Gender and Education (See Appendix F). Domangue, E. A., & Solmon, M. A. (2008). A feminist poststructuralist examination into the President's Challenge Physical Fitness Awards Program. Gender and Education. iFirst Article. DOI: 10.1080/09540250802467943

population groups' (516). Research has shown that girls frequently display low-skill levels in physical activities (Ennis 1999) as a result of inadequate exposure to skill instruction and a socialization process that encourages them to reject the significant value of participation in physical activity (Nilges 1998; Vertinsky 1992) and fitness activities. Numerous researchers have concluded that girls in adolescence are less likely to participate in physical activity than boys of the same age (see Pratt, Macera, and Blanton 1999; Vescio, Wilde, and Crosswhite 2005). However, there is evidence that the portrayal of girls as inactive may not provide an accurate or complete picture. Azzarito, Solmon, and Harrison (2006) concluded that the high school aged girls in their study participated actively in physical education classes. This finding was consistent with earlier studies (see Flintoff and Scraton 2001; Williams and Bedward 2001). These confounding findings emphasize the need to understand the multiple layers of gender¹ interactions in physical education and the significant problems associated with making sweeping generalizations about an entire group of people based on one aspect of their identity.

Additionally, these findings shed light on the need for critical inquiry into all areas of physical education as a response to the rise in the number of overweight children and adults. One aspect of physical education programs that has not been investigated from a feminist perspective is normative-based fitness testing programs. While the norms for the President's Challenge Physical Fitness Award Program [PCPFAP] were established based on biological sex differences, we propose that the program is a dominant discourse within physical education classes that reinforces gender, gender order, and gender expectations (President's Council on Physical Fitness and Sports [PCPFS] 2007). This analysis of gender in relation to fitness testing can provide insight into how, through the division of girls and boys, the PCPFAP highlights differences and contributes to a gendered understanding of the body and ability.

Physical activity environments are a ‘social context for the production and reproduction of larger gender injustices’ (Nilges 1998, 175) by way of patriarchal ideology both covertly and overtly. In 1907, William Orr stated,

While the boy may indulge in vigorous effort to the limit of his strength, the girl must husband her resources. Woman represents the conservative tendency, man the progressive. Grace, poise, and good form are important elements in the training of the female...the male must learn to achieve, accomplish, and conquer. For the female, games should be played with caution... [Because] of the inability to stand prolonged physical strain, frequent intervals of rest should be given. (56)

In the physical education context, ideologies similar to Orr’s are currently still in place and are reason for investigation into the construction of normative-based fitness testing, especially when examining gendered barriers to physical fitness and activity.

Fitness testing: A discourse in physical education

The first youth fitness test in the United States commenced in 1957 (Freedson, Cureton, and Heath 2000) as a result of a publication by Kraus and Hirschland (1954). They reported that children in the United States scored lower than European children on the Kraus-Weber minimum fitness test. Almost 58% of children from the United States failed the minimum fitness test, compared to only 8.7% of children from Europe. Thus, fitness testing programs were initiated with the intention to improve fitness levels for youth (Freedson et al. 2000). During this thorough review of the literature, an elephant in the room became apparent. That is, there was little to no discussion of the role of President Dwight D. Eisenhower’s reaction to the findings in the Kraus and Hirschland study (see Azzarito 2007). As a former officer in the military, Eisenhower was particularly responsive to the report. Military officers and recruiters complained about the poor fitness levels of Americans being drafted during World War II and the Korean War (PCPFS 2006a). Fifty percent of the men who reported to the draft boards were deemed physically unfit. Additionally, the Kraus and Hirschland (1954) study was published at the height of the Cold War. While combating these political issues may not have been the sole reason for the creation

of the President's Council on Youth Fitness² on 16 July 1956 by President Eisenhower, there is an obvious connection that cannot be ignored. This perspective of fitness testing underscores testing not only as a form of scientific evaluation, but as a method to produce and reproduce the dominant group's political and social agenda, that is, to have access to physically fit men prepared for war.

The most recently identified objectives of fitness tests are to motivate individuals to create personalized fitness plans, while maintaining physical activity across the lifespan (PCPFS 2003). Furthermore, youth physical fitness tests in the United States are employed as a response to the alarming trends in physical inactivity, obesity and degenerative diseases (Baumgartner, Jackson, Mahar, and Rowe 2003). Physical fitness is a factor that is influenced by physical activity and ultimately affects individuals' overall health (Bouchard, Shephard, and Stephens 1994) and wellness. Physical education teachers are currently using a variety of physical fitness tests to measure students' fitness levels (e.g., the President's Challenge, FITNESSGRAM®). If a person attended a school in the United States, chances are they participated in some type of fitness testing (Cooper Institute for Aerobic Research [CIAR] 2007; PCPFS 2007). Since the inception in 1966 of the President's Challenge, a norm-referenced test, approximately 55 million people have received awards as a result of their participation in the fitness program (PCPFS 2006b).

Students who perform at or above the 85th percentile in five events receive the highest award (i.e., Presidential Physical Fitness Award). Students who perform at or above the 50th percentile receive the National Physical Fitness Award. Students who attempt at least five events receive the Participant Physical Fitness Award. Physical educators have the option to choose which tests they will ask their students to perform. In a study by Keating and Silverman (2004), physical education teachers were asked to recall information about fitness testing from 1997 to

1998. In their sample, 40.3% used the President's Challenge, 19.4% used the Fitnessgram®, and 6.6% used the American Alliance of Health, Physical Education, Recreation, and Dance [AAHPERD] Physical Best Test. The researchers were unsure about why more teachers elected to implement norm-referenced tests. They suggested that teachers may use the tests they are most familiar with and may not want to change.

Numerous scholars have identified advantages and disadvantages associated with fitness tests in physical education (see Fox and Biddle 1986; Pangrazi 2000; Physical Education Association [PEA] 1988). Emphasis on these limitations reinforces the need for a clearer understanding of the implications of fitness testing on students. Thus, Harris and Cale (2006) suggested that these limitations provide justification for questioning how rigorously the findings, both from experimental and field based fitness tests, can be interpreted and generalized. With fitness testing programs providing dissimilar expectations or norms for girls and boys, a fitness test conundrum transpires.

A feminist poststructuralist framework

The tenets of feminist poststructuralism underline the significance of highlighting institutions' and cultures' prevailing discourses (Flintoff and Scraton 2001), and 'it is through discourses that meanings and people are made and, importantly, through which power relations are maintained and changed' (8). Discourse refers to the ways in which specific cultures, societies, and institutions construct and structure meaning (Hollway 1983). Thus, discourse results from constantly changing social factors that guide, produce, and reproduce meaning. Discourse is not only representation, but action. Therefore, this theoretical framework provides a critical lens to analyze the structure of all disjointed discourses and the production and reproduction of power relations, while understanding resistances to specific discourses (Weedon 1997). Feminist poststructuralism was defined by Weedon as 'a mode of knowledge production

which uses poststructuralist theories of language, subjectivity, social processes and institutions to understand existing power relations and to identify areas and strategies for change' (40-41). This analysis is useful for challenging and transforming discursive practices by identifying weak points, consequently allowing change to occur.

Discursive practices cannot happen outside of discourses. For example, when teaching a unit on basketball a physical education teacher may teach a class with both girls and boys how to play one-on-one defence, but use the words 'man-to-man.' The teacher's linguistic ambiguity and the students' reactions to the comment are informed by social structures, and contribute to the reproduction of gender order. This is an example of a discursive practice that has significant implications for the construction of identities by placing emphasis on a specific group. Likewise, usage of the word *challenge* in the President's Challenge Physical Fitness Awards Program could also be considered a discursive practice. There are multiple dictionary definitions for the word challenge, but the most relevant is 'a call to engage in a contest, fight, or competition' (The American Heritage® n.d.). Santana, Solmon, Cothran, Loftus, and Stocking-Davidson (1998) argued that the ideal physical education students are frequently ones who can (re)produce a patriarchal image of masculinity and athleticism, while sustaining a high level of competitiveness. Thus, the word challenge can be considered a gendered term, especially when used in the physical education setting. In the fitness testing context, challenge suggests a positioning, albeit in relation to others or to self, it necessitates a duelling or proving of physical fitness. This is problematic because, as mentioned earlier, femininity has been socially constructed to suggest passivity. A discussion about the word challenge gives reason to deconstruct a dominant pedagogical practice that sends a contradictory message to students who have been socialized to perform gender in non-competitive ways. Deconstructing such discursive practices allows for multiple understandings of how discourse positions girls and boys in

opposition to each other. Additionally, fitness tests emphasis on competition and superiority may send students' false messages about fitness, while further stunting the objective to encourage regular physical activity (Cale and Harris 2005).

Central to feminist poststructuralism is the idea of agency (Azzarito et al. 2006). In the text *Feminist Practice & Poststructuralist Theory*, Weedon (1997) provides an example of how power 'structures relations between different subjects within or across discourses' (110). She points out that married women in the nineteenth century were considered to be property of their husbands. These women utilized strategies that resisted and threatened the patriarchal perspective of family through acts of manipulation and assuming male pseudonyms. Thus, feminist poststructuralism acknowledges that individuals are actively selecting their positioning within different discourses (Gavey 1989). Evidence of this was present when Azzarito and colleagues (2006) suggested, 'Although several girls expressed a belief in boys' "natural" physical superiority, they still positioned themselves as arbiters of their own participation and reasoned that such differences could benefit them' (231). While it may be difficult for some to deem fitness testing as a hegemonic context, according to Foucault (1990) such power relations are always present regardless of the society or particular social concerns (see Weedon 1997). Poststructuralism welcomes a 'plurality of meanings' (Gavey 1989, 462). Flintoff and Scraton (2001) suggested, '...central to post-structural analyses is the ways in which individuals negotiate an identity within different contexts, and by doing so, challenge or resist dominant discourses of gender' (8). While the researchers' interpretation of poststructuralism is related to gender, the above statement can unequivocally be applied to fitness testing in physical education. It is important to acknowledge that students are not just inundated with gendered discourses in the physical education context, but in all aspects of their lives. Likewise, physical education,

more specifically fitness testing, is one aspect of society that may reinforce stereotypical gender expectations, but not necessarily in all classes.

Numerous researchers have used a feminist poststructuralist framework to investigate the gendered nature of physical education settings (e.g., Azzarito and Solmon 2006a; Azzarito and Solmon 2006b; Azzarito et al., 2006; Flintoff and Scraton 2001; Martino 1999; Wright 1995). For example, Wright (1995) explained how scholarship rooted in feminist poststructuralist methodology revealed the way language discourses in physical education were used by students and teachers, specifically in terms of gender relations. Through the deconstruction of physical education's dominant discourses that are rooted in gendered power relations and cultural stereotypes, researchers can provide the field with invaluable knowledge and insight that will allow girls to reconsider participation in physical education and physical activity (Azzarito et al. 2006).

A girl/boy binary system

The standards established for students who participate in the PCPFAP are articulated in terms of expectations for girls and expectations for boys. The tests and qualifying standards that are markedly different for prepubescent girls and boys foster a gendered continuum that forces some students into dominant positions, while others are pushed into the margins. According to Scott (2003), 'It is not sameness or identity between [girls] and [boys] that we want to claim but a more complicated historically variable diversity than is permitted by the opposition male/female' (387). Before this issue can be deconstructed, it is imperative to acknowledge that societal and cultural practices can expand or reduce biological differences between females and males, which ultimately influence gendered expectations (Fausto-Sterling 1992; Newman 2007). Feminist poststructuralism challenges culturally-established, dichotomous relationships (e.g., girls' physical education/boys' physical education, femininity/masculinity) (Flintoff and Scraton

2001). Without deconstruction, separate but equal education policies are established that, as history has shown, are never actually equal.

Subordinate/dominant

Using patriarchal consciousness as a theoretical framework, Santina and colleagues (1998) investigated middle school students' perceptions of motivational strategies teachers use for girls and boys in the physical education context. Patriarchal consciousness is particularly relevant to this discussion as it implies a way of understanding human characteristics in opposition, that is, there is always a hierarchical positioning of perceived differences (Lorde 1984) between groups. In terms of gender this is significant because there are typically only two (i.e., girl, boy), allowing definitive dominant and subordinate group positioning to be established and reinforced.

Kessler, Ashenden, Connell, and Dowsett (1985) proposed that schools provide a setting for specific gender regimes to transpire. They defined gender regime 'as the pattern of practices that constructs various kinds of masculinity and femininity among staff and students, orders them in terms of prestige and power, and constructs a sexual division of labour within the institution' (42). Such gender regimes or dominant discourses may be difficult to pinpoint as the indirect effects are not initially considered to be associated with gender and/or sex. Physical education contexts have been identified as one subject area that permits gender constructs to actively and forcefully socialize students (Chepyator-Thomson and Ennis 1997). Would math or English teachers provide assessments that had different gender expectations for girls and boys? Of course there are gender stereotypes associated with expectations for success in math and English, but parents, teachers, and students would revolt if performance expectations varied by gender in those domains.

Fausto-Sterling (1992) wrote, 'It behooves us to remember that the amount of variation among [boys] and [girls] is greater than that between the sexes' (218). Using a girl/boy binary system to assess physical fitness leads to the diminution of the importance placed upon differences among girls and among boys, as opposed to the differences established by the binary. Azzarito et al.'s (2006) study provided examples of students (e.g., Christen, Lakisha) who failed to accept inherently binary perspectives of gender and physical activity when asked about specific activities that might be thought of as only girls' or boys' activities. Gorely, Holroyd, and Kirk (2003) found that, as a group, boys articulated muscularity as decisively related to masculinity. When the researchers looked more closely into the boys' understanding of muscularity this articulation was not apparent with all boys in the study. This finding is consistent with Martino's (1999) suggestion that more boys, than previously established through empirical results, have negative experiences in physical education. However, it is imperative to note that boys in the dominant position operate from a place of relative privilege allowing them the opportunity to choose how they will function in that position (Connell 1996). Likewise, girls have the option of how they want to navigate through a patriarchal discourse but from a disadvantaged position.

Ignoring the intersection of individuals' non-gender identities

It is beyond the scope of this viewpoint to discuss issues surrounding race, class, ethnicity, and sexual orientation. However, it is important to note that these identities are constantly intersecting with gender and may promote even greater differences/similarities in performance on fitness tests, especially when considering the norms and specific tests (see Grant 1992; Varpalotai 1987). The PCPFAP assumes that all girls and boys have had the same lived experiences that would enable them to perform in accordance with their respective gender.

Fitness tests present qualifying standards in a way that presupposes human beings to live solely in the context of their gender and are unaffected by other aspects of their identities.

The identities that comprise an individual contribute to how one comes to understand physical fitness and activity. Specifically, the intersection of race, class, gender, religion, etc. creates a unique lens through which individuals come to view the importance of participating in regular physical activity. Evidence of this interaction was apparent in a study by Azzarito and Solmon (2006b) that investigated how high school physical education students' discourses about the body varied by gender, race, and self-reported participation in physical activity and physical education. Gorely and colleagues (2003) suggested that through this intersection, 'Individuals from some social groups will be less inclined than others to seek to participate regularly in sport or other forms of physical activity' (442). For example, fitness tests do not consider how Muslim girls (see Gorely et al. 2003) can use their bodies 'in free and open engagement with the world' (Young 1980, p. 152). Through gendered expectations, the PCPFAP and other forms of fitness testing fail to account for performance in regard to race, religion, socioeconomic background, previous exposure and access to physical activity, and culture.

