

PEDAGOGY

Attitudes Toward Physical Education of Female High School Students

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Abstract

*The purpose of this study was to determine the attitudes of female high school students toward PE in selected North Carolina schools. The high schools were conveniently selected to include the Northeast Piedmont urban region of North Carolina. Participants consisted of 102 female students aged 14 to 18 years old who were enrolled in ninth to 12th grade PE classes. The instrument used in the study (High School Students' Attitudes Towards Physical Education) was a 19-item questionnaire developed by Bibik, Goodwin, and Omega-Smith (2007). Data were analyzed with the independent samples *t* test ($p < .05$) level of significance. The results of this study show the attitudes toward PE, the grade averages in PE, the importance of PE in their lives, and the preference for single-gender versus coeducational among female students were significantly different ($p < .05$). Additionally, within the coeducational PE class, 14.5% of the female students preferred being taught in a single-gender PE class, and approximately 24.4% of the female students enrolled in the single-gender PE class preferred a coeducational PE class. This study indicates the importance of creating positive learning environments at the high school level for female students, developing informed teacher strategies, and understanding female students' attitudes toward PE.*

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Physical education (PE) is an important factor in the lives of youth. Through it, they have the opportunity to participate in physical activity (PA), acquire the developmental skills to participate in sports and daily activities of living, and develop a wealth of knowledge about healthy choices. According to the Roslow Research Group (RRG, 2009), most PE programs throughout a child's life are focused on elements such as health-related fitness, motor skills and movement forms, personal and social responsibility/character development, and preparation for sport participation. Once these children reach high school, the primary focus of these programs shifts to just health-related fitness, leading less than half of high school students to exercise 60 min per day (Centers for Disease Control and Prevention [CDC], 2014). In fact, researchers have found only 27% of high school females and 43% of high school males exercise for at least 60 min per day once they reach high school (Healthy People 2020, 2014; Wilkinson & Bretzing, 2011).

The CDC (2012) recently reported 16.9% of adolescents in the United States are obese, and Davy, Harrell, Stewart, and King (2004) found "obesity and cardiovascular diseases are more prevalent in the Southeast as compared with other geographic regions of the United States" (p. 571). Specific to this study, 15.4% of children are obese in North Carolina ("F as in Fat," 2014), yet the CDC (2012) reports 15.4% (boys and girls) in this state do not participate in PA on any day. With the amount of adolescents who are overweight and obese reaching epidemic proportions (Eisenberg, Radunovich, & Brennan, 2012; Ogden et al., 2006), female students' attitudes toward PE must be considered to make PA a major part of their everyday lives when it comes to curriculum choices (Rikard & Banville, 2006). Therefore, the purpose of this study was to examine the attitudes of female high school students toward PE in selected North Carolina schools. Furthermore, the differences between the attitudes of female high school students enrolled in a coeducational setting toward PE and those enrolled in a single-gender setting were examined to help understand the settings, programs, and instruction that adolescent females prefer.

Background

The purpose of "Physical Education is to develop physically literate individuals who have the knowledge, skills, and confidence to

enjoy a lifetime of helpful physical activity” (National Association for Sport and Physical Education, 2014, para.1). Coeducational PE classes began to appear in public schools with the passage of Title IX, a federal statute created to prohibit gender discrimination in educational programs that receive federal financial assistance (Lipka & Wolverton, 2007). Under provisions of Title IX, schools are required to provide an environment conducive to males and females receiving the same opportunities to participate in PE activities (Carpenter & Acosta, 2005). Consequently, this provision has led researchers to explore students’ perceptions of coeducational and single-gender PE in greater depth (Constantinou, Manson, & Silverman, 2009). Specific to this study, we focused on which PE environment, single-gender or coeducational, is more conducive to adolescent females’ learning (Derry & Phillip, 2004).

Coeducational Settings

Since the application of Title IX to PE classes, data have indicated most students believe the benefits of participating in a gender-mixed (coeducational) environment outweigh those derived from a gender-separate (single-gender) format (Carpenter & Acosta, 2005; Hill & Cleven, 2005). This is because students in coeducational classes feel their experiences are more successful when socialization of genders occurs.

