

## Student's Preferences Regarding Coed Versus Non-Coed Physical Education Classes

### Öğrencilerin Karma ve Karma Olmayan Beden Eğitimi Dersine Karşı Tercihleri

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#### *Abstract*

The purpose of this study was to determine primary school students' (6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup> grades) perceptions of coed versus non-coed physical education classes. The sample consisted of 530 primary school students from both public and private schools in Ankara. The data was collected by using a questionnaire which was developed by researchers (Treanor, Graber, Housner, & Wiegand, 1998) to measure the primary school students' perceptions of coeducational and same-sex physical education classes. Most of the students stated that they like physical education classes, try hard, follow rules, and also behave well in physical education lessons. The responses related to their skills, strength, endurance, flexibility levels, and weight were varied among students. Boys rated themselves as having high levels of skill, strength and endurance; whereas girls were rated as being more sensitive, fragile, and less skilled. Similarly, students preferred coed physical education classes in some situations and preferred same sex physical education classes in other situations. It is suggested that additional research is needed for this area because of the obvious complexity and importance of the issue.

*Keywords:* Physical education, coed education, non-coed education

#### *Öz*

Bu çalışmanın amacı ilköğretim öğrencilerinin (6., 7., 8. sınıf) karma ve farklı cinsiyet grupları ile işlenen beden eğitimi derslerine karşı tutumlarını belirlemektir. Çalışmaya Ankara ili genelinde bulunan devlet ve özel ilköğretim okullarda okuyan 530 öğrencisi katılmıştır. Veriler, ilköğretim öğrencilerinin karma ve farklı cinsiyet grupları ile işlenen beden eğitimi derslerine karşı tutumlarının belirlenmesi amacıyla araştırmacılar (Treanor, Graber, Housner, & Wiegand, 1998) tarafından geliştirilen bir anket yardımı ile toplanmıştır. Çalışma sonucunda elde edilen bulgulara göre öğrencilerin büyük bir çoğunluğunun beden eğitimi dersinden hoşlandıkları, derslerde ellerinden gelen çabayı gösterdikleri, kurallara uydukları ve aynı zamanda iyi davranışlar sergiledikleri belirlenmiştir. Kız ve erkek öğrencilerin spor becerileri, güç, dayanıklılık, esneklik ve kilo ile ilgili belirttikleri görüşler farklılık göstermiştir. Erkek öğrenciler kendilerini daha becerikli, güçlü ve dayanıklı görürken; kız öğrenciler kendilerini daha hassas, kırılgan ve daha az becerikli olarak tanımlamaktadırlar. Benzer şekilde ilköğretim öğrencilerinin karma ve farklı cinsiyet grupları ile işlenen beden eğitimi dersine karşı olan tutumları da bazı etkenlere bağlı olarak değişiklik göstermiştir. Konunun karmaşıklığı ve önemi açısından çeşitli nitel ve nicel destekleyici çalışmaların yapılması önerilmektedir.

*Anahtar sözcükler:* Beden eğitimi, karma eğitim, karma olmayan eğitim

## Introduction

Physical education (PE) is an integral part of the total education. The aim of PE is not only to develop the physical skills of children, but also to assist their psychological and sociological development. In other words, the main aim is to support the development of the whole child (Docheff, 1996). Especially, it is known that peer interaction and communication for the psychosocial development of children play a major role in assisting the child to adapt the physiological and developmental changes that occur within his or her body during the adolescent period (Crawford, 1996). From this point of view, physical education provides a socially integrated environment for all students. However, physical educators prefer single-sex physical education classes, that provide students with positive learning environments, because of the developmental differences in adolescent girls and boys (Davis, 1999).