Gendered fitness tests

The normative standards for the PCPFAP expect different outcomes for girls and boys prior to the onset of puberty. Researchers have suggested that muscular differences do not emerge across the sexes until after girls and boys experience bodily changes related to puberty (Payne and Isaacs 2005). For girls, on average, puberty begins around age 11 or 12. For boys, on average, puberty begins around the age of 13 (Kelly 2006). According to the PCPFC (2007), boys' normative fitness standards are higher on 7 out of the 10 fitness tests prior to the average start of puberty for girls. Girls are expected to have higher performance outcomes than boys on only two tests: the V-sit and sit-and-reach tests, both tests of flexibility. Gender disparity for the

partial curl-up test is apparent for children 12 years old. Using Audre Lorde's (1984) perspective to deconstruct fitness testing allows researchers and practitioners to realize that patriarchal societies are rooted in ideologies that consciously attempt to ensure that girls are essentially viewed as inferior to boys.

Essentialist argument. For the essentialist argument, gender is rooted in a biological perspective that focuses females' and males' physiological differences as an explanation for the formation of gender (see Kessler et al. 1985; Stanley 2002). Wright (1995) suggested, 'For instance, in physical education the differences between male and female performances in, and attitudes towards, physical activity are for the most part taken as given and natural' (11). The social construction of gender leads to an essentialist argument that males are innately stronger than females, which would explain the gender differences in performance on the fitness measures assessed in the PCPFT. According to Azzarito et al. (2006), physical education students' apparent conscious rejection of essentialist notions of certain physical activities based on gender-appropriateness surfaced in participants' comments like, 'Anyone or anybody should be able to participate in what they want to' (229). However, other participants in the study made distinctions about the essence of girls and boys participation in physical activities and placed girls in a supporting-role.

Physical education programs (Hargreaves 1994), like the PCPFAP, present a foundation that serves to reinforce a dominant masculine discourse. It is naïve to think that girls are incognizant of the varying gender expectations and to think that their perceptions do not hinder their abilities to perform as well as if not better than boys on the tests and future physical activity endeavours. Nilges (1998) stated,

If girls enter a gender-integrated physical education setting in which they perceive themselves, or are perceived by others, to be devoid of physical power, then problems of patriarchal equity quickly supersede the liberal veil of emancipatory success overtly implied by an equal access environment. (175)

From a feminist perspective, it becomes important to understand how the predicted outcomes contribute to gender performance in physical education classes and reinforce gendered fitness expectations. These individual tests are significant and provide a space where, essentially speaking, boys are always expected to outperform girls. Similarly, Griffin (1983) found that when students were asked to select an activity, girls selected girl-identified activities and boys selected boy-identified activities. This selection process ultimately limited their overall participation in activities across the curriculum.

Santina and colleagues' (1998) observed that, in male-dominated curricula, when girls performed successfully they were ascribed a male-performance label rather than a label recognizing them as advanced or superior athletes (i.e., She's as good as a boy). In fitness testing this phenomenon is especially relevant as the binary system perpetuates a dichotomously gendered perspective, hierarchical in nature. Evidence of this binary comparison is evident in Wright's (1996) study. She investigated the ways in which physical education teachers and students positioned themselves relative to gendered body and ability discourses. The students reflected on personal attitudes and participation in physical education, while providing insight into perceptions of their classmates. Wright argued that physical education was shortchanging girls by providing experiences that allowed girls to formulate identities relative to the polar opposite of boys' body physicality (i.e., strength, ability, competitiveness). In these studies, the researchers established gender as the prevailing identity within dominant discourses.

A hidden curriculum. The hidden curriculum in physical education provides a space for the validation of gender representations that can be found in the broader society (Santina et al., 1998). Researchers have argued that the hidden curriculum is entrenched in all subject areas through concealed beliefs and understandings prevalent in the overt curricular plans (Gingsberg

and Clift 1990; McLaren 1989). Chepyator-Thomson and Ennis (1997) defined the hidden curriculum as, ‘Those aspects of curriculum and pedagogy that are not taught consciously in school or planned for students’ education but nevertheless learned by students as a result of the societal practices of schooling’ (89). In Bain’s (1985) review of the hidden curriculum, she urged researchers to explore and expose assumptive aspects of the physical education environment. For example, even ‘good’ physical education programs have been seen to continually focus on instruction (i.e., games, sports, activities) with Euro-American origins (Hastie, Martin, and Buchanan 2006). One may argue that the same is true for fitness testing in the United States as the tests date back to the Kraus-Weber minimum muscular fitness tests (Kraus and Hirschland 1954). As Baldwin, Buchanan, and Rudisill (2007) suggested, in the physical education context there has been a continual emphasis on the interests of the dominant group, which ultimately further positions the subordinate group in the margins of movement curricula. Furthermore, the significantly common prevalence of hidden curricula has the capability to establish cultural dispositions (Mangan 1993).

Kessler et al. (1985) argued that researchers can use feminism to re-examine ‘the hidden curriculum and the many ways in which schools and teaching materials have reinforced passivity, dependence, and restricted ambition among girls’ (35). In regard to the PCPFAP, it is this ‘restricted ambition’ that needs to be examined. Through feedback prior to testing and during testing, it is possible that teachers (un)knowingly enable a male-dominated physical education environment that fails to question the taken-for-granted notion of patriarchal ideology. Physical education teachers’ intended curricular plans are then altered and the hidden curriculum takes precedence allowing gendered behaviour patterns to occur. When such patriarchal pedagogical practices occur, the girls in the physical education classes experience negative repercussions (Santina et al. 1998). Teachers’ socially constructed perceptions of gender roles

are deeply rooted in pedagogical practices (Griffin 1989), thus, emphasizing femininity and masculinity as defined by the broad society through a hidden curriculum.

The body and ability: A body 'challenge'

'One of the "hidden agendas" of the school is to regulate, normalize and discipline children's bodies' (Lupton & Tulloch 1998, 22). According to Judith Butler (1999), 'The act of gender requires a performance that is repeated' (178). The PCPFAP repeats gender performativity, therefore contributing to girls' and boys' understandings about how their bodies should look, perform, and conform. The focus on how the body is socially constructed in terms of feminization and masculinization pays particular consideration to body physicality, muscularity, and thinness (Connell 1983). Numerous scholars have emphasized the body as a site where a culture's definition of acceptable femininities and masculinities is encountered and there may be resistance to conform to or to challenge those definitions (Skelton 2000; Paechter 2001). Historically, this resistance has been reported in the United States as early as the beginning of the 20th century (Vertinsky 1992). 'Patriarchal history suggests that females are more likely than males to enter the physical education classroom lacking the physical and social confidence needed for success' (Nilges 1998, 191). Girls' understanding of physical activity as a masculine realm contributed to their learning that bodies are delicate impediments rather than 'living manifestations of action and intention' (Vertinsky 1992, 363).

The PCPFAP is an aspect of physical education classes that reinforces a gendered perspective of the body. Young (1980) confirms that 'insofar as we learn to live out our existence in accordance with the definition that patriarchal culture assigns [girls and women], we are physically inhibited, confined, positioned, and objectified' (152) These characteristics of the female, gendered body are perpetuated through systems that promote performance differences. A girl may not realize that her body can actually attain muscular strength and endurance, whereas a

boy may fail to understand that with practice their bodies can be just as flexible as the female body.

Young (1980) argued that girls learn how to manipulate their bodies in ways that hinder movement. The hindered movements are potentially caused by wearing restrictive clothing (Fausto-Sterling 1992) and performing bodily movements in ways that promote femininity for girls. Garrett (2004) argued that feminized assumptions about the body reduce girls' opportunities to engage their whole bodies openly in the world around them. With age, girls '[develop] bodily timidity that increases.... In assuming herself to be a girl, she takes herself to be fragile' (Fausto-Sterling 1992, 153). However, it is equality as problematic to presume or suggest that all girls have learned to move their bodies in inhibited ways. This labelling of girls does not acknowledge that there are significant differences among girls and among boys. According to Azzarito and Solmon (2006a), girls' and boys' understandings of the body as a gendered construct serves to influence resistance to and participation in physical activity.

A critical aspect of Azzarito and Solmon's (2006a) study was a discussion of the normalized body. This concept serves to demonstrate the idea that dominant discourses attempt to promote and create 'ideal bodies' (Evans and Davies 2004), thus creating a 'hierarchy of bodies (high status and low status)' (Azzarito and Solmon 2006a, 204). The researchers found that when high school physical education students were asked to link their physical education experiences to images in fitness magazines that they expressed notions of the 'comfortable body' and 'bad body' (see also Garrett 2004). This binary disposition is similar to the normalisation of students' bodies for normative-based fitness tests through a hierarchy of bodies (e.g., good/bad, fast/slow, strong/weak, flexible/not flexible). A student in their study, Charles, identified himself as having a bad body in relation to the other boys during his middle school years. When comparing himself to girls in his coeducational high school class, he astutely noted

Like in doing push-ups, the number that they call for the girls are like a little lower, whenever you like look at the little charts and stuff. But I noticed that a lot of girls can be as good or better than most of the guys, actually most of them are better than me. (214)

This emphasizes the problematic nature of promoting essentialist, hegemonic notions of body ability in fitness testing.

As mentioned earlier, tests of flexibility are the only fitness tests where girls are expected to consistently out-perform (out-stretch) boys. The most frequently administered flexibility test is the sit-and-reach test (Hoeger and Hopkins 1992). From a health-related perspective, this test is significant because if performance outcomes are used appropriately, students can begin to understand how hip and trunk flexibility can reduce the risk for future lower-back problems (AAHPERD 1980; Jackson and Baker 1986). However, from a feminist poststructuralist perspective, the body's ability to perform such fitness tests becomes a site of resistance and acceptance for girls and boys. One may argue that some girls may work hard to reveal flexible bodies as this expectation is feminized, whereas, some boys may counter a fear of demasculinisation in this flexibility dilemma by failing to reach their bodily potential. However, for those boys who do perform well on tests of flexibility, questions and comments about their sexuality may occur within the physical education context.

This gendered and sexualized phenomenon surfaced in a study by Gorely and colleagues' (2003). The study focused on students' articulation of the relationship of the body to size/shape and physical activity to gender. Additionally, they sought to examine how students' expressions of such relationships influenced thoughts about physical activities in gender-appropriate terms. When asked to comment on photographs of male body-builders, one girl said, 'When you imagine men you imagine them to be muscley, but when you imagine women, I don't know why but you just imagine them to be more feminine' (432). This response is important to consider for two reasons. First, the girl associated a 'muscley' physique to masculinity. Second, she could not

explain why she thought that women should be more feminine. However, a different girl provided an essentialist perspective when asked to comment on a photograph of female body-builder. She said, 'Women shouldn't be as muscley as that. They weren't born to be that muscley. Men are meant to be stronger. Women aren't supposed to be like that' (432-433). One male student, when asked to comment on a photograph of a male ballet dancer, said, 'The man looks like a wimp because he got a feminine body. It's really thin and flexible' (425). All three of these students' responses suggest that they have come to learn about gender in terms of bodily expectations and gender performativity. Similarly, the researchers stated, 'To engage in some of these activities for young women is to risk becoming less feminine, even masculinised, and to have their sexuality scrutinized and questioned' (Gorely et al. 2003, 435). Various participants in Azzarito and Solmon's (2006a) study also mentioned the role of flexibility in the construction of their gendered bodies. For example, Andrea perceived her body as a comfortable body that was flexible but lacked muscularity. To Andrea, her body is considered comfortable because it complies with a discourse of femininity.

Reference to these studies emphasizes the need for feminist scholars to focus attention to how students' gendered perceptions of the body and ability influence performance outcome and future intention to be physically active. According to Weedon (1987), 'Discourses are more than ways of thinking and producing meaning. They constitute the "nature" of the body, unconscious and conscious mind and emotional life of the subjects which they seek to govern' (105). The application of a feminist poststructuralist framework provides a lens to examine the hidden curriculum and the influential role that it has on students' participation in fitness testing and how they learn to move their bodies according to cultural expectations.

Conclusion

The conclusion is framed to reflect the sentiment offered by Chepyator-Thomson and Ennis (1997), that is, it 'is based on the assumption that schools are social sites, and their social practices operate to prepare students for specific roles they will play in the broader society' (95). It was established early in this paper that fitness testing is one pedagogical practice or discourse implemented in physical education programs. The goal of physical fitness testing is to motivate youth to sustain or increase physical fitness levels and participation in regular physical activity (Harris and Cale 2006). The limited amount of research pertaining to youths' responses to fitness testing coupled with the perspective that schools are social sites that reinforce patriarchal ideologies is the primary reason for deconstructing fitness tests.

Gard and Wright (2005) suggested that in the 1970s certain practices were initiated in physical education programs which actually deterred students from engaging in physical activity. With children in the United States failing to show improvements in certain components of fitness (Zito, West, and Henschen 1987) and the decrease in physical activity (Hovell et al. 1999), Keating (2003) questioned the role of fitness testing in contributing to improving children's fitness levels and increasing participation in physical activity. For girls and women, the uncertainty of the implications of fitness testing is magnified through this thorough feminist analysis of the PCPFAP as a gendered discourse. Kessler and colleagues' (1985) characterization of Australian schools as a 'patriarchal gender regime' and proposition that this regime is likely to occur in other countries is one more reason to deconstruct fitness testing. While acknowledging their interpretation of schools as cynical, they acknowledged the potential such feminist interpretation can have on enabling social change to occur on a structural level.

Assessing discourses from a new and different perspective can have significant implications for students and practitioners. According to Foucault (1990),

Discourse transmits and produces power; it reinforces it but it also undermines and exposes it, renders it fragile and makes it possible to thwart it. In like manner, silence and secrecy are a shelter for power, anchoring its prohibitions, but they also loosen its hold and provide for relatively obscure areas of tolerance. (101)

This review provides insight into how physical fitness testing as a dominant discourse potentially acts as an explicit and hidden curricular practice in the physical education setting. As Chepyator-Thomson and Ennis (1997) observed, high school students conformed to cultural gender expectations of femininity and masculinity.

Throughout this viewpoint, the word performance has been used in two different ways. In one usage of the term, performance is how one completes a task. This can be all movements involved in completing the task or the actual outcome (i.e., completing 4 pull-ups). In the second usage of the term, performance relates to Butler's (1999) explanation of gender performativity. This is similar to Goffman's (1959) perspective of performance. 'To be a given kind of person...is not merely to possess the required attributes, but also to sustain the standards of conduct and appearance that one's social grouping attaches thereto' (81). For Butler, gender is what a person does as opposed to an expression of what a person is. In order for changes to the physical education environment to occur, the second usage of the word performance is propitious for (re)considering normative-based fitness tests. Teachers and researchers must begin to consider how gender performativity may play out in outcomes on fitness test and future intention to be physically active.