However, coeducational PE classes may not be as educationally productive for students as having homogeneous groupings of PE opportunities (Bibik, Goodwin, & Omega-Smith, 2007). When surveyed, females often report being more uncomfortable in this setting (Constantinou et al., 2009). In coeducational PE settings, males dominate and often intimidate females in terms of organizational, spatial, verbal, and pedagogical aspects of lessons (Cockburn, 2001). As a result, females may be at a disadvantage in terms of their potential and attainment.

Chepyator, Russell, and Culp (2007) found females’ participation in PA drops drastically by the time they reach high school. For instance, though females participate in several activities in elementary school (indicated by the number of activities engaged in), by the time they reach middle school, participation often drops by half, and by high school, participation in PE drops even further.

Furthermore, lack of participation in PE or less than optimal experiences in classes limits females' learning and their PA levels across their life span (Azzarito, Solomon, & Harrison, 2006). For coeducational versus single-gender PE classes, females dislike the experience of coeducation more than males, and this increases with age (Cockburn, 2001). Stereotypical gender role expectations seem to be more intense in coeducational classes, causing females to feel more uncomfortable when forced to participate with males (Constantinou et al., 2009). Females then become less active and less successful within PE classes and when engaged in PA outside of PE.

In coeducational PE classes, the number of students is typically higher with a variety of skill levels. The higher the number of students in coeducational classes and the increased variance in skill development, the more difficult it becomes to separate the groups of skills to teach the skills necessary for game play. Females become more reserved about actively participating. Research indicates females spend fewer minutes and a smaller proportion of lesson time in PA than males do (McKenize, Prochaska, Sallis, & LaMaster, 2004). McKenzie et al. (2004) found female-only classes have more time for skill drills and less time for game play than do coeducational classes, and these factors reduce the effect of class gender composition on students' moderate to vigorous PA (MVPA). However, the trade-off is that more time in skill drills reduces PA during lessons. In addition, in large coeducational classes, some instructors find it easier to include substantial time for game play rather than design appropriate skill drills when faced with many skill levels. This leads to the hope that more time participating in game play will increase PA; however, the females' participation levels and skill development still remain low (McKenize et al., 2004), leading to the question of whether coeducational settings versus noncoeducational settings are the determining factor or whether society plays a more influential role in how students perceive the sports they play (Osborne, Bauer, & Sutliff, 2002) than does the PE setting in which they engage.

Most coeducational PE settings typically have a low level of female student participation. However, researchers have found that if an instructor who relates well and understands females' attitudes toward PE provides instruction, participation may increase. Flintoff and Scraton (2001) explored young women's perceptions of and atti-

tudes toward involvement in PA and PE in a coeducational PE class. The results indicate many of the young women enjoyed and were involved in PA, both in and out of school, because they were making active choices about their PA. Also, the data demonstrate teachers who can provide safe and supportive environments, who recognize the often different aspirations and motivations among their pupils, and who listen to their pupils are more likely to be successful than those who subscribe to hierarchical, discipline-based relationships and traditional curricula and pedagogies. In conclusion, even though the settings were coeducational, the females reported their activity level increased with a positive and supportive environment. The females felt comfortable while participating in PE, which is imperative for establishing a foundation of healthy behaviors later in life.

Single-Gender Settings

The ideology that single-gender PE settings result in higher numbers of interactions with teachers, and therefore increased participation opportunities for female students, has gained considerable attention in recent years (Hannon & Ratliffe, 2007). One reason is single-gender settings have higher percentages of academic learning time. According to Derry and Phillip (2004), female students in single-gender PE classes receive more positive learning experiences than their counterparts. They found that engaged skill learning time is significantly higher in single-gender classes than in coeducational classes (Hannon & Ratliffe, 2007). The interactions between teacher and student are also much greater, creating a more positive learning experience for females.