Research on the effectiveness of coed versus non-coed physical education has shown different findings. Treanor, Graber, Housner and Wiegand (1998) investigated the effects of coeducational and same-sex physical education classes on the students' learning. According to their research, students received more practical opportunities, learned more, cooperated better, and played team and individual sports better in coed physical education classes. In addition, Griffin (1984) reported that students were influenced by their own skill level and while skilled girls felt more secured and performed well, less skilled boys felt insecure in coed PE classes. Another study indicated that if the main aim was skill development, co-educational PE class did not achieve this. However, if the aim was social development, they did (McCarty, 1996). Docheff (1996) noted that it was apparent that coeducational classes play an essential role in the physical, social, and cognitive development of students.

Moreover, students' perceptions of coeducational and same-sex physical education classes are another issue for research studies and these studies have indicated various findings. For example, students' perceptions depend largely upon the situation at hand (Osborne, Bauer & Sutliff, 2002). Lirgg (1993) indicated that boys in coed classes were more confident in their ability than

those in non-coed physical education classes and while boys described success as a skill, girls defined it as doing their utmost in physical education. In addition, boys limited the girls' abilities in coeducational classes (Lirgg, 1993). As a result, the motivation of girls was found to decrease in coeducational classes (Bogatay, 2002). Similarly, Hutchinson, (1995) noted that girls were more likely to perceive themselves as incapable in coed physical education classes. Some teachers also considered girls to be less skillful than most boys in some games such as basketball or volleyball (Griffin, 1984).

Current studies have shown that both coed and non coed physical education classes have strengths and weaknesses. A better understanding of students' perceptions as a first step provides valuable information for developing positive learning environments for students in physical education classes. Based on that premise, the purpose of this study was to determine the primary school students' preferences regarding coed versus non-coed physical education classes.

## METHOD

Data was collected during the fall semester of the 2003-2004 academic year. The sample consisted of 530 primary school students from both public and private schools in Ankara. The public and private schools were randomly selected by the researchers from all the primary schools in Ankara. Official permission for the study was obtained from the Ministry of National Education before the study was conducted. The researchers distributed and collected the questionnaires before the physical education classes began.

The original questionnaire was developed by researchers (Treanor, Graber, Housner, & Wiegand, 1998) to measure primary school students' perceptions of coeducational and same-sex physical education classes. It includes three sections: demographics (related to the age, grade, & gender of the students), perceptions (related to the students' perceptions of their level of skill, fitness, effort, and enjoyment in physical education classes), and their preferences (related to students' preferences for coeducational and same-sex physical

education). Students responded to items on a 4 point Likert-type scale. The scale points ranged from 1 (strongly disagree) to 4 (strongly agree).

Before the main study, the questionnaire was translated into Turkish by experts. Also the questionnaire was field-tested for clarity of the items in a sample of students enrolled in physical education classes. According to the students' suggestions and comments, corrections and adjustments were made without damaging the original form of the questionnaire. The reliability analysis was also conducted in a different sample of students (n=78). The questionnaire was found to have good internal consistency, with a Cronbach alpha coefficient reported of  $\alpha=0.78$  (perception items) and  $\alpha=0.86$  (preference items).

The findings of the study were analyzed by using descriptive statistics including the number and percentages of the responses.

### Findings

A total of 530 students completed the questionnaire. Table 1 provides the demographic variables of the participants.

Table 1.  
*Descriptive Characteristics of the Participants*

	Public School (n=6)		Private School (n=5)		Total
	n	%	n	%	n
Gender					
Girls	146	58	106	42	252
Boys	160	57.5	118	42.5	178
Grade Level					
6 <sup>th</sup>	79	45.2	96	54.8	175
7 <sup>th</sup>	153	66.5	77	33.5	230
8 <sup>th</sup>	74	59.2	51	40.8	125