Implications for practice

Nilges (1998) suggests that in the physical education context, social reconstruction needs to occur so teachers and students can realize that as a result of a lifetime of exposure to patriarchal-dominant structures, girls' thoughts about self-worth and physical activity are

diminished. Social reconstruction, in attempts to eradicate gender discrimination, can challenge students to assess how societal and historical factors contribute to forcing girls into subordinate positions. If all students are to learn and perform in ways consistent with being productive citizens, then all teachers—including physical educators— must be encouraged to successfully promote school reform to advance increased student learning and gender equity. Additionally, teachers must be able to assess and reflect on the practices they employ, whom these practices affect, how all students are affected, and implications of their teaching practices on students' current and future participation in physical activity.

Since the implementation of Title IX in 1972 by the United States Department of Education's Office for Civil Rights, schools have undergone drastic changes as they attempt to adhere to mandates for gender equity (Sadker and Sadker 1994). No matter how classes are grouped or curricula developed, effective teaching practice is the foundation of quality instruction. All students deserve equity in quality of instruction in all domains regardless of gender (Gabbei 2005). There is evidence that, despite Title IX, girls' needs are not being met in current physical education programs (Ennis 1999). Wright (1995) stated

There exists an unconscious inclination to select boys more often than girls to demonstrate a skill; to provide more useful, corrective feedback to boys; to give attention to boys more than girls, such as calling on boys more to answer questions in class; and to use habitual gender-based language when addressing students, such as the common phrase, 'man-to-man defence'. (12)

Evidence of this phenomenon was also discussed in the American Association of University Women's (1991) report titled *Shortchanging Girls, Shortchanging America*. Identifying patterns of unintended gender-based selections could help make corrections, thereby augmenting the physical education environment. For example, teachers need to question their reasons for labelling a certain activity like push-ups as 'boy push-ups' and modified push-ups as 'girl push-ups.' To address such gendered disparities in physical education contexts, Azzarito et al. (2006)

urged physical educators to investigate their own stereotypes that manifest and the barriers girls experience in their classes.

In regard to fitness testing, teachers should carefully consider which tests will be implemented and how the performance outcomes will be used. Whitehead and Corbin (1991) reported that typically less than 1% of children will perform well enough to receive the Presidential Physical Fitness Award. This finding emphasizes one question that physical education teachers should consider when selecting fitness test programs. That is, would it be more beneficial for children to focus on self-improvement relative to personal goals than on how they perform relative to their peers or normative standards (see Ames and Maehr 1989)? This question should be addressed in light of evidence that an environment that emphasizes comparisons to peers can hinder perceptions of ability when high ability is something that only a few can achieve or demonstrate (Nicholls 1989). This may be the experience for those students who participate in the PCPFAP, but never achieve the 85th percentile. By design, the 85th percentile represents a standard that only 15% of children would be expected to attain.

There has been a copious amount of research suggesting that evaluations based on norms, publicly administered, and linked to one's ability can have harmful effects on students' motivation (R. Butler 1987, 1988; Covington and Omelich 1984; Jagacinski and Nicholls 1984; Nicholls 1989). The President's Council for Physical Fitness and Sport has received extensive criticism for using normative-based standards to evaluate students' fitness tests outcomes (Safrit and Looney 1992). While the various award levels of the PCPFAP may have been developed with good intentions, this type of reward system becomes problematic when group norms are established without accounting for varying abilities and interests (Lepper and Hodell 1989).

The PEA (1988) argues that, if done correctly, fitness testing coupled with appropriate monitoring can provide a valuable component to physical education programs through the

promotion of the positive aspects of health-related fitness throughout the lifespan and enhanced knowledge about health-related fitness principles. Teachers have been encouraged to use fitness tests with criterion-referenced standards (American College of Sports Medicine [ACSM] 1988; Pangrazi 2003; Updyke 1992). According to Cale and Harris (2005), fitness tests based on criterion-referenced standards are appropriate due to the fact that the standards are achievable by a large proportion of children. This reinforces the notion that children can be fit and healthy without performing as an elite athlete or a student in the 85th percentile would be expected to perform.

Despite the argument that criterion-referenced standards should be used, norm-referenced standards 'will always be a critical tool in describing and monitoring changes in the fitness status of American youth' (Ross, Pate, Delpy, Gold, and Svilar, 1987, 66). While the normative standards may be beneficial in mapping the fitness levels of young people, one cannot ignore the current separation of girls and boys. However, practitioners can contribute to the social reconstruction of the fitness testing component of physical education by critically assessing how and why subordinate/dominant binary systems continue to divide students 'along gender lines' (Nilges 1998, 191). Physical educators who accept the established outcome differences on physical fitness tests as natural differences are for all intents and purposes teaching for the fitness tests' expected outcomes (see Leinhardt 1983). Thus, by deconstructing fitness tests from both a historical perspective and as a contemporary practice, physical educators can add a crucial piece to the pedagogical puzzle.

According to Safrit and Looney (1992), schools frequently have end-of-the-year programs that recognize students for exceptional achievement in a variety of academic content areas. They recommend that if physical educators desire to recognize outstanding students for their performances on fitness tests, emphasis should be placed on their ability to attain desirable

health-related fitness standards as opposed to interpersonal comparisons. They also suggest that teachers do not necessarily have to disclose the students' scores, but could use an interpretation of the scores to plan their physical education classes. The scores become a pedagogical tool to provide physical education programming that effectively meets the health-related needs of individual students. However, looking at this pedagogical practice through a poststructuralist lens reinforces the need to consider how the body is becoming normalized (Azzarito and Solmon 2006a) and possible implications for such normalisation. From a feminist perspective, researchers can begin to understand why students adopt and maintain gendered beliefs about their bodies.

One way for teachers and students to deconstruct dominant discourses is through dialogue about how the discourses were established, implemented, and reinforced in a historical context. For example, physical educators can discuss with their students how the PCPFAP expects different outcomes from girls and boys. This practice can provide students with opportunities to ask questions about why those differences were established. Through addressing the boy/girl binary performance system, the teacher can challenge the students to disregard the differences, while encouraging them to focus instead on how to become more physically fit individuals regardless of their sex/gender. This suggestion is consistent with recommendations made by Azzarito and Solmon (2006) that 'young people pursue physically active lifestyles when practices in physical education create contexts that encourage them to step outside the gendered limits of the gym' (95). In these types of learning environments, students can establish how they want to move, ultimately leading to a construction of the body that positively reflects and respects students' individual needs. Once students have the chance to understand how dominant discourse can foster an environment that hinders their development, students can have the knowledge to reconsider the physical potential of their bodies.

Future directions

Based on the extensive review of the current literature, research related to the gendered nature of fitness testing is scarce and greatly needed. If pedagogues are truly interested in gaining insight into the role of construction and performativity of gender on fitness testing, future studies can utilize a feminist poststructuralist framework to re-consider and re-structure physical education contexts and dominant discourses.

Through critical feminist analysis of the relationship between fitness testing and gender; scholars, teachers, and test developers can begin to understand how students come to realize gender and physicality in terms of culture and society. Future research needs to focus on how the PCPFAP and other physical fitness assessments affects students' performances based on the expectations for their gender, which is shaped by 'individual[s]' belief system[s]' (Fausto-Sterling 1992, 12) about sex, gender, and physical ability. It is important to understand what the PCPFAP represents for students and teachers. This heightened sense of awareness will allow researchers and practitioners to recognize the ways in which fitness testing in physical education contexts socially constructs students' ideologies about physical fitness and their bodies. This understanding is especially significant as the CDC (1997) has argued that physical education programs need to improve, as this can be a crucial site for educating children in the United States about the health-related benefits of being physically active. Through insight into students' experiences, fitness tests and pedagogical practices can be transformed so that they no longer constrains students into traditional gender roles, but instead provides an optimal space for the promotion of healthy and active lifestyles.

Additionally, by assuming that all girls of the same age and all boys of the same age are the same, therefore comparable, is problematic. Evidence of this assumption is apparent in Safrit and Looney's (1992) comment that norm-referenced standards convey a student's status on an

array of fitness tests ‘relative to a like group of people...’ (124). The like groups are based solely on age and gender, thus ignoring other aspects of individuals (i.e., ethnicity, socioeconomic status, body type, motivation dispositions) that may contribute to physical ability or fitness. Using normative standards for fitness testing is further complicated by the fact that norms do not always equal desirable outcomes (Baumgartner et al. 2003). For example, 12-year-old girls are expected to complete 2 pull-ups in order to perform at the 85th percentile, whereas, 12-year-old boys are expected to complete 7. The difference in performance expectations increases significantly with age, so that, at age 17 girls are expected to complete 1 pull-up and boys are expected to complete 13. These normative-based disparities reinforce the notion that norms are not necessarily the preferred outcomes.

As mentioned in the feminist poststructuralist section of this review, the PCPFAP, like many fitness tests, presents the normative evaluation standards in binary girl/boy terms. There may be differences between males and females, but those differences typically account for a small portion of the variance (Marsh 1989). This small portion translates into large gender differences that are emphasized and reinforced through such discursive practices a normative-based fitness tests. Nilges (1998) argued, ‘The concept of feminist pedagogy hold emancipatory power that has yet to be fully explored by a profession that has a patriarchal history of situating boys and girls as largely separate, different, and unequal’ (191). This reinforces the need for feminist scholars to research how PCPFAP and other fitness testing programs perpetuate patriarchal hegemony. Thus, research methodology should resist focusing on essentialistic gender or sex differences, while focusing instead on how fitness testing and teaching/learning practices affect students’ understanding of bodily physicality. However, there must also be consideration for how girls and women may perceive fitness testing as liberatory and enabling practices.

Fausto-Sterling (1992) suggests, 'Our cultural conceptions will change the way our bodies grow, and how our bodies grow will change the way our culture views them' (222). This concept plays a significant role in how feminist scholars can continue to address the ways in which the physical education contexts need to be viewed through a lens that reconsiders consciously and unconsciously accepted notions of gendered expectations. Through sound feminist research, scholars can begin 'to build a [physical education context] that respects and recognizes differences, while understanding and emphasizing human similarities' (222).

Additionally, future research should consider how individuals experience fitness tests outside of simply a gendered perspective, but through other identities (see Flintoff and Scraton 2001). Until developers of fitness tests show concern for the ways in which people's multiple identities shape and influence physicality, teachers need to be cautious in how they use the tests and cognizant of students' cultural understandings of their bodies and ability. Fausto-Sterling's critical analysis of previous research reveals that projecting gender may not always be an 'unconscious inclination;' therefore, it is critical that fitness testing systems like the PCPFAP are assessed so that the perpetuation of gendered expectations in physical education environments can be eliminated and social transformation can occur.

Notes

1. Gender configurations imply that femininities and masculinities are not received, but actively and socially constructed (Connell 1996). Masculinity represents and/or requires 'aggression, independence, rationality, activity, and competition,' whereas femininity represents and/or requires 'nurturance, dependence, cooperation, intuition, and passivity' (Boutilier & SanGiovanni 1983, 153). Butler (1999) suggested that gender is a performance, that is, 'Gender is always a doing' (33). Therefore, in this viewpoint, the discussion positions gender at the front of the critique of fitness testing because as West and Zimmerman (1987) noted, in order to 'do gender' one must behave gender appropriately.
2. The President's Council on Youth Fitness was later changed to the President's Council on Physical Fitness. The current title is the President's Council on Physical Fitness and Sports.

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APPENDIX C: INSTRUMENTATION

Gender: Female or Male (circle one)

Age: _____

Ethnicity: Black Asian-American White Hispanic American Other (please specify) _____

Thank you for completing this questionnaire. There is no right or wrong way to rate these items. Your PE teacher will not see your responses to the questions.

Directions: For each item, place a check in the box that most accurately matches your thoughts about the statement,

“I feel most successful on the FitnessGram when...”

		1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.	I am the only one who can do well on the fitness test.					
2.	I improve my score because I have worked hard.					
3.	I can do better than my friends.					
4.	The others can not do as well as me.					
5.	I see improvements in my scores.					
6.	Others mess up and I do not.					
7.	I learn how to do the tests by trying hard.					
8.	I work really hard.					
9.	I get the best score.					
10.	I do better on a fitness test than I had previously done.					
11.	I am the best.					
12.	I do a fitness test and it really feels right.					
13.	I do my very best.					

Directions: Please use the following number scale for answering these two questions.

		1	2	3	4	5
		Not at all	No	A little	Yes	Very much
92.	Pretend that every Friday in your physical education class is a free day. How likely would you be to choose to do fitness-related activities?					
93.	Fitness-related activities will be included next school year. If you had the chance to choose to participate, how likely would you be to do them again?					

Directions: For each of the following statements, please indicate how true it is for you, using the following scale:

		1	2	3	4	5	6	7
		Strongly Disagree	Disagree	Mildly Disagree	Neutral	Mildly Agree	Agree	Strongly Agree
14.	I enjoyed doing the fitness tests.							
15.	I think I was pretty good at doing the fitness tests.							
16.	I put a lot of effort into the fitness tests.							
17.	The fitness tests were fun to do.							
18.	I felt nervous while doing the fitness tests.							
19.	I didn't try very hard to do well on the fitness tests.							
20.	I thought that the fitness tests were boring activities.							
21.	I think that I did pretty well on the fitness tests compared to the other students.							
22.	I tried very hard on the fitness tests.							
23.	I didn't put much energy into the fitness tests.							
24.	I thought the fitness tests were quite enjoyable.							
25.	After doing the fitness tests I felt that I was pretty good at them.							
26.	I felt pressured while doing the fitness tests.							
27.	I would describe the fitness tests as very interesting.							
28.	I felt very tense while doing the fitness tests.							

Directions: Please use the following number scale for answering these two questions.

		1	2	3	4	5
		Not at all	No	A little	Yes	Very much
29.	Pretend that every Friday in your physical education class is a free day. How likely would you be to choose to do fitness tests?					
30.	Fitness testing will happen next year. If you had the chance to choose to participate, how likely would you be to do them again?					

Directions: For each item, place a check in the box that most accurately matches your thoughts about the following statements,

“During fitness testing, ...

		1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
63.	My teacher feels happy when I learn something new.					
64.	My teacher feels happy when I do my best.					
65.	My teacher feels happy when I do better than other students.					
66.	My teacher says it is OK for me to make mistakes.					
67.	My teacher says only a few kids can be the best.					
68.	My teacher says it is OK for me to ask for help if I do not know how to do a fitness test.					
69.	My teacher encourages me to do better than other students.					
70.	My teacher makes sure that I have enough time to learn how to do the fitness tests.					
71.	My teacher is proud of me when I am the best student.					

Interview Protocol.