Based on another study, female students have reported teachers expect more from them in single-gender classes than in coeducational classes (Couturier, Chepko, & Coughlin, 2007). In addition, females have stated they have the chance to participate and feel challenged athletically when participating in a single-gender class (Derry, 2002). Adolescent females do not have to contend with the males adolescents' increased developmental abilities or aggressive and dominating play style. As a result, researchers have found single-gender PE classes may be a better learning environment for adolescent females. Females may prefer coeducational PE, but they gain more teacher feedback and have more engaged skill learning time in a gender-separate PE class (Derry & Phillip, 2004).

In conclusion, the importance of PE in the lives of young females has become a major concern, especially regarding coeducational or single-gender settings. Current studies on coeducational and single-gender PE classes have been presented. The outcomes of the studies show that although coeducational PE classes are preferred, males and females also prefer noncoeducational PE in other situations based on the instructional unit being taught. Furthermore, data indicate adolescent females often resist PE. This may be in response to the official curriculum and instruction of PE, intolerable peer relations, and/or dominant cultural messages about femininity. Therefore, gender-segregated classes are seen as an intervention that may increase females' attendance and enjoyment of PE (Olafson, 2002).

Health Factors

The U.S. Department of Health and Human Services (2014) reported decreases in PA among ninth to 12th grade adolescents. This is creating a plethora of issues because a lack of participation in physical activities during adolescence may increase the risk of obesity. Obesity is a growing epidemic in adolescent females (Groth & Morrison-Beedy, 2011). When studied, 32% of adolescent females have been found to be obese or overweight (Ogden et al., 2006) and “this problem is even more pronounced for Black girls, 42% of whom are obese or overweight and 25% obese” (Groth & Morrison-Beedy, 2011, p. 15). This is particularly alarming because data indicate “at least three in four obese teens grow up to become obese adults, which predispose them to serious ailments such as degenerative arthritis, heart disease, stroke and several forms of cancer” (American Academy of Pediatrics, 2003). Furthermore, the CDC (2014) found adolescents who are overweight or obese are more apt to remain so in adulthood than preadolescents aged 10 to 14 years old.

Why is obesity increasing in adolescent females? One theory is “that our children are leading more inactive life styles than in the past” (Eisenberg et al., 2012). Other research supports the supposition that

adolescent girls are at risk for obesity because of factors that include both life circumstances, which are difficult to modify, and lifestyle factors such as poor patterns of sleep, high-fat

diets, and low levels of PA that offer potential for intervention. (Groth & Morrison-Beedy, 2011, p. 16)

Researchers have argued that because of the large amount of time students spend in school during the day, school teachers have a huge influence on addressing this health epidemic, especially in schools with a strong PE program. Story, Kaphingst, and French (2006) noted the quality of PE classes is “crucial to their effect on child and adolescent overweight” (p. 119) because schools can promote good nutrition, PA, and healthy weight among children through healthful school meals and foods, PE programs and recess, classroom health education, and school health.

Hence, female students in high school who are enrolled in PE courses need positive experiences to have successful outcomes. Most of these positive experiences that females are experiencing are determined by the nature of the class, whether it is coeducational or single gender, or if the units taught are conducive to the students’ participation. With obesity and sedentary lifestyles increasing, there needs to be more focus on PE programs to have an inclusive environment (Rikard & Banville, 2006) so students of all ability levels have the opportunity to participate in a PE setting that is comfortable. This would lead to an increased amount of engaged learning time and an increase in PA among adolescent females.

Therefore, the purpose of this study was to determine the attitudes of female high school students toward PE in selected North Carolina schools. We surveyed female high school students enrolled in a coeducational setting and female high school students enrolled in a single-gender setting to determine if there were significant differences in their attitudes toward PE.

Method

Participants

Data collection occurred at two high schools in the Northeast Piedmont urban region of North Carolina. Participants consisted of 102 female students aged 14 to 18 years old who were enrolled in ninth to 12th grade PE classes. Male students were not included in this study. Therefore, the focus of this research was on female students. Females from nine PE classes were surveyed from two PE

class settings and school settings. Six of the PE classes were coeducational ($n = 55$) in a public school and three were single gender ($n = 47$) in a private school.

Instrumentation

The instrument used in the study was the High School Students' Attitudes Towards Physical Education questionnaire (Bibik et al., 2007). The questionnaire was modified from the original within the demographic section by adding race and classification level. Additionally, some questions from the content area were removed because they were irrelevant to this study.