Interview Questions/Comments	Related Prompts
What is your name and how old are you?	
For how many years have you been a student at Troy Elementary?	
Can you talk a little bit about your thoughts and experiences in physical education?	-Likes? Why do you like that aspect? -Dislikes? Why do you dislike that aspect?
During this interview, I will ask you several questions that relate to fitness testing?	
Do you know what I am talking about when I say fitness testing?	
What do you think is the purpose of fitness testing?	
What have been your experiences with fitness testing in your physical education classes at Troy Elementary?	-Any specific memories related to fitness testing?
Did you receive a fitness award this year?	-How did you feel when you received/did not receive a fitness award? -What were you thinking?
What are you thinking about while you are completing or watching other students complete the fitness tests?	-Goals? -Comparing yourself to others? -Personal improvements?
Do you like one fitness test more than the others?	-Which one? -Why?
Do you dislike one fitness test more than the others?	-Which one? -Why?
Do you think girls or boys have higher expectations on the sit-and-reach test?	-Why do you think ____ have higher expectations? -Girls are actually expected to stretch further than boys. What do you think about this fitness expectation? -Would it be okay for a boy to outstretch a girl?
Do you think girls or boys high higher performance expectations on the pull-up test?	-Why do you think ____ have higher expectations? -Boys are actually expected to complete more than girls. What do you think about this fitness expectation? -What would happen if a girl did more pull-ups than a boy?
Do you think girls or boys have higher expectations on the mile run test?	-Why do you think ____ have higher expectations? -Boys are actually expected to run faster than girls. What do you think about this fitness expectation? -Would it be okay for a girl to outrun a boy?
Before this interview, did you ever think about the different expectations for boys and girls?	-Why do you think you have thought about this? Or, why do you think you never thought about this aspect of fitness testing?
Is there anything else you would like to add about your experiences or thoughts related to fitness testing in physical education?	
Thank you for your time. I appreciate your participation in this study.	

APPENDIX D: PILOT STUDY

Fitness Testing: How Do Students Make Sense of the Gender Disparities?

Physical educators use a variety of formal and informal assessments to gain information about what their students are learning, how they are performing skills, and to provide feedback about their own pedagogical practices¹ (Stand & Mauch, 2008). One form of assessment that has been in place in the United States since 1957 is physical fitness testing (Freedson, Cureton, & Heath, 2000). Fitness testing programs are used to help students assess and create individualized fitness plans, by using information about their current fitness levels (President's Council for Physical Fitness and Sports [PCPFS], 2003). Depending on the testing program that the physical educator selects or is required to administer, students obtain information about their fitness levels by comparing their performance outcomes to normative- or criterion-based expectations. Physical education teachers are encouraged to use the students' outcomes to design their curricula. It is also recommended that students' parents or guardians be given the fitness testing outcomes so that they can have information about their children's fitness levels.

Standardized fitness testing programs were developed after President Dwight D. Eisenhower learned that children in the United States performed lower on the Kraus-Weber minimum fitness test than European children (PCPFS, 2006a). The Kraus-Weber minimum fitness test assessed flexibility and muscular strength in the leg and trunk muscles. In 1954, Kraus and Hirschland reported that approximately 60% of children from the United States who participated in their study failed at least one fitness test included in the Kraus-Weber minimum fitness test, while only 9% of children from European countries failed one test. President Eisenhower also received messages from military generals about the subpar fitness levels of men attempting to enlist in branches of the military (Azzarito, 2007; Domangue & Solmon, 2008). At a time in United States history, when government officials were fearful there would not be

adequate numbers of men prepared to go to war, concern ensued that resulted in the development of policies aimed at addressing this perceived deficit (PCPFS, 2006a). When considering these historical aspects of fitness and conceptions of fitness, it becomes apparent that fitness testing, as a gendered discourse, in the physical education context cannot be ignored.

Theoretical Framework

Using a feminist poststructuralist framework, Domangue & Solmon (2008), proposed multiple readings of fitness testing as a gendered discourse. According to Weedon (1997), feminist poststructuralism is defined “a mode of knowledge production which uses poststructuralist theories of language, subjectivity, social processes and institutions to understand existing power relations and to identify areas and strategies for change” (p. 40–41). It is these historically situated power relations that provoke, enforce, impose, and allow dominant discourses to remain intact without being questioned. Thusly, through deconstructing institutions established discourses, poststructuralism reveals and reconsiders such power dynamics that perpetuate binary conceptions of difference and otherness (Flintoff & Scraton, 2001). Discourse includes, and is not limited to, always changing language, practices, performances, texts, and actions associated with how cultures’ ascribe and construct meaning through prevailing ideologies. As a result of the unveiling of dominant discourses and fluidity of discourse, the stripping away of the power dynamics creates the opportunity to question and challenge taken-for-granted notions, reconceptualization of ideologies, and, ultimately, facilitates change.

One critique of fitness testing is that through the explicit division of boys and girls, based on norm- and criterion-referenced fitness expectations, a culture of differences is perpetuated that reinforces patriarchal ideals of physicality (Domangue & Solmon, 2008). Additionally, these gender performance differences are apparent prior to the onset of puberty². The authors also highlighted gender-related issues associated with the majority of the fitness tests composing the

PCPFT expect boys to outperform girls on 7 of the 10 tests. Tests of flexibility were the only assessments that consistently expected girls to outperform boys. This unveiling of the power relations apparent in fitness testing, according to Domangue & Solmon (2008), creates a hidden curriculum (Bains, 1985) that ultimately creates a gendered body challenge that ignores how students' or individuals' non-gendered identities intersect to produce embodied experience.

According to Paechter (2006), dominant discourses that are rooted in promoting gender differences influence how girls and boys learn to display and perform their embodiment. Embodiment is a critical facet to consider when investigating how individuals' physical identities develop (Garrett, 2004). That is, embodiment refers specifically to how individuals' participation in physical activities, the influences of popular culture, and bodily experiences interact to shape and transform physical identity. The nature of embodiment "cannot be understood as precultural, or as solely a natural or individual entity," that is, embodiment is constructed and meaning ascribed through various lived experiences (Satina & Hultgren, 2001, p. 522). When perceiving and interpreting fitness testing as a gendered discourse, it is important to consider Ross's (1998) perspective that "we do not and will never know what bodies can do because we and they are caught up in historical and social inequities that invisibly bind bodies in their social places and inscribe social regulations on them" (p. 2).

These theoretical critiques of fitness testing, coupled with the fact that girls have been excluded from various physical activities under the guise of inherent bodily weaknesses and frailty (Clark & Paechter, 2007), highlight the necessity for further investigations into all aspects of the physical education domain. In spite of the elimination of barriers to participate in physical activity that girls a century ago encountered, many obstacles are still in place that covertly and overtly hinder girls' involvement in regular physical activity. Physical education is one of the last subject areas that explicitly separates girls and boys based on perceived physiological

differences, stereotypical assumptions of gender-appropriate activities, and a socialization process that promotes normative conceptions of femininity and masculinity. Thus, the purpose of this article is to examine how students make sense of the gender disparities that are evident in fitness testing programs. In this study, the following research questions were addressed: a) How do physical education students experience fitness tests that create a context for promoting gender differences?, and b) What are the implications of such disparities on how students come to understand the physical potential of their bodies? This research is important because as Vu, Murrie, Gonzales, and Jobe (2006) argued, there has been a limited amount of research that looks directly at adolescent girls' and boys' perceptions of physical activity behaviors.

Method

Participants and Setting

The participants in this study were 18 fifth grade students at a public elementary school (i.e., Troy Elementary) located in the southeastern region of the United States. This school was selected because the physical education teachers administer the President's Challenge Physical Fitness Awards Program (PCPFAP). The teachers were three physical education teachers (2 females, 1 male) who averaged 13 years of experience teaching in the public school system. While the PCPFAP was the fitness testing program that was investigated in this study, other testing programs divide students' fitness expectation by girls' and boys' expected abilities. Six students (3 girls, 3 boys) from each fitness award group (i.e., Presidential, National, and no award) were purposefully selected to participate in this study based on the recommendations of the physical educators. That is, the teachers provided the names of students in each group who they thought would speak openly about their experiences with fitness testing.

Approximately 50% of the student-enrollment at Troy Elementary's comprises students who identify as African American and 50% who identify as White. In terms of race, the students

involved in the study reflect the racial demographics of the elementary school (9 African American, 9 White). In this school, the physical education teachers provide fitness awards only to those students who reach the normative standards for the Presidential and National fitness categories. Students receive the Presidential Fitness Award when they perform at or above the 85th percentile on five fitness tests (i.e., sit-and-reach, pull-up, curl-up, shuttle run, mile run). The National Fitness Award is presented to students who perform at or above the 50th percentile on five fitness tests. Students may receive the Participant Fitness Award when they attempt five fitness tests, but because of cost considerations, those awards were not given. Prior to participating in this project, the study was approved by the University’s Institutional Review Board. The participants provided assent and their parents or guardians provided informed consent. Pseudonyms were used throughout this article in order to protect the identities of the participants. See Table 1 for a complete listing of the students by award group.

Table 1. Fifth Grade Students’ Fitness Tests Scores by Award Status.

Award Status	Participant ^a	Curl-ups	Shuttle Run	Sit-and-reach	Mile Run	Pull-ups
Presidential (n=6)						
	Ali**	41	10.7	34	9:19	3
	Ashley**	46	10.5	42	8:28	4
	Christine**	42	9.9	37	8:46	3
	Dennis*	47	9.1	31	7:48	10
	Milton *	54	9.2	31	7:30	6
	Randy*	51	9.8	31	7:08	6
National (n=6)						
	Aaliyah**	39	9.7	34	8:38	2
	Amanda**	31	11.8	30	11:11	1
	Ben*	51	9.7	36	9:30	3

(Table, con'd.)

	Cohen*	35	10	28	8:20	3
	Marc*	45	9.6	37	9:47	6
	Sheri**	35	11.3	38	9:48	2
No Award (n=6)						
	Alicia**	33	10.9	30	15:15	0
	Doug*	16	11.8	13	14:18	0
	Jasmine**	21	11.4	30	14:26	0
	Joey*	32	11.5	26	14:39	0
	Nicole**	33	11.6	32	12:59	0
	Richard*	21	12.1	15	11:31	0

^aPseudonyms used to protect students' identities are listed in alphabetical order. *=Male; **=Female

Procedures and Instrumentation

Once the students completed the fitness tests and the physical education teachers used their performance outcomes to establish their fitness award group, the students participated in a 15-25 minute, audiotaped interview. A combination of the standardized, open-ended interview protocol and interview guide approach was used in this study (Patton, 2002). The questions and interview protocol were developed by the researchers and piloted with fifth graders not involved in this study (Table 2)². This particular interview protocol was selected because it ensures that all participants are asked the same questions, while allowing for the researchers to probe more deeply when further information may be obtained or relevant to the research question. The interview questions enabled the researchers to assess students' perceptions of the PCPFAP in terms of gender and bodily physicality, while investigating the implications of the gendered performance outcomes on how students understand their physical abilities and movement potentials. Examples of the questions include: "Do you think girls or boys have higher

expectations on the sit-and-reach test?, Why do you think girls/boys have higher expectations?, “Girls are actually expected to stretch further than boys? What do you think about this fitness expectation?”, and “Would it be okay for a boy to outstretch a girl?” Similar questions were asked about the other fitness tests. The questions were structured so that gender-related issues were overtly addressed, but the students had the opportunity to express their personal perceptions of gender in fitness testing. Regardless of how the students responded to the questions, the interviewer maintained a neutral perspective when students openly discussed gender-related aspects of fitness testing and how they made sense of the disparities. The primary researcher maintained an outsider-positioning with students as this allowed for exploration into how students experienced and embodied fitness testing without disclosing the specific purpose of the study (Reinharz, 1992).

Table 2. Interview protocol with questions and prompts.

Interview Questions/Comments	Related Prompts
What is your name and how old are you?	
For how many years have you been a student at Troy Elementary?	
Can you talk a little bit about your thoughts and experiences in physical education?	-Likes? Why do you like that aspect? -Dislikes? Why do you dislike that aspect?
During this interview, I will ask you several questions that relate to fitness testing?	
Do you know what I am talking about when I say fitness testing?	
What do you think is the purpose of fitness testing?	
What have been your experiences with fitness testing in your physical education classes at Troy Elementary?	-Any specific memories related to fitness testing?
Did you receive a fitness award this year?	-How did you feel when you received/did not receive a fitness award? -What were you thinking?
What are you thinking about while you are completing or watching other students complete the fitness tests?	-Goals? -Comparing yourself to others? -Personal improvements?
Do you like one fitness test more than the others?	-Which one? -Why?
Do you dislike one fitness test more than the others?	-Which one? -Why?
Do you think girls or boys have higher expectations on the sit-and-reach test?	-Why do you think ____ have higher expectations? -Girls are actually expected to stretch further than boys. What do you think about this fitness expectation? -Would it be okay for a boy to outstretch a girl?

(Table, con'd.)

Do you think girls or boys high higher performance expectations on the pull-up test?	-Why do you think ____ have higher expectations? -Boys are actually expected to complete more than girls. What do you think about this fitness expectation? -What would happen if a girl did more pull-ups than a boy?
Do you think girls or boys have higher expectations on the mile run test?	-Why do you think ____ have higher expectations? -Boys are actually expected to run faster than girls. What do you think about this fitness expectation? -Would it be okay for a girl to outrun a boy?
Before this interview, did you ever think about the different expectations for boys and girls?	-Why do you think you have thought about this? Or, why do you think you never thought about this aspect of fitness testing?
Is there anything else you would like to add about your experiences or thoughts related to fitness testing in physical education?	
Thank you for your time. I appreciate your participation in this study.	

Data Analysis

The interviews were transcribed verbatim. The analysis was rooted in feminist poststructuralist theory that facilitated an understanding of how students ascribe meaning to a fitness testing program with established gender differences (Weedon, 1997). The data were initially analyzed inductively with the primary research question in mind. Placing the research question at the forefront of the initial coding (Patton, 2002) permitted the researchers to investigate how the binary normative standards establish, reproduce, and challenge students' notions of physical fitness and ability.

All interviews were read carefully allowing a line-by-line analysis to occur. In the initial coding, 253 individual units of data (IUD) were identified (Strauss & Corbin, 1998). A feminist poststructuralist analysis of the data occurred through close readings of how the students expressed notions of binary constructions of gender, fitness, and the body. For example, Milton's statement, "Not many of the girls have muscles unless they like really want them, and they exercise as much as us boys do" was initially coded as "essentialist", "socially constructed", and "like the boys." The initial IUDs were then collapsed into 21 mutually exclusive subcategories

(e.g., essentialist ideas about ability, social constructed notions of ability, nature and nurture, change the structure of fitness testing, discrediting girls' fitness abilities). Upon further analysis of the subcategories, four prominent themes surfaced that provided a thorough representation of how students make sense of the gender disparities that can be found in the PCPFAP. Repeated close readings occurred in order to identify possible negative cases that may have provided alternatives to the themes that emerged from the data, however, negative cases were not apparent. Trustworthiness was obtained through member checks, reflective journaling, and triangulation (Patton, 2002). After the students' interviews were transcribed, the interviewer met with each student to ensure that their responses to the questions were what they wanted to convey. This process also allowed the students to expand or elaborate on specific comments and clarification to occur when appropriate (Rossman & Rallis, 1998). Reflective journaling allowed for opportunities to acknowledge researcher biases, brief considerations of the students' interviews, sequence of data collection events, and encounters with teachers and students throughout the study. Triangulation occurred by using multiple data sources including formal interviews, member checks, fitness testing scores, award status, and reflective journal (Patton, 2002).