The questionnaire consisted of 19 items (five open-ended questions, 14 Likert-type questions). The questionnaire was organized into the following sections: (a) demographics and personal information; (b) likes, dislikes, and perceived importance of PE; (c) importance of other subject areas; and (d) most and least important activities in the PE curriculum. Validity of the instrument was established through the original questionnaire (Bibik et al., 2007), and the design has been recognized in supporting literature (Fowler, 2002; Thomas, Thomas, & Silverman, 2011). The Cronbach's alpha coefficient of reliability was 0.962.

Procedures

A request to use the questionnaire instrument was granted prior to data collection, and then modifications were made to the questionnaire prior to the pilot test. The modified questionnaire was pilot-tested in a local high school in North Carolina near our location with students in a PE class who were not part of the study. A letter was sent to the school principals and the PE teachers of each school explaining the purpose of the study and asking permission to have the female students enrolled in their PE classes complete the questionnaire. In addition, parental/guardian consent forms were sent home with students who volunteered to participate in the study. The consent forms explained the purpose and procedures of the study.

Fifty-five questionnaires were administered to female students enrolled in a coeducational PE class, and 47 questionnaires were administered to female students in a single-gender PE class with 100% response rate ($N = 102$). Only female students were given the questionnaire because of the national and state data of the high per-

centage of inactivity among female students. PE classes are required for all female high school students according to the Department of Public Instruction in North Carolina (2013).

A number and letter were preassigned on the questionnaires for each of the two settings. Female students who were enrolled in a single-gender PE class retrieved a questionnaire with the letter *A* located in the upper right-hand corner. Female students enrolled in a coeducational PE class received a questionnaire with the letter *B* located in the upper right-hand corner. In addition, the questionnaires were preassigned and created in a booklet form.

Data Analysis

Data were analyzed from the High School Students' Attitudes Towards Physical Education questionnaire using descriptive statistics and an independent samples *t* test ($p < .05$) with the Statistical Package for Social Science (SPSS) 18.0. Means and standard deviations were calculated for the variables in the public school coeducational PE classes and in the private school single-gender classes. Descriptive statistics were used to summarize the numbers and percentages of (a) the ethnicity of female students enrolled in the PE classes; (b) the classifications and overall grade averages of the female students enrolled in the PE classes; (c) the class preferences of the female students; (d) the female students' attitudes toward likes, dislikes, and perceptions of enjoyment in the PE classes; and (e) the independent samples *t* test and means of female students enrolled in the PE classes. Additionally, an independent *t* test was used to determine if there was a significant difference in females' attitudes toward PE in coeducational PE in a public school versus single-gender PE in a private school.

Results

Six ethnic groups were represented in the single-gender and coeducational PE classes (see Table 1). Approximately 83% of the students in the single-gender PE class were Caucasian ($n = 39$) compared with 25.5% in the coeducational PE class. Additionally, 52.7% ($n = 29$) of the female students in the coeducational PE class were African American, 9.1% ($n = 5$) were Multiracial, and 12.7% ($n = 7$) were Hispanic. In the single-gender PE class, 8.5% ($n = 4$) of the female students were African American, 2.1% ($n = 1$) were American

Indian, 2.1% ($n = 1$) were Multiracial, 2.1% ($n = 1$) were Hispanic, and 2.1% ($n = 1$) were Asian (Table 1).

Approximately 100% ($n = 47$) of female students in the single-gender PE class reported having an A grade average in PE. However, 64.2% ($n = 34$) of the female students in the coeducational PE class reported having an A grade average, 20.8% ($n = 11$) reported having a B grade average, and 15% ($n = 8$) reported having a C grade average in PE. Two of the female students in the coeducational PE class did not respond to this question (see Table 1).

Table 1

Ethnicity of Female High School Students in Single-Gender and Coeducational Physical Education Classes

Race	Private school single gender		Public school coeducational	
	N	%	N	%
American Indian	1	2.1	0	0.0
Multiracial	1	2.1	5	9.1
Hispanic	1	2.1	7	12.7
Asian	1	2.1	0	0.0
Caucasian	39	83.1	14	25.5
African American	4	8.5	29	52.7
Total	47	100.0	55	100.0

Of female high school students in single-gender PE classes, 97.9% were ninth graders ($n = 46$) and one (2.1%) was a 12th grader. No female high school students were in the 10th and 11th grades in the single-gender PE group (see Table 2). Approximately 70.9% of the students in the coeducational PE classes were ninth graders ($n = 39$), 16.4% were 10th graders ($n = 9$), 3.6% were 11th graders ($n = 2$), and 9.1% ($n = 4$) were 12th graders (see Table 2). Approximately 66.7% of the female students in the single-gender PE class and 70.3% of the female students in the coeducational PE class responded that physical educators should teach more games. Approximately 11.1% of females in the single-gender PE class and 16.2% of females in the coeducational PE class indicated physical educators should allow more time in PE classes. Female students in the single-gender PE

class (16.7%) and 2.7% of the female students in the coeducational PE class stated they should be allowed to assist in choosing the health units to be taught (see Table 2). Eleven students in the single-gender PE classes and 18 students from the coeducational PE classes did not respond to this question.

Table 2

Percentages of Classification and Grade Averages of Female High School Students in Single-Gender and Coeducational Physical Education Classes

Group	Classification	Number of participants	
		Number of participants	%
Single-gender	9th	46	97.9
Single-gender	12th	1	2.1
Total		47	100.0
Coeducational	9th	39	70.9
Coeducational	10th	9	16.4
Coeducational	11th	2	3.6
Coeducational	12th	5	9.1
Total		55	100.0

Grade average	Single gender		Coeducational	
	N	%	N	%
A	47	100.0	34	64.2
B	0	0.0	11	20.8
C	0	0.0	8	15.0
Total	47	100.0	53	100.0

Descriptive statistics are shown in Table 3, and 75.6% of the female students ($n = 34$) enrolled in the single-gender PE class preferred a single-gender PE class. Approximately 24.4% ($n = 11$) of the female students in the single-gender PE class preferred a coeducational PE class. Two of the students did not respond. Furthermore, approximately 85.5% ($n = 47$) of the female students enrolled in coeducational PE preferred a coeducational PE class. However, 14.5%

($n = 8$) of the female students in the coeducational PE class preferred a single-gender PE class. Two students in the single-gender PE class did not respond.

Table 3
Class Preference

Characteristic	Single-gender preference		Coeducational preference	
	<i>N</i>	%	<i>N</i>	%
Single-gender	34	75.6	8	14.5
Coeducational	11	24.4	47	85.5
Total	45	100.0	55	100.0

Several of the female students believe playing games and having fun in PE classes is important (37.8% of the female students in the single-gender class and 26.9% of the female students in the coeducational PE class; see Table 4). Also, 33.3% of female students in the single-gender PE class and 7.7% from the coeducational PE class also enjoy PE because it is a way of taking a break from other classes. In addition, 8.9% of students in the single-gender PE class and 26.9% in the coeducational PE class mentioned daily exercise as a characteristic of PE. Additionally, the majority of the female students (46.5%) reported they would like to have PE for the entire school year. Only 3% of the female students indicated they would like to never have PE or to only have it one period (16.2%) of the school year. Two students in the single-gender PE class and three students from the coeducational PE class did not respond.

Over 52 (52.5%) of the female students in the single-gender PE class and 36.4% in the coeducational PE class indicated how becoming sweaty was the least liked concept of PE. In addition, 22.5% of the female students in single-gender and 43.2% of the female students in the coeducational PE classes reported they disliked the conditioning aspects and health units of PE. Approximately 17.5% of the students in the single-gender and 15.9% of the female students in the coeducational PE classes least liked the competitiveness among the students during PE. In addition, 7.5% of the students in

the single-gender class and 4.5% of the students in the coeducational PE class disliked performing physical activities in front of classmates (see Table 4). Seven students from the single-gender and 11 students from the coeducational PE classes did not respond.