Results

The four themes that emerged highlight the significance of listening to how children experience fitness tests and make sense of the gender disparities. First, the students explained the gender differences through essentialism and social construction, with some students acknowledging the role of both. Second, it became apparent that the children were aware of how their peers were performing in terms of their gender. Third, the flexibility component of the fitness testing program was a specific point of contention for the students. Fourth, the students had suggestions for ways to change the fitness tests so that they were more enjoyable and

appropriate for all students.

Nature, Nurture and a Combination of Both

All students, regardless if they received an award or not, expressed personal conceptions about girls' and boys' fitness levels and the (in)appropriateness of participating in gender-linked activities. When asked to explain why there are gender differences on the fitness tests, the students' responses revealed a great degree of variability. For example, Ashley, a Presidential award recipient, stated, "I think that normally boys do run faster than girls because in mostly every sport you run, and most boys always run in whatever they do. Like at recess, boys don't play on the playground. They play football and they run a lot. And, so I'm sure that they run more than girls." Ashley continued, later in the interview, "Well, some boys are very, very, very fit and some are like not. Some girls can do a lot of pull-ups, so I actually really don't know why they expect more pull-ups from boys." While she recognized potential differences in physical ability, her comments are significant because she is unable to explain why she thinks the differences exist. This implies, a taken-for-granted, assumption of gender and differences coupled with ideations of essentialist and social constructions of fitness.

Essentialist perspective. Alicia stated that boys and girls have different performance expectations "because boys and girls are different from each other." She made generalizations that "girls talk about fashion and boys talk about sports." Ben stated that girls take gymnastics and that girls are more flexible than boys. He said, "Boys' flexibility is kind of bad." He assigned a negative label to boys' flexibility. Several of the students explained the differences on the fitness tests by stating that boys play more sports (e.g., football) than girls. Dennis said that the differences were a result of "girls not wanting to workout that much." He suggested that girls prefer to stay inside the house and talk on the telephone.

Additionally, some of the students talked about the innate physical ability of boys. Naomi stated that boys' upper-body strength is "supposed to be stronger than girls." She also discussed that girls do not have problems when boys outperform girls. She said, "girls don't mind if boys do better than them because boys are expected to do better." Milton agreed the gendered standards are skewed to expect more from boys. He said, "Because the girls don't have to do as much in life with their bodies. They don't have to have as much strength as boys."

Social construction. For these fifth grade students, more students than not argued that the differences were a result of gendered socialization processes. Several of the students mentioned that they thought the gender differences on fitness tests were because of choices and previous experiences rather than natural dispositions. For example, Jasmine argued that boys have higher expectations because "they have stronger muscles. Because they probably lift weights." While Jasmine's comment does reinforce a gender stereotype about all boys, it provides evidence that she does not assume muscular strength to be an essential phenomenon among boys. She added that the differences between boys and girls fitness testing expectations were a result of girls not getting enough exercise. Similarly, Amanda suggested that "boys workout and have muscles in their arms," allowing boys to do more pull-ups. Amanda followed-up this comment with a more essentialist perspective. She argued that instead of wanting to workout, girls just want to go shopping.

Many of the students, regardless of award status, believed that practice was an important key to being physically fit or performing well on the tests. While the students made blanket comments like "[Boys] have stronger upper body strength" (Sheri). Those types of statements were frequently followed by sentiments that emphasized that with practice students can improve their fitness levels. One student not only discussed the role of practice, but that this practice could potentially decrease the differences between boys and girls. Sheri stated,

... we can do better than boys, I mean Thomas did 17...20 [pull-ups], I can't remember. And most of the girls they did about 2 or 3. Still a girl can practice and get her arms stronger and do just as many as the boys.”

It is important to point out that Thomas (who was not a participant in this study) not only outperformed the girls; he outperformed all the students in the fifth grade. With outliers like Thomas and emphasis on male physicality, this highlights the problems with students considering their personal fitness levels in relation to other students, rather than on self-improvement.

Many of the students explained the gender differences due to a lack of access to strength-gaining activities either in school or outside of school activities. The students expressed notions about gender, which were linked to how the body and ability is socially constructed.

Interviewer: Why do you think that boys are expected to do more pull-ups than girls?

Marc: Because, I would say that boys are stronger than girls.

Interviewer: Why do you think that boys are stronger than girls?

Marc: Maybe because boys exercise more than girls.

Interviewer: What do girls do?

Marc: Girls are usually doing their nails or sitting on the couch watching TV.

Similarly, Christine, a Presidential Award recipient, discussed fitness testing expectations in terms of her gendered life experiences. Christine stated, “You don't see girls out lifting heavy boxes or moving peoples' stuff. They usually have people come out to do that for them.”

Christine was okay with the different expectations, however, she pointed out that she could run faster than several of the boys. She explained the differences as a result of boys being outside more than girls.

The students elaborated on the implications of the messages they receive about gender and ability from popular culture and significant people in their lives (e.g., parents, peers, teacher). When Doug (a student who did not receive a fitness award, thought that standards should be the same for girls and boys, and could name girls who outperformed the majority of the boys) was asked to discuss why he thought that boys were expected to do more pull-ups than girls, he provided a response that emphasized the role of popular culture in shaping students' perceptions of gender and physical ability.

Doug: I think [the differences are okay] because I was watching this fitness video and it said that boys are supposed to be stronger. And boys are supposed to have a lot more ability. And that is what I heard before.

Interviewer: Do you agree with this?

Doug: I agree a little bit because it was informational and that is the only reason why I agree a little bit. But, otherwise I don't agree.

This segment of the interview is significant because it highlights the powerful effects that gendered messages can have on how students come to formulate their own conceptions of gender and ability--embodiment. In spite of the fact that Doug was exposed on a daily basis to girls who outperformed boys and that he was cognizant of the fitness levels of both girls and boys, a part of him still ascribed to the dominant groups' notions of gendered ability.

Cohen also agreed with the gender differences and explained that the differences exist because "boys do more exercises." He also connected the fitness testing disparities with the gender disparities he observed while watching a television program called the World's Strongest Human. He observed, "[On the program] they had mostly boys." This student explained that he thought boys lift weights more than girls and that girls are "probably just trying to get off their weight." Not only does this comment highlight the significant role of popular culture in

stratifying and unequally representing females and males, it also emphasizes notions of the gendered body. The students' discussions of the role of popular culture demonstrate its influence on how they make sense of the gender disparities by reinforcing stereotypical beliefs that males are strong (more space), while females focus on weight loss (less space). Conversely, there were students that acknowledged that there are similarities among boys and girls. For example, Ali, a Presidential award recipient, recognized similarities. She said, "Boys and girls are a lot alike. There's nothing really different."

Gendered Observations: Responses to Girls' Success

It was clear that the students were aware of their peers' performances and whether or not they received an award. Doug stated, "There is one girl in our class that made Presidential. Her name is Ashley." Similarly Marc said, "Boys are not always faster than girls. There are some girls that are faster than boys, like Christine." Three subthemes are included within this theme.

Negative responses to girls' success, not boys. When boys were observed to perform better than the girls on the sit-and-reach, their performance frequently encouraged the students to try harder. The boys' performances were not talked about in a negative way. For example, Nicole stated, that when she sees a boy that is really flexible she thinks, "Wow. I need to start stretching some more." However, when Nicole was asked what she thinks about a girl who does well on a fitness test, she said, "I think that she is a show-off or something like that." Dennis explained that he has experienced students in the class taunting him when a girl runs faster than he does. He said, "Boys say 'why did you let that girl pass you up?'" Dennis believed that the boys in his class were counting on him to be faster than the girls. Similarly, Marc said, "Boys would maybe get made fun of. And, say that the girls didn't really do well or that they cheated." However, Christine explained that when she does better than the boys in her class that others believe that her performance is due to the fact that "she might be more active."

Discredit ability in relation to boys. Second, high performing girls' abilities were discredited. Christine based her thoughts about the difference between girls and boys abilities to complete pull-ups on information that she has received from others. She said, "People say that boys might have more upper strength and girls have more lower strength than boys." This is a general statement about all boys and girls, and she goes on to agree with the differences despite the fact that she performed better than most of the boys in the class. Christine said,

I agree a little bit because I'm really good at running and I'm not so good at pull-ups. Cause I don't really work on my upper strength. I'm more out there running because my dad has horses and I have to go catch them.

Christine discredits her own upper-body strength as a result of ascribing to the normative standards that boys are stronger than girls. Her statement also suggests that she is unaware that upper-body strength is needed to perform daily tasks that she accomplishes at home, like herding horses.

Amanda agreed with the divergent fitness expectations for girls and boys on the mile-run, however, it was at the cost of discrediting her own ability. She situated herself as not being able to "run faster than the boys." However, when she was asked if she runs faster than some boys she said, "Yes, I just can't run as fast as the fastest boy." Pedagogues must consider how this positioning of herself in relation to the fastest boy and not her own ability may play a critical role in how she comes to understand her ability.

Ben suggested that he thought that it would be okay for girls to outperform boys because some boys may try, but "they are just not in shape." Ashley, described, "There is this one short, short little girl in my class, Sheri. She got like two pull-ups and *that's a lot for a girl.*" Little did this student know that two pull-ups was actually above the average ($M = 1.23$) for all students in

the class. Sheri did *a lot for all the students*. This is another example of how girls' physical abilities are frequently discredited by both girls and boys.

Girls' abilities compared to boys' abilities. The students in the study, regardless of fitness award level and gender, frequently discussed their performances in relation to boys'. For example, Sheri stated, "I mean, it makes you feel good to outrun a boy...it kinda makes you feel good cause a lot of the boys think boys can run faster than you so it feels good to run faster than a boy." However, when Jasmine began discussing how well another student (Aaliyah) did on the fitness tests, she did not reference the performance in relation to boys. Jasmine expressed that people think "she's probably the best in the class." Alicia also discussed how her best friend Aaliyah's, a Presidential award winner, performance compared to boys'. She said, "Some people say 'I didn't know she was faster than you. I didn't know that she could outrun all those boys in our class.'" Richard explained that he thought the high performing girls might feel disappointment when they have to follow lower award standards despite the fact that they performed the best. He said, "They want it to be equal. It would be fair for everybody."

Flexibility Dilemma

When students were asked to describe their thoughts about the different expectations for girls and boys on the test of flexibility (i.e., sit-and-reach), the students provided a variety of insightful responses. Sheri said,

I don't think that's fair because girls, they, have to do [sic] more flexibility, but boys can do just as well as others, because they can be in gymnastics, so can we. They can do basketball, so can we. We can do a lot of things that the boys can do and boys can do a lot of things that girls can do.

Nicole presented a different side of the flexibility spectrum. She stated that she thought that girls are more flexible than boys. However, she also argued that this was fair practice for the boys.

Nicole said, “On the boys’ physical cards, they don’t have to do as much. But then again, they have to do more sit-ups and more pull-ups, and stuff like that.” The differences were rationalized as a fair practice.

Dennis presented a different concern for the different expectations for girls and boys on the sit-and-reach. He said that he had a problem because “all girls aren’t flexible.” Similarly Alicia stated, “Some girls are flexible and some girls are not.” Conversely, Richard adamantly suggested that he thinks that girls are more flexible. When asked about the gender disparities on the mile-run, however, he expressed a different sentiment that suggests the gendered label that students assign to different fitness activities. Richard said, “I think it’s true that boys are faster than girls, but not in all cases because I know some girls that are just as good as any boy, if not better.” Some students argued that the gendered flexibility differences are acceptable because there “has to be an easy one for girls” (Randy). He agreed with the gender differences on the sit-and-reach test, stating, “It is right because boys are more muscular. They can run faster than girls. And the girls, they got flexibility, so it is easy.” This perspective shows how some students maintain gendered assumptions that flexibility is an easy fitness task for all girls.

Stretching does not hurt girls. Christine, a Presidential award winner, agreed that boys are not as flexible as girls and the expectation differences were reasonable. However, she justified these differences by suggesting that boys can hurt themselves when doing the sit-and-reach. When asked if girls can get hurt doing flexibility tests, she said, “Yes we can, but I can’t really explain why.” Cohen provided a similar explanation that girls experience less pain while doing fitness tests or physical activities that require a demonstration of flexibility. When asked if he thought that boys could do splits like the female gymnasts he observed, he focused on pain as a factor that restricts boys’ ability to be flexible. He stated, “I think boys would have to, like, when they’re trying to do splits or something like that, they would have to hold their soreness in

until they are down.” He failed to recognize the role that socialization processes have in affecting flexibility, gendered perceptions of flexibility, and that soreness or pain is a factor that may be present for all students, regardless of their sex-based physiology. He grounded this perspective in a gendered generalization that girls are physiologically different than boys, while failing to recognize that with practice individuals can become more flexible. Ben explained, “It hurts, and we [boys] aren’t used to doing flexibility stuff.” This student’s response suggests that he is aware that with exposure to different activities ability can change. Thus, drawing attention to the potential (in)appropriateness of the actual tests and how access to practice contributes to ability.

Misinformation. Throughout the students’ interviews, it was not uncommon for students to make comments about gender and flexibility based on information they received from parents, teachers, and popular culture. For example, Amanda thought that different expectations for boys and girls on the sit-and-reach were appropriate. That is, she agreed, “Because the girls have longer legs, and the boys have longer arms.” According to Richard, girls’ bodies are more flexible because “they are usually smaller.” He equated flexibility to the size of a person’s body and assumes that girls are smaller. Milton maintained a different conception of flexibility. He said, “I think that girls must have some kind of ... they have something in them that makes their arms stretch longer.” Similarly, Cohen provided an essentialist notion of flexibility and gender differences, agreeing with the different gender expectations on the sit-and-reach fitness test. He stated, “[Girls] have certain muscles that let them flex a whole lot better.” Later in the interview, this student explained that he learned about these biological differences in his science class. He said, “We learned about the muscles of humans both females and males.” This type of misinformation that students receive and interpret from a variety of sources including peers, parents, popular culture, teachers, and dominant discourses demonstrate the need to provide experiences that do not separate students according to social constructs, like gender.

Students' Suggestions for Change

Throughout the interviews, it became apparent that many of the students had problems with the categorization of the normative-based data in terms of girls and boys. Doug expressed a direct concern with the standards being different. He said,

I don't think that it should be this way because there are boys who can stretch. I'm not just saying that because I'm a boy. I don't really think it is true that all girls are better stretchers than boys.

Doug's statement displays a progressive notion of gender and ability, that is, it is not safe to oversimplify conceptions of ability based solely on one's gender.

Not only did the students explain why they were concerned, but they also expressed ideations of wanting to have the same performance expectations. For example, Sheri said, "I would say that you shouldn't say that girls and boys are different. You should say that anything can happen. Because anything can happen." Dennis also expressed concerns with the standards. He explained, "Girls can run as fast as boys if they try." This comment emphasizes the notion that just because a normative standard has been acquired, it does not necessarily mean that it should be a desirable standard. These standards may discourage students from trying as hard as they possibly can. Ben noted, "The girls' times (pause) like the girls (pause) have to get different times than the boys." He argued,

They should try to get the same time as the boys. They should help themselves by running at home and when they get to do the mile, they should try to help themselves run the same mile time as the boys.