Table 4

Likes, Dislikes, and Perceptions of Enjoyment of Female High School Students While Participating in Single-Gender and Coeducational Physical Education Classes

Characteristic	Single gender		Coeducational	
	N	%	N	%
Likes				
Play games/have fun	17	37.8	14	26.9
Take a break from class	15	33.3	4	7.7
Being with friends	4	8.9	11	21.2
Fitness maintained	5	11.1	9	17.3
Daily exercise	4	8.9	14	26.9
Total	45	100.0	52	100.0
Dislikes				
Conditioning and health units	9	22.5	19	43.2
Getting Sweaty	21	52.5	16	36.4
Competitiveness among students	7	17.5	7	15.9
Performing physical activities in front of classmates	3	7.5	2	4.5
Total	40	100.0	44	100.0
Perceptions of Physical Education and Enjoyment				
More games	24	66.7	26	70.3
Choice of health units	6	16.7	1	2.7
More time in PE	4	11.1	6	16.2
Change nothing	2	5.6	4	10.8
Total	36	100.0	37	100.0

Results of the independent samples *t* test are shown in Table 5. Results indicate a significant difference in six areas at the .05 level. The female students who participated were ninth graders. Results indicate a significant difference in classification in PE among the students in the single-gender classes, $M = 1.06$, $SD = .000$, $t(101) = -3.14$, $p < .002$, and the coeducational classes, $M = 1.55$, $SD = .940$, $t(101) = -3.14$, $p < .001$; the grade average in PE among students in the single-gender classes, $M = 1.00$, $SD = .000$, $t(100) = -4.90$, $p < .000$, and the coeducational classes, $M = 1.56$, $SD = .750$, $t(100) = -4.90$, $p < .000$; perceived importance of PE among students in the single-gender classes, $M = 3.17$, $SD = 1.070$, $t(98) = -2.38$, $p < .020$, and the coeducational classes, $M = 3.72$, $SD = 1.215$, $t(98) = -2.38$, $p < .019$; the characteristics the students liked about PE classes among students in the the single-gender classes, $M = 2.20$, $SD = 1.307$, $t(95) = -3.04$, $p < .003$, and the coeducational classes, $M = 3.10$, $SD = 1.563$, $t(95) = -3.04$, $p < .003$; PE preference of students in the single-gender classes, $M = 1.78$, $SD = .435$, $t(100) = 7.50$, $p < .000$, and the coeducational classes, $M = 1.16$, $SD = .356$, $t(100) = 7.50$, $p < .000$; and how often PE should be offered in the single-gender, $M = 1.49$, $SD = .787$, $t(97) = -3.05$, $p < .003$, and the coeducational, $M = 1.98$, $SD = .812$, $t(97) = -3.05$, $p < .003$, PE settings in this study.

Additionally, within the coeducational PE class, 14.5% of the female students preferred being taught in a single-gender PE class. And approximately 24.4% of the female students enrolled in the single-gender PE class preferred a coeducational PE class.

Discussion

The female students enrolled in the coeducational PE class (70.9%) and single-gender PE class were largely ninth graders (97.9%), which could have had a significant effect on the overall attitude toward PE of the students in this study. Therefore, it is critical that adjustments to teaching strategies continue in PE, whether classes are coeducational or single gender. A significant difference was found in the perceived importance of PE among students in the coeducational PE classes, $t(98) = -2.38$, $p < .019$, and single-gender PE classes, $t(98) = -2.38$, $p < .020$, and this indicates teaching strategies at these two schools may not be working and should be adjusted.

Table 5

Independent Samples t Test and Mean of Female High School Students in Single-Gender and Coeducational Physical Education Classes