This complements the concerns expressed by Dennis and other students. The participants argued that students should strive to do as well as possible, but unfortunately the design of the tests places boys in the dominant performance group. Therefore, the students have to reference

performance in terms of gender. Specifically, positioning for girls is in opposition or comparison to boys. However, Marc expressed a different perception.

Interviewer: For the sit-and-reach, who do you think are expected to stretch farther, boys or girls?

Marc: Maybe both

Interviewer: Why is that?

Marc: Because they both have to try and set a goal for themselves.

Marc's comments are in opposition to previously discussed responses to why gender differences are present and serve to suggest that some students may think that the tests should be structured around individual improvements rather than according to gendered standards. According to Randy, the fitness test expectations should only be reported by age. He adamantly stated,

I don't think it is right that we have different times. I think they should do it by our age. Because it is not right. There is a girl who beat me last year and she is extremely fast. I don't think it is right.

This was not the case for all students. Some students were aware of the disparities and agreed with the differences. Once again, these differences were explained by rhetorical practices that supported notions of gender that were essentialist, socially constructed, or a combination of both.

Discussion and Future Directions

This study extended previous feminist-based research (Azzarito & Solmon, 2006; Flintoff & Scraton, 2001; Martino, 1999; Wright, 1995) by investigating the gendered aspects of fitness testing in physical education classes using feminist poststructuralist theoretical framework (Weedon, 1997). The students' comments about fitness tests revealed that they are moving and performing in a normative-based context that reinforces notions of superiority and gendered constructions of the body. This is a significant finding because, according to Williams and

Woodhouse (1996), students' viewpoints have largely been "a neglected dimension of research into [PE] curriculum practice" (p. 212). According to Paechter (2003), physical education classes continue to promote gendered forms of movement by way of reinforcing patriarchal-based ideologies vis-à-vis pedagogical practices that present certain physical activities as being appropriate for only girls or only boys.

The analysis of the interviews revealed not only how students explain the gender differences, but also provided suggestions for changing the structure of the tests. Several of the students' responses highlight the problems that occur when students make assumptions about gender and natural ability. Students' essentialist perspectives about physical ability surfaced during the interviews through their vocalized and internalized assumptions about all girls (e.g., "girls *don't mind* when boys outperform girls"). This generalization places girls in a position of subordinate ability as compared to boys. One thing to consider when understanding the students' perceptions of fitness testing is that the students were aware of their classmates' abilities based on gender. It is important to understand students' misconceptions and the root of that misinformation so that teachers can attempt to correct such information. The students' perceptions and embodiment of fitness testing and gender demonstrate the need for future research that focuses specifically on fitness testing as a dominant discourse in physical education.

The role of popular culture cannot be ignored in this discussion of fitness testing. The implications of how students made sense of the different gender expectations, through various forms of media, were apparent in two of the four themes. It is important to note that "even though such messages are interpreted individually, they are not received or read in a social vacuum, but recontextualised amid the prevailing interests of peer-group cultures, family members, and school personnel" (Evans et al., 2008, p. 67). Two students provided specific

examples of how fitness-related media informed their embodiment. Azzarito and Solmon (2006) wrote, “Embedded in dominant discourses about the body, the images of bodies produced by the fitness and fashion industries (i.e., as exemplified by fashion, fitness, and sports magazines) have become signifiers of the ideal gendered body, the valuable body” (p. 204). This pressure is then reinforced in physical education dominant discourses like fitness testing that construct divergent gendered expectations to produced normalized conceptions of physicality. Therefore, continued research needs to focus on how students use messages from popular culture to create their physical identities (see Azzarito & Solmon, 2006, Garrett, 2004), while also looking closely at how physical educators project personal embodiment and gendered expectations through fitness testing practices.

The fourth theme, “Students Suggestions for Change,” may be one of the most important in terms of how researchers and pedagogues start to reconsider fitness testing as a dominant discourse. Listening to the students brings to light important feminist-based pedagogical questions, including: 1) “do students in the margins have a voice? and 2) how should and can their voices be heard? In this study, the marginalized students become those who’s fitness abilities, in a norm-referenced fitness testing setting, do not qualify them to receive fitness awards, thus creating a category of otherness. When a dominant, gendered-perspective of fitness is reinforced through such assessment practices, the students’ in the margins voices can offer significant insight into why change is essential and how it can possibly occur. Collins (1998) identified this phenomenon as the outsider-within. According to Collins, outsider-within refers to “social locations or border spaces occupied by groups of unequal power” (p. 5). Thus, individuals who maintain an outsider-within position are able to gain knowledge, but due to their subject positioning, are never able to truly claim the same status or power as members of the dominant group. Such situating of marginalized individuals as outsiders-within, can provide

insight for a reconceptualization of fitness that recognizes how individuals' lived experiences (including fitness testing experiences) contribute to how bodily meaning is constructed. For fitness testing, the concept of outsider-within can be explored on multiple levels, including, but not limited to status as a student, fitness level, gender, ethnicity, religion, and socio-economic status. Additionally, physical education teacher educators can incorporate the students' voices from this study into their own pedagogies or classes in order to initiate dialogue about embodiment and fitness testing.

While this study focused only on gender, one cannot ignore how other social constructs intersect to influence how students experience fitness testing. This research illuminates and reinforces a significant concept presented by Lorde (1983). She wrote, "There is no hierarchy of oppression" (p. 9). Gender is not the only social construct that the students in this study, and students in most schools, have to negotiate in order to perform their selected or ascribed identity. Lorde argued,

I was born Black, and a woman. I am trying to become the strongest person I can become to live the life I have been given and to help effect change toward a livable future for this earth and for my children. As a Black, lesbian, feminist, socialist, poet, mother of two including one boy and a member of an interracial couple, I usually find myself part of some group in which the majority defines me as deviant, difficult, inferior or just plain 'wrong' (p. 9).

In regard to fitness testing, Lorde's thoughts emphasize the need for research that delves more deeply into how students of all backgrounds experience a dominant discourse that can have profound implications on students' self-identities and embodiment. Likewise, Santana and Hultgren (2001) wrote, "Lived experience occurs within situations or contexts that vary by class, race, gender, geography, and other distinctions, resulting in the construction of meaning in ways that bear differences in these regards" (p. 523). Unfortunately, the political, socially-constructed,

historically-situated, gendered discourse or pedagogical practice of fitness testing fails to account for or consider such embodiments.

As this research revealed, by using feminist poststructuralist theory (Weedon, 1997) coupled with Collin's (1998) perspectives of the role of positionality and Lorde's (1983) concepts of oppression to understand students' articulations of their experiences and how meaning is ascribed, important and meaningful insight was gained about this specific aspect of physical education. Using these theoretical lenses, pedagogues and researchers can begin to uncover the answers to critical questions, including: who (what groups) created fitness tests?, how is the information being used?, what are the effects of norm- or criterion-referenced tests on students in margins?, what do students do with the information they gain about their fitness levels?, and how are fitness testing experiences re-lived across an individual's lifetime?

Endnotes

1. The term "pedagogical practice" is inclusive of all aspects of the curriculum that teachers knowingly or unknowingly and covertly or overtly include in their teaching. In broad terms, "pedagogical practice," can refer to which content is included, personal teaching philosophies, and formulation of class expectations and routines, to name a few. When discussing fitness testing as a "pedagogical practice," this includes which program the teacher selects or is expected to administer, how the tests are administered (i.e., publicly, privately, peer groups), frequency of testing, and what the teachers do with the fitness assessments (i.e., program evaluation, to create individualized fitness plans, rewarding the students, publicly displaying students' results.)
2. Throughout this article, usage of language that discusses the fitness expectations in terms of gender disparities is used. Initially this may seem problematic due to the fact that girls' and boys' fitness expectations for the PCPFAP are actually based on biological sex differences. However, we apply Judith Butler's (1999) perspective of gender to this examination of fitness testing. Butler stated, "Gender is always a doing" (p. 33). We conceptualize the performance of gender(s) as a social construct that students' are constantly negotiating between and across when they experience fitness testing and other dominant discourses that are rooted in essentialist notions of physicality.
3. This study was part of a larger study. The interview protocol used in the larger study includes questions/prompts that in addition to addressing issues related to the divergent gender expectations also asks students about their motivational dispositions towards fitness tests. Table 2 includes the entire interview protocol.

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APPENDIX E: RAW DATA

ID	Gen	Group	Test	Task	ego	tskclim	egoclm	pc	effort	enjoy	pres	testint	fitint
1	2	2.00	1	5.00	4.67	4.00	2.75	3.00	7.00	4.20	5.67	2.50	4.00
2	2	2.00	1	5.00	1.83	4.80	2.25	4.00	5.50	4.60	6.33	2.50	5.00
3	2	2.00	1	4.86	2.00	5.00	2.50	4.33	6.50	3.80	5.67	4.00	4.50
4	2	2.00	1	5.00	3.00	4.20	3.50	3.00	7.00	2.20	7.00	1.00	2.00
5	2	1.00	1	4.71	2.17	4.80	4.00	6.00	7.00	5.80	2.67	4.00	4.50
6	2	1.00	1	4.29	2.33	3.60	3.25	6.00	6.50	4.80	2.00	4.00	4.00
7	2	1.00	1	4.14	2.83	3.40	2.50	3.00	4.00	3.40	3.33	3.50	3.50
8	2	2.00	1	4.71	2.67	3.00	1.00	4.67	6.75	4.80	4.00	3.50	4.50
9	2	2.00	1	4.14	3.17	3.60	3.75	4.67	7.00	5.20	3.00	4.00	3.50
10	2	2.00	1	5.00	1.83	4.20	2.25	5.33	6.75	4.60	2.33	3.00	5.00
11	2	1.00	1	4.43	3.00	4.80	4.00	5.67	7.00	5.80	1.00	5.00	5.00
12	1	1.00	1	4.29	4.00	4.40	2.50	7.00	7.00	5.80	3.33	4.50	5.00
13	1	2.00	1	4.57	3.33	3.80	2.75	6.00	7.00	5.40	2.00	5.00	5.00
14	1	1.00	1	5.00	4.17	5.00	3.25	5.00	6.00	4.00	2.00	4.00	4.50
15	1	2.00	1	4.14	2.33	4.00	2.00	4.67	6.50	4.40	3.67	3.50	4.50
16	1	2.00	1	4.43	2.67	3.80	2.25	4.33	6.75	4.40	2.33	4.00	4.00
17	1	2.00	1	4.43	3.00	4.60	3.00	4.33	7.00	4.40	1.00	1.00	5.00
18	1	2.00	1	3.00	2.50	3.60	3.50	4.00	5.50	3.60	2.67	1.50	3.50
19	1	2.00	1	4.00	1.67	3.40	3.00	2.00	6.25	2.80	5.33	2.00	2.50
20	1	2.00	1	4.14	1.00	2.60	1.00	1.00	5.50	1.60	7.00	3.50	3.00
21	1	1.00	1	5.00	1.67	5.00	3.00	6.33	7.00	5.80	3.00	5.00	5.00
22	1	2.00	1	4.43	3.50	4.60	3.00	6.00	5.50	5.80	3.33	4.50	4.00
23	1	1.00	1	4.71	3.67	4.20	3.00	6.33	7.00	5.80	3.33	5.00	5.00
24	2	2.00	1	4.57	3.00	4.80	3.00	3.00	6.00	3.60	5.00	3.00	3.50
25	2	2.00	1	4.43	1.00	4.80	1.25	6.00	7.00	5.80	1.33	4.50	5.00
26	2	2.00	1	4.14	3.83	3.40	2.00	3.33	6.25	3.20	7.00	2.00	2.50
27	2	1.00	1	4.86	3.67	4.40	3.00	5.67	7.00	5.00	2.33	4.50	4.50
28	2	1.00	1	3.57	3.00	4.20	2.50	4.67	6.25	5.20	1.67	4.00	5.00
29	2	2.00	1	4.86	1.83	4.80	2.25	3.33	6.25	4.00	4.33	4.00	5.00
30	2	2.00	1	4.00	2.17	2.40	2.25	2.00	6.25	4.00	5.33	2.50	3.00
31	2	1.00	1	4.86	3.67	4.40	4.50	6.33	7.00	4.20	5.00	4.00	3.50
32	2	2.00	1	4.57	2.33	3.20	1.50	2.67	5.75	3.60	5.33	3.50	3.50
33	2	1.00	1	5.00	3.50	5.00	4.00	6.33	7.00	5.20	1.67	4.00	4.00
34	2	2.00	1	4.71	2.00	3.80	1.75	2.00	6.00	3.80	1.33	3.00	3.00
35	2	2.00	1	4.43	1.00	4.80	2.00	2.33	5.50	5.40	7.00	5.00	4.00
36	1	2.00	1	4.57	1.67	4.00	3.00	4.00	6.25	4.40	1.67	3.50	3.50
37	1	1.00	1	4.71	2.50	3.00	2.75	4.00	4.50	3.60	4.00	2.00	2.50
38	1	2.00	1	5.00	4.83	4.60	4.00	5.67	7.00	5.60	6.00	2.00	2.00
39	1	1.00	1	4.71	2.67	4.40	4.00	6.33	6.50	5.80	2.00	5.00	4.50
40	1	2.00	1	4.29	2.83	3.60	3.75	3.67	5.25	3.60	5.67	3.00	3.50
41	1	2.00	1	4.29	2.33	3.40	2.00	5.00	5.75	3.60	4.00	2.50	2.50
42	1	2.00	1	4.14	3.33	3.00	2.25	4.67	6.25	3.60	6.33	2.50	2.00
43	1	2.00	1	4.29	4.50	3.80	4.00	6.33	5.50	5.60	4.67	4.00	4.50
44	1	1.00	1	4.86	3.00	5.00	2.50	6.67	7.00	5.40	1.67	4.50	4.50
45	1	2.00	1	4.71	2.33	2.80	3.00	4.33	4.75	5.00	4.67	3.00	2.50
46	2	1.00	1	5.00	1.33	6.40	1.00	5.33	7.00	5.80	2.67	5.00	5.00