Variable	Single-gender (<i>n</i> = 47)			Coeducational (<i>n</i> = 55)		
	<i>M</i> (<i>SD</i>)	<i>t</i>	<i>p</i>	<i>M</i> (<i>SD</i>)	<i>t</i>	<i>p</i>
Classification	1.06 (.438)	-3.14	.002*	1.55 (.94)	-3.14	.001*
Race	4.85 (.850)	-0.74	.457	5.05 (1.37)	-0.74	.440
Grade Average in PE	1.00 (.000)	-4.90	.000*	1.56 (.75)	-4.90	.000*
Importance of PE	3.17 (1.07)	-2.38	.020*	3.72 (1.21)	-2.38	.019*
Like About PE	2.20 (1.30)	-3.04	.003*	3.10 (1.56)	-3.04	.003*
Dislike About PE	2.10 (1.10)	1.50	.137	1.82 (.870)	1.50	.137
Consider Helpful in PE	1.83 (1.06)	1.16	.251	1.55 (.978)	1.16	.253
Make PE Fun	1.72 (.909)	-1.39	.167	2.09 (1.10)	-1.39	.160
Single-Gender or Coed Preference	1.78 (.435)	7.50	.000*	1.16 (.356)	7.50	.000*
Benefits From PE After High School	3.57 (.695)	.63	.531	3.44 (1.05)	0.63	.548
How Often PE Should Be Offered	1.49 (.787)	-3.05	.003*	1.98 (.812)	-3.05	.003*

Note. PE = physical education.

**p* < 0.05.

Another important variable in PE is for administrators and/or teachers to allow female students to choose whether they would prefer a coeducational or single-gender PE class. Prior to the 1970s, most PE classes were single gender; however, with Title IX and other social changes, coeducational PE classes have become more common (Bibik et al., 2007; Carpenter & Acosta, 2005). In most public schools, the PE classes are coeducational, whereas the PE classes in the majority of private schools are single gender. When the female students were asked which PE class they preferred, some students responded toward a coeducational PE class when playing games such as capture the flag or ultimate Frisbee and toward a single-gender PE class when units such as swimming or yoga are being taught. These PE units are similar to the results found in Hill and Cleven (2005) that indicate the activities female students prefer include swimming, volleyball, contemporary dance, aerobics, and gymnastics, among others. Therefore, it is recommended that when feasible, female students be given a choice in regard to the type of PE class they prefer.

Another concept that should be considered is increasing the number of elective PE offerings for juniors and seniors because 97.9% of students in the single-gender PE class and 70.9% in the coeducational PE class were ninth graders. Allowing more PA options for junior and senior female students will provide a gateway for an active, healthy lifestyle into adulthood. Based on this research, many of these students may choose sports or games and others may choose fitness options (Bibik et al., 2007). Through this option, teachers have more opportunities to help female students remain physically active. To continue improving PE programs, administrators and teachers should include students' perceptions and attitudes toward curriculum choices. Pedagogically, PE classes should be grouped by skill rather than gender. This would allow students to learn more efficiently and to improve developmental skills necessary to participate in several sporting activities. Furthermore, it would lead to an increase in PA, which is imperative for good health and for creating a foundation of healthy behavior.

Conclusions

This research was limited specifically to female students in an urban setting. Although much emphasis has been placed on students' attitudes toward PE, there needs to be focus on the relationship

among attitudes, outcomes, and fitness levels. Statistical data indicate there is a decrease in PA and an increase in obesity in female adolescents (CDC, 2012). Therefore, the demands for PE need to increase specifically for students in Grades 9 to 12. Another recommendation to future researchers is to administer the High School Students' Attitudes Towards Physical Education questionnaire (Bibik et al., 2007) to (a) various ethnic groups in the female student populations in public schools in Grades 9 to 12, (b) students in Grades 9 to 12 who participate in an extracurricular sport and those who do not participate in an extracurricular sport, (c) males and females enrolled in Grades 9 to 12 in single-gender and coeducational PE settings, and (d) female students in Grades 9 to 12 enrolled in PE classes in rural high schools.

In conclusion, with obesity on the rise, it is imperative to continue to push for PA and PE within school systems. This study shows the importance of positive learning environments, teacher strategies, and the role of students' attitudes toward actively participating in PE. By obtaining students' feedback and incorporating their ideas in the PE curriculum, administrators and teachers may have the opportunity to continue helping female students become healthy and physically active. Building a healthy view of PA at this age through a more inclusive curriculum will provide an imperative foundation for females to continue being healthy and physically active as adults. Female students must continue to be educated regarding the benefits of PA and achieving a healthy and physically active adult lifestyle.

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