47	2	1.00	1	5.00	3.83	3.80	4.50	7.00	6.75	5.80	3.00	5.00	5.00
48	2	2.00	1	4.43	2.83	3.80	3.75	2.00	5.50	4.80	1.67	4.50	3.50
49	2	2.00	1	4.29	2.00	3.80	1.50	5.67	6.50	5.60	2.00	4.50	4.00
50	2	1.00	1	4.43	4.50	4.20	3.75	4.67	5.00	4.60	3.33	4.50	4.00
51	2	1.00	1	4.29	2.33	3.60	2.75	4.00	6.25	3.00	5.00	3.50	4.00
52	2	1.00	1	3.86	3.83	3.60	3.25	5.33	6.75	5.20	3.00	4.50	4.50
53	2	2.00	1	2.43	1.50	3.80	3.75	2.00	5.50	4.80	1.67	1.00	3.50
54	2	2.00	1	4.14	2.83	4.20	2.00	5.00	7.00	4.60	2.00	3.50	5.00
55	2	1.00	1	4.29	3.67	4.20	2.25	3.67	6.25	4.00	3.00	4.00	3.00
56	2	2.00	1	4.00	3.00	4.20	2.50	3.33	4.50	4.20	4.33	2.50	2.00
57	2	2.00	1	5.00	3.67	3.80	3.50	5.33	6.75	5.00	4.67	4.00	3.50
58	2	1.00	1	4.43	3.17	3.80	3.25	5.33	5.75	3.60	6.00	3.00	3.50
59	2	2.00	1	3.71	1.83	4.00	3.50	1.00	5.00	2.80	6.67	1.50	1.00
60	2	2.00	1	3.86	2.67	4.20	2.50	5.00	6.50	4.20	3.67	4.50	4.00
61	1	1.00	1	4.71	2.83	4.60	3.00	3.67	6.25	4.20	4.67	3.50	5.00
62	1	1.00	1	4.86	3.17	5.00	3.50	5.67	7.00	4.40	1.00	3.00	4.50
63	1	2.00	1	4.00	3.33	5.00	5.00	4.67	5.25	4.00	1.67	4.00	4.00
64	1	2.00	1	3.00	1.00	3.00	1.75	1.67	7.00	2.20	2.33	2.00	1.00
65	1	1.00	1	3.71	3.17	3.80	2.50	5.33	5.50	4.80	1.00	4.00	4.00
66	1	1.00	1	4.86	3.00	3.80	2.25	5.00	6.00	3.80	4.33	5.00	4.00
67	1	1.00	1	4.00	1.83	4.80	3.25	5.33	6.75	4.80	3.00	2.50	3.50
68	1	1.00	1	4.00	3.17	3.20	3.25	3.67	5.50	3.00	2.00	2.50	1.50
69	2	1.00	1	4.43	3.17	4.00	3.50	3.00	6.50	2.80	5.67	3.00	3.00
70	2	2.00	1	4.14	2.67	4.20	3.25	1.00	6.00	2.40	5.00	1.50	3.50
71	2	1.00	1	2.00	2.67	1.20	1.50	6.33	7.00	3.00	1.00	3.00	2.50
72	2	1.00	1	4.00	3.00	3.40	3.00	5.00	6.25	4.00	5.33	4.00	4.00
73	2	2.00	1	4.43	1.50	1.80	2.00	1.00	4.75	2.20	6.33	2.50	2.50
74	2	2.00	1	4.57	3.83	3.60	3.00	3.67	4.25	4.80	5.33	4.00	1.00
75	2	2.00	1	4.29	2.17	4.20	2.50	7.00	7.00	5.40	5.00	4.50	3.00
76	2	1.00	1	4.86	2.67	3.80	3.00	7.00	7.00	4.60	5.00	4.00	4.00
77	2	1.00	1	4.57	2.67	3.60	2.00	5.00	6.75	2.80	2.33	3.50	3.00
78	2	2.00	1	4.57	1.83	3.40	3.25	2.67	6.75	1.60	5.00	3.00	2.00
79	1	2.00	1	4.43	2.50	4.60	2.25	6.33	5.50	5.20	5.67	4.50	3.00
80	1	2.00	1	4.14	1.50	3.40	2.00	3.67	6.75	4.20	4.67	4.00	4.00
81	1	1.00	1	3.14	3.00	4.00	3.50	5.33	6.25	3.80	4.00	3.00	2.50
82	1	1.00	1	4.86	2.83	3.40	1.00	6.67	7.00	5.60	1.33	5.00	5.00
83	1	1.00	1	4.29	3.67	2.20	2.50	5.67	7.00	4.20	1.00	3.00	3.00
84	1	1.00	1	5.00	4.00	3.00	3.00	5.00	4.25	2.80	1.00	3.00	3.50
85	1	1.00	1	4.14	3.67	4.80	2.75	4.67	6.75	2.80	3.00	4.00	4.00
86	1	1.00	1	4.43	2.67	3.40	2.75	4.67	6.00	4.80	4.33	3.50	4.50
87	1	2.00	1	3.71	2.17	5.20	2.50	7.00	6.00	5.00	4.00	3.00	4.00
88	1	1.00	1	4.29	2.00	3.40	2.25	4.00	6.50	5.00	2.00	2.00	4.00
89	1	2.00	1	3.57	3.67	3.80	3.00	3.67	5.00	2.40	1.67	3.50	3.50
90	1	2.00	1	3.29	1.50	4.20	4.00	1.00	6.75	2.80	5.33	4.50	3.50
91	1	2.00	1	4.43	3.83	4.00	3.00	6.67	7.00	5.40	5.00	4.00	4.00
92	2	1.00	1	3.86	2.50	4.60	2.50	4.00	6.00	2.60	3.67	2.50	2.00
93	2	1.00	1	4.00	2.50	4.00	3.00	1.00	4.00	1.00	3.00	1.00	3.50
94	2	1.00	1	4.43	3.33	4.60	3.25	4.67	6.25	3.40	5.00	1.50	2.50
95	2	1.00	1	3.57	3.67	4.80	4.00	3.67	6.75	4.60	3.67	2.00	4.50

96	2	2.00	1	3.57	3.00	3.00	3.50	3.67	5.75	2.00	7.00	1.00	1.00
97	2	2.00	1	4.00	2.50	4.20	1.25	1.00	5.50	2.20	6.00	3.50	3.00
98	2	2.00	1	4.57	2.50	3.80	3.00	4.67	6.75	5.80	1.33	3.00	3.00
99	2	2.00	1	5.00	3.00	4.00	3.50	5.33	7.00	5.40	1.00	4.50	4.50
100	2	2.00	1	3.29	1.67	3.20	1.75	3.67	5.50	3.40	2.33	2.50	2.50
101	2	1.00	1	4.00	3.67	1.20	1.25	5.33	6.75	6.40	6.33	3.50	4.00
102	2	1.00	1	4.57	2.17	3.40	2.25	4.00	6.75	3.60	4.67	3.00	4.00
103	1	2.00	1	4.14	1.33	4.60	2.00	5.00	6.50	5.00	6.00	5.00	5.00
104	1	2.00	1	4.14	2.50	2.40	1.25	2.33	5.50	4.20	1.00	3.50	5.00
105	1	2.00	1	4.29	1.00	3.20	1.25	4.67	6.50	4.20	1.00	3.50	4.50
106	1	1.00	1	4.86	2.83	3.80	3.50	5.33	5.25	4.20	4.00	4.50	5.00
107	1	2.00	1	4.29	2.67	3.60	2.00	1.00	6.00	3.00	3.67	3.00	3.50
108	1	2.00	1	5.00	3.00	5.00	2.00	6.67	7.00	5.80	7.00	4.00	4.00
109	1	2.00	1	4.71	3.33	4.80	3.75	6.67	7.00	5.40	5.67	5.00	5.00
110	1	2.00	1	3.86	1.17	4.00	1.00	3.67	6.00	1.60	2.00	2.00	4.00
111	1	1.00	1	4.57	2.83	4.60	3.75	4.00	6.00	5.20	5.00	3.50	3.50
112	1	2.00	1	4.86	2.00	4.60	2.50	5.33	6.75	4.20	2.67	4.00	3.50
113	2	2.00	1	4.71	1.67	4.40	1.00	1.00	7.00	2.20	4.00	2.00	5.00
114	2	2.00	1	4.00	1.67	4.20	1.25	5.00	6.75	4.60	2.33	3.00	3.00
115	2	2.00	1	3.43	3.50	2.20	4.00	4.67	6.25	3.80	3.67	4.00	4.00
116	2	2.00	1	3.57	1.50	4.20	3.50	1.00	4.25	2.40	7.00	4.00	3.00
117	2	1.00	1	4.57	2.67	5.00	3.75	5.33	5.75	3.60	1.00	4.00	3.50
118	2	1.00	1	4.71	2.50	4.20	1.00	5.67	7.00	2.20	1.00	4.00	3.50
119	2	2.00	1	3.86	1.83	4.00	1.50	3.33	7.00	4.60	1.67	3.50	4.00
120	2	1.00	1	4.71	2.33	3.60	2.50	4.33	7.00	2.80	5.00	4.00	4.00
121	2	2.00	1	4.29	1.67	3.60	2.50	3.67	5.00	2.20	2.00	2.00	4.50
122	1	2.00	1	3.71	1.83	4.80	3.25	2.00	5.50	5.40	5.00	4.00	4.50
123	1	2.00	1	4.14	3.67	4.80	2.75	5.67	4.00	4.60	3.33	4.50	4.50
124	1	2.00	1	3.71	3.33	3.40	3.25	4.33	5.50	4.00	2.67	2.50	3.00
125	1	1.00	1	1.71	3.17	3.80	1.25	6.33	6.25	5.00	1.00	3.50	3.50
126	1	1.00	1	4.86	3.33	4.40	3.00	6.33	7.00	4.80	1.00	3.50	3.50
127	1	1.00	1	4.57	2.67	2.00	2.00	5.00	7.00	5.00	2.00	4.50	4.50
128	1	1.00	1	4.71	1.83	4.00	1.00	5.33	7.00	4.80	4.00	4.50	4.50
129	1	2.00	1	4.57	1.83	3.20	2.25	6.67	5.25	2.60	2.33	1.50	2.00
130	1	1.00	1	4.57	2.00	3.40	1.75	4.67	6.25	3.80	2.33	3.00	3.00
131	1	2.00	1	4.43	2.33	4.20	3.50	5.00	6.75	4.40	3.67	4.50	3.50
132	1	1.00	1	4.43	3.50	4.00	2.75	6.33	7.00	5.00	5.00	5.00	4.00
133	1	1.00	1	4.29	3.33	3.20	2.75	3.67	4.25	2.80	6.00	2.50	2.50
134	2	2.00	1	3.86	2.33	3.40	2.25	4.00	6.75	3.60	4.67	2.50	4.00
135	2	2.00	1	4.43	2.83	4.40	2.50	2.33	4.25	3.20	1.67	2.50	2.50
136	2	2.00	1	4.29	1.50	3.60	1.00	2.33	7.00	3.00	4.00	2.50	3.00
137	2	1.00	1	4.43	3.00	4.20	1.50	4.00	7.00	3.80	3.00	3.50	3.50
138	2	2.00	1	4.00	2.17	4.20	3.50	1.00	4.25	2.40	7.00	4.50	3.00
139	2	1.00	1	4.43	3.00	4.80	3.00	4.67	6.00	4.40	1.00	2.50	3.50
140	2	1.00	1	4.57	2.50	4.20	2.75	4.67	6.75	5.80	5.33	3.00	2.00
141	2	2.00	1	4.43	2.83	4.40	2.00	5.67	6.75	2.80	4.00	2.50	4.00
142	2	1.00	1	3.57	2.17	4.60	2.25	2.67	4.25	3.00	5.00	4.00	4.00
143	2	1.00	1	3.43	4.00	5.00	3.25	7.00	7.00	5.80	7.00	4.50	4.50
144	2	1.00	1	4.29	3.17	5.00	3.25	5.67	6.75	2.80	4.00	3.00	3.00

145	1	2.00	1	5.00	2.00	3.00	4.75	6.00	6.25	5.20	5.00	4.50	4.50
146	1	2.00	1	4.14	2.17	2.20	3.75	3.00	5.00	3.00	2.67	2.00	3.50
147	1	1.00	1	4.71	2.83	3.40	4.00	4.67	6.75	5.20	4.33	4.00	5.00
148	1	1.00	1	4.57	2.83	2.80	1.50	5.67	5.25	4.60	2.67	3.00	3.50
149	1	1.00	1	4.14	4.00	4.00	2.50	7.00	5.50	4.80	6.00	5.00	5.00
150	1	2.00	1	4.00	2.50	1.80	3.00	3.67	4.00	2.20	5.00	1.00	1.00
151	1	2.00	1	4.14	3.00	3.40	3.50	4.67	7.00	5.20	3.33	4.00	4.00
152	1	1.00	1	3.00	2.67	2.20	2.25	4.33	4.25	2.40	2.00	2.50	2.00
153	1	1.00	1	4.86	3.00	4.80	3.00	5.33	6.00	5.00	4.00	5.00	5.00
154	1	2.00	1	5.00	2.17	5.00	4.75	4.67	7.00	5.00	1.00	5.00	5.00
155	1	1.00	1	5.00	4.00	5.00	5.00	6.67	5.00	5.40	2.00	4.00	2.00
156	2	3.00	2	3.43	2.00	3.00	2.00	1.33	4.00	2.20	1.67	3.00	3.00
157	2	3.00	2	3.71	2.83	2.80	2.25	4.00	4.25	3.60	3.67	1.00	1.00
158	2	4.00	2	3.86	2.17	3.80	2.00	3.67	5.50	4.40	2.67	3.00	4.00
159	2	4.00	2	4.71	3.83	3.40	1.50	3.67	6.50	2.80	7.00	1.00	5.00
160	2	3.00	2	5.00	2.33	4.60	1.50	6.00	6.50	3.60	2.67	1.50	2.50
161	2	3.00	2	4.43	1.67	4.60	2.50	3.33	5.50	5.60	3.67	3.50	4.50
162	2	3.00	2	5.00	3.00	4.80	2.00	6.33	6.50	5.20	1.33	3.50	5.00
163	2	3.00	2	4.14	2.67	4.00	3.75	6.00	6.25	5.00	6.00	3.50	3.50
164	2	3.00	2	4.29	1.83	4.20	2.00	4.33	4.25	3.80	5.67	3.00	3.00
165	2	4.00	2	4.43	1.00	5.00	1.00	4.33	7.00	5.80	5.67	3.00	3.50
166	2	3.00	2	4.43	4.17	3.60	2.75	5.00	7.00	3.60	6.00	2.00	2.50
167	2	3.00	2	4.00	2.17	4.20	1.75	5.00	6.00	4.80	5.33	3.00	4.00
168	1	3.00	2	3.57	1.83	3.20	2.00	3.67	5.00	3.40	3.67	3.00	4.00
169	1	4.00	2	3.86	2.50	4.60	2.25	5.67	7.00	2.60	1.00	3.50	4.00
170	1	4.00	2	4.00	1.33	3.80	2.75	5.67	6.00	4.20	2.33	3.00	3.50
171	1	4.00	2	4.57	1.83	4.00	2.50	4.33	6.75	2.80	4.00	3.50	4.50
172	1	4.00	2	4.14	1.67	4.00	1.75	3.33	6.75	3.40	4.00	3.00	4.50
173	1	3.00	2	4.86	3.83	5.00	2.75	6.67	7.00	5.60	2.33	5.00	5.00
174	1	3.00	2	4.86	1.83	3.80	2.50	5.67	7.00	4.20	1.67	3.50	2.50
175	1	3.00	2	4.86	2.50	4.00	3.00	4.33	6.75	3.80	4.00	3.00	4.00
176	1	4.00	2	4.29	1.67	3.40	2.25	4.00	6.25	3.80	2.33	2.50	2.00
177	1	3.00	2	4.43	2.67	4.60	1.00	7.00	7.00	4.00	1.33	3.50	5.00
178	1	4.00	2	4.29	2.00	5.00	1.00	2.00	5.25	3.00	1.00	2.00	2.50
179	1	3.00	2	4.43	2.50	3.60	2.00	5.67	6.75	5.60	1.00	4.50	4.50
180	1	3.00	2	4.57	1.50	4.80	1.50	5.67	7.00	5.20	3.00	3.50	4.50
181	2	3.00	2	4.71	2.50	4.60	1.75	6.67	7.00	4.60	4.33	2.50	2.00
182	2	3.00	2	4.43	2.00	3.80	1.50	5.67	7.00	4.00	2.67	3.50	3.50
183	2	3.00	2	5.00	3.33	4.40	2.75	6.33	7.00	5.20	4.00	5.00	4.50
184	2	3.00	2	4.29	1.67	4.60	1.25	4.33	7.00	5.00	4.00	3.50	5.00
185	2	4.00	2	3.71	2.33	4.60	1.75	6.00	7.00	4.80	4.00	3.50	4.50
186	2	4.00	2	3.14	2.50	4.20	2.00	6.67	7.00	6.40	1.00	5.00	4.00
187	2	4.00	2	4.71	2.50	5.00	1.75	6.33	6.50	5.80	1.33	4.00	4.50
188	2	3.00	2	5.00	3.50	4.80	2.25	6.00	7.00	4.20	1.67	4.00	4.50
189	2	4.00	2	3.29	2.33	4.20	1.75	4.67	6.50	5.20	2.33	3.50	3.50
190	2	3.00	2	4.43	2.33	4.20	1.00	4.00	6.75	2.60	3.00	3.00	3.00
191	2	4.00	2	4.71	2.00	4.00	1.50	4.33	6.75	4.40	4.33	3.50	3.50
192	2	4.00	2	4.57	1.83	3.60	2.00	3.33	5.75	4.00	2.67	4.00	3.00
193	2	3.00	2	4.71	1.33	4.20	1.00	4.67	7.00	4.20	5.00	4.00	4.50

194	2	4.00	2	4.29	1.67	4.20	1.75	3.00	7.00	3.80	2.33	3.00	2.50
195	1	4.00	2	4.29	2.67	3.40	3.00	3.67	5.75	3.60	1.00	4.50	4.50
196	1	3.00	2	4.71	2.17	4.40	3.00	5.67	7.00	4.00	4.33	4.50	4.50
197	1	4.00	2	4.71	2.00	4.00	1.50	3.67	7.00	3.00	2.67	2.50	2.50
198	1	4.00	2	4.29	3.67	2.40	3.25	3.33	5.00	1.80	3.00	5.00	4.50
199	1	3.00	2	3.86	2.17	4.00	1.50	5.00	6.50	5.20	3.67	3.50	3.50
200	1	3.00	2	4.86	1.67	4.20	2.25	5.33	7.00	5.40	3.00	4.50	3.50
201	1	3.00	2	4.71	2.67	4.00	2.50	5.67	6.25	5.60	2.33	4.50	3.00
202	1	3.00	2	4.29	2.67	4.00	1.75	5.67	6.75	4.80	1.67	5.00	4.50
203	1	4.00	2	5.00	2.00	5.00	1.75	5.00	7.00	4.20	1.00	2.00	5.00
204	1	3.00	2	4.00	1.17	3.80	1.75	5.00	7.00	3.40	2.67	3.00	4.00
205	1	4.00	2	4.43	2.83	4.00	2.50	3.33	4.25	4.00	6.33	3.50	3.00
206	1	3.00	2	4.71	3.67	5.00	3.50	5.67	7.00	2.60	2.00	2.50	2.50
207	2	4.00	2	4.43	3.17	4.40	3.75	6.33	6.00	4.20	1.00	4.00	3.00
208	2	4.00	2	4.43	2.17	3.80	2.75	4.33	5.50	4.20	3.67	3.00	4.00
209	2	3.00	2	4.86	1.17	4.40	1.50	3.33	6.50	2.80	6.00	2.50	3.00
210	2	3.00	2	4.14	2.50	3.60	2.25	5.33	6.50	3.20	4.00	1.50	3.00
211	2	3.00	2	3.14	2.33	4.00	2.00	3.67	6.00	3.00	2.00	2.00	3.00
212	2	3.00	2	5.00	4.17	4.20	2.75	6.67	6.25	4.60	4.33	4.00	4.50
213	2	3.00	2	4.43	2.67	4.40	1.75	4.33	5.50	3.20	4.33	3.00	3.50
214	2	3.00	2	5.00	3.17	3.60	1.75	4.33	6.00	3.40	4.67	2.00	3.00
215	2	3.00	2	4.00	1.50	1.20	3.00	3.33	4.75	2.20	1.00	2.00	1.00
216	2	4.00	2	4.57	3.33	3.80	1.25	6.33	5.50	3.60	2.00	2.50	4.00
217	2	4.00	2	5.00	4.17	4.80	4.50	6.33	6.50	4.40	5.33	3.00	4.50
218	2	4.00	2	4.29	3.17	5.00	2.25	4.00	4.75	5.00	2.00	4.50	5.00
219	2	3.00	2	4.86	1.83	4.20	1.50	3.67	6.75	3.60	2.67	3.50	4.00
220	2	4.00	2	4.71	3.67	5.00	2.75	5.33	6.25	4.20	2.67	3.50	5.00
221	1	3.00	2	4.29	3.17	4.00	2.50	3.00	5.75	3.80	5.33	2.50	4.50
222	1	4.00	2	4.71	2.33	3.60	3.00	4.00	6.00	3.40	3.00	3.50	3.50
223	1	3.00	2	4.00	2.83	3.60	2.50	6.33	7.00	3.40	3.00	4.50	2.50
224	1	3.00	2	5.00	1.33	4.40	1.50	6.00	6.75	5.80	3.33	4.50	3.00
225	1	3.00	2	4.57	2.83	4.00	2.75	6.00	6.50	4.60	2.33	4.00	4.50
226	1	4.00	2	4.00	2.50	4.40	2.00	3.67	5.00	5.80	3.00	4.50	4.50
227	1	3.00	2	5.00	4.83	5.00	1.50	7.00	7.00	5.80	1.00	5.00	5.00
228	1	3.00	2	4.86	2.00	4.40	1.75	6.00	7.00	5.40	1.67	4.00	4.00
229	1	3.00	2	4.86	3.17	3.60	2.50	5.33	6.50	4.40	3.33	4.00	4.00
230	1	3.00	2	4.43	2.33	3.80	2.00	4.33	5.25	4.60	2.33	3.50	4.50
231	2	4.00	2	3.71	3.67	4.00	2.25	5.33	7.00	4.80	5.00	2.50	3.50
232	2	3.00	2	5.00	3.50	5.00	4.75	7.00	5.25	5.80	1.00	4.50	5.00
233	2	4.00	2	4.57	2.50	4.40	2.50	3.33	5.75	3.20	3.67	2.50	3.00
234	2	4.00	2	4.57	1.17	4.80	1.00	2.00	3.50	2.20	6.00	1.50	3.50
235	2	4.00	2	4.71	3.00	3.00	1.50	2.67	7.00	3.80	7.00	3.00	3.50
236	2	4.00	2	4.86	3.00	4.80	2.25	4.67	7.00	4.20	5.33	2.50	4.50
237	2	3.00	2	4.71	2.67	3.80	1.00	6.00	7.00	4.40	6.00	3.50	3.00
238	2	3.00	2	4.86	2.67	5.00	2.25	5.33	7.00	5.40	2.33	4.50	7.00
239	2	3.00	2	4.14	2.17	2.00	1.75	4.33	6.00	1.80	1.67	2.00	2.50
240	2	3.00	2	4.57	2.67	4.40	1.00	5.33	7.00	5.20	3.67	3.00	4.50
241	2	3.00	2	4.43	2.00	4.20	2.00	5.67	6.75	3.80	6.33	3.50	4.50
242	2	3.00	2	4.57	3.83	4.20	3.75	6.00	6.75	4.00	2.00	3.00	4.50

243	2	4.00	2	4.71	2.67	3.60	2.75	2.33	5.50	2.60	2.33	2.00	3.50
244	1	3.00	2	3.86	2.33	3.00	3.00	5.33	6.75	5.80	3.00	4.50	5.00
245	1	3.00	2	4.43	3.50	3.80	2.75	5.00	7.00	4.00	3.33	3.50	5.00
246	1	3.00	2	4.29	2.83	2.60	3.75	5.00	5.50	3.40	1.67	2.50	3.00
247	1	4.00	2	4.86	1.83	5.00	1.25	5.67	7.00	3.40	1.00	1.00	3.50
248	1	4.00	2	3.86	3.00	4.20	3.00	4.33	4.50	4.60	4.00	3.50	4.00
249	1	4.00	2	4.29	1.33	4.60	2.00	1.33	7.00	3.60	7.00	4.00	5.00
250	1	4.00	2	5.00	2.33	4.40	2.50	5.67	7.00	5.80	1.00	4.50	5.00
251	1	3.00	2	4.71	3.83	5.00	2.25	5.33	6.50	5.00	7.00	3.50	5.00
252	1	3.00	2	3.71	1.17	4.80	1.50	5.00	7.00	4.80	7.00	2.00	4.50
253	1	4.00	2	4.57	1.17	5.00	2.50	6.00	7.00	5.40	7.00	3.00	4.00
254	1	3.00	2	4.71	4.00	4.60	2.50	6.67	6.75	3.40	3.33	4.00	4.50
255	1	3.00	2	4.43	2.33	4.60	2.25	6.33	6.00	5.20	5.67	4.50	4.50
256	2	2.00	1	3.71	1.00	4.20	1.50	2.00	6.00	3.60	5.00	2.00	2.50
257	1	2.00	1	3.57	1.67	4.20	3.75	3.00	5.75	3.00	1.33	2.50	1.00
258	2	4.00	2	3.57	1.83	3.60	2.00	3.33	6.00	5.20	4.67	5.00	5.00
259	2	3.00	2	4.86	2.83	5.00	2.50	7.00	7.00	5.40	4.00	5.00	4.50
260	2	4.00	2	4.71	4.00	5.00	3.50	5.67	7.00	5.40	5.33	3.50	3.50
261	2	3.00	2	4.14	4.00	4.80	1.75	6.33	7.00	5.80	4.33	5.00	5.00
262	2	3.00	2	4.43	2.67	3.80	1.50	5.67	7.00	3.60	3.00	3.50	5.00
263	2	4.00	2	5.00	2.50	5.00	3.25	5.33	7.00	3.60	5.67	3.00	5.00
264	2	4.00	2	4.43	2.50	4.80	2.25	6.00	6.50	5.20	1.33	5.00	5.00
265	2	4.00	2	4.00	2.17	4.20	2.50	3.33	6.00	4.60	4.00	2.50	3.50
266	2	3.00	2	2.00	1.50	4.40	2.50	4.67	6.00	4.80	1.33	3.50	5.00
267	2	3.00	2	5.00	4.50	5.00	3.25	7.00	7.00	5.80	1.00	5.00	5.00
268	2	4.00	2	4.14	4.50	4.80	3.50	3.67	4.25	6.00	3.00	3.50	4.50
269	1	4.00	2	3.71	1.00	4.20	2.00	3.67	5.75	3.20	2.00	3.00	2.50
270	1	3.00	2	4.57	4.00	5.00	4.75	7.00	7.00	5.40	6.33	5.00	5.00
271	1	3.00	2	4.86	2.50	4.60	1.25	5.67	6.50	5.20	5.00	5.00	5.00
272	1	4.00	2	4.86	2.83	4.60	4.00	6.00	6.75	5.40	3.33	4.50	4.50
273	1	3.00	2	5.00	4.67	5.00	5.00	7.00	7.00	5.80	1.00	5.00	5.00
274	1	3.00	2	5.00	4.33	5.00	3.50	6.67	7.00	5.80	1.00	5.00	5.00
275	1	3.00	2	5.00	5.00	5.00	4.50	7.00	7.00	5.80	1.00	5.00	5.00
276	1	3.00	2	5.00	3.17	4.20	3.00	5.33	6.50	5.80	2.00	4.50	4.50
277	1	4.00	2	4.43	3.67	4.80	4.00	7.00	7.00	3.80	2.33	3.00	3.00
278	1	3.00	2	5.00	4.67	4.60	3.25	7.00	7.00	5.80	1.00	5.00	5.00
279	1	4.00	2	4.86	5.00	4.40	2.75	6.67	6.25	4.40	6.00	2.00	4.50
280	1	3.00	2	5.00	4.33	4.40	2.25	6.33	6.50	5.00	6.00	3.50	5.00
281	1	3.00	2	4.14	3.83	3.80	1.75	6.00	5.50	4.40	6.67	4.50	4.50

APPENDIX F: LETTER OF PERMISSION

Permission to include in Dissertation Document Inbox X

from Elizabeth Domangue <edomang@tigers.lsu.edu> [hide details](#) May 26 (6 days ago) Reply
to genderandeducation@cf.ac.uk
date Tue, May 26, 2009 at 2:47 PM
subject Permission to include in Dissertation Document
mailed-by tigers.lsu.edu

Dear Helen,

Thank you for replying to my recent email. I am writing to request that I may include as an appendix of my dissertation the manuscript "A Feminist Poststructuralist Examination into the President's Challenge Physical Fitness Awards Program" that was published online by Gender and Education. I need to submit my dissertation to the Louisiana State University Graduate School in the next couple of weeks in order to graduate this August. Publication of this manuscript in Gender and Education will be acknowledged in the dissertation. Thank you for your time, and I look forward to hearing from you.

Sincerely,
Elizabeth Domangue

--

Elizabeth Domangue, M.S.
Department of Kinesiology
112 Long Fieldhouse
Baton Rouge, LA 70803
Louisiana State University
edomang@tigers.lsu.edu
225-578-2036 (campus)

[Reply](#) [Forward](#)

genderandeducation Dear Elizabeth I am copying Lisa Larsson, our production editor at Taylor and... May 27 (6 days ago)
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All the best,

VITA

Elizabeth Domangue was born in Houma, Louisiana. She graduated from Louisiana State University in 2000 with a bachelor's degree in kinesiology—human movement sciences. She received her master's degree in kinesiology with an emphasis in pedagogy from Louisiana State University in 2002. To support this academic pursuit, Elizabeth was selected as a recipient of the Gordan and Mary Can Fellowship. She is a certified physical education, health, special education and biology teacher. After graduating with her master's degree, Elizabeth was a health and special education teacher at West Feliciana High School, while also serving as the assistant coach for volleyball, basketball and softball. Prior to returning to LSU in 2005 to begin her pedagogy doctoral program at Louisiana State University, Elizabeth taught English in Gunmamachi, Japan. While pursuing her doctorate, Elizabeth was the recipient of the Myra Sadker Dissertation Award, Corbett Graduate Summer Research Award, Outstanding Women's & Gender Studies Minor Award, College of Education Lilian Olson Scholarship, and LSU's Woman's Faculty Club Scholarship. Along with the assistance of two professors in the Kinesiology Department, Elizabeth helped establish the LE PAS. This service-learning program was designed to provide organized physical activity for students who were displaced due to the destruction caused by Hurricane Katrina in 2005. During her program of study, Elizabeth has made 13 presentations at national conferences and has had two articles published and two articles accepted for publication. Elizabeth Domangue has recently accepted an Assistant Professor position at San José State University in San José, California.