Based on the students' responses on self-perceptions of their skill, fitness, effort, and enjoyment in physical education, the descriptive data were presented in Table 2. As can be seen from Table 2 the responses of students from public and private schools have different results for each of the items. Most of the students stated that they like physical education classes, try hard, follow rules, and also behave well in physical education lessons. Similarly, the responses related to their skills, strength,

endurance, flexibility levels, and weight were varied among students. Descriptive statistics for students' responses on preferences for coeducational or same sex physical education classes were given in Table 3. Results indicated that both public and private school students' responses varied for each of the items and situations. Students preferred coed physical education classes in some situations and preferred same sex physical education classes in other situations. Descriptive statistics for boys and girls responses to the self-perception items were given in Table 4. According to the results, students generally like physical education lessons. Boys perceive themselves as having good sports skills, more muscular development and a higher level of endurance and flexibility than girls. Also most of the students from both genders perceived themselves as not overweight.

The descriptive statistics of girls' and boys' preferences for coeducational or same sex physical education classes can be seen in Table 5. The responses to the items related to the preferences for coeducational or same sex physical education classes show that boys and girls have different ideas.

### Discussion

The purpose of this study was to determine the primary school students' perceptions of coed versus non-coed physical education classes. In general, the participants of the study like physical education, try hard, follow rules, and also behave well in physical education classes. It can be concluded from the students' responses that they seem to enjoy participating in physical education. This may be because their physical education classes provide them with the chance to socialize and have fun (Hastie, 1998). According to self-perceptions responses of students, boys rated themselves as having higher levels of skill, strength and endurance than girls. The findings were consistent with a study by Wright (1996). Wright (1996) investigated students' perceptions about gender with regard to physical description. It was also founded that girls rated themselves as more sensitive, fragile and less skilled than the boys. Additionally, boys rated themselves as strong, competitive and having high levels of skills.

Table 2.  
Descriptive Data for Public and Private School Students' Responses on Self-Perception Items

Items*	Public Schools								Private Schools							
	a		b		c		d		a		b		c		D	
	n	%	n	%	n	%	n	%	n	%	n	%	N	%		
1	215	70.2	78	25.5	9	2.9	4	1.3	154	68.7	64	29	3	1.3	3	3.1
2	175	57.1	112	36.6	14	4.57	5	1.6	113	50.4	91	44.6	15	6.6	5	2.2
3	155	50.6	130	42.4	16	5.2	5	1.6	103	45.9	104	46.4	12	5.3	5	2.2
4	121	39.6	138	45.2	42	13.7	4	1.3	108	48.2	79	35.2	33	14.7	4	1.7
5	86	28.1	126	41.1	75	24.50	19	6.2	79	35.2	74	33.0	56	25	15	6.6
6	121	39.5	149	48.7	29	9.4	7	2.2	104	46.4	86	38.4	28	12.5	6	2.6
7	84	27.4	123	40.1	84	27.4	15	4.9	57	62.9	93	41.5	52	23.2	22	9.8
8	16	5.2	42	13.7	93	30.3	155	50.6	12	5.3	42	18.7	71	31.7	99	44.2

\*Items

1= I like physical education

2= I try hard in physical education

3= I follow rules and behave well in physical education

4= I have good sport skills in physical education

5= I have a good level of muscular strength

6= I have a good level of endurance

7= I have good flexibility

8= I am overweight

a= Strongly agree

b= Agree

c= Disagree

d= Strongly disagree

Table 3.

Descriptive data for public and private school students' responses on preferences for coeducational or same sex physical education classes

Items*	Public Schools						Private Schools					
	a		b		c		a		b		C	
	n	%	n	%	n	%	n	%	n	%	n	%
9	135	44.1	80	26.1	91	29.7	73	32.5	81	36.1	70	31.2
10	130	42.4	93	30.3	83	27.1	65	29.0	89	39.7	70	31.2
11	105	34.3	123	40.1	78	25.4	66	29.4	104	46.4	54	24.1
12	158	51.6	49	16.0	99	32.3	94	41.9	43	19.2	87	38.8
13	141	46	71	23.2	94	30.7	70	31.2	69	30.8	85	37.9
14	104	33.1	83	27.1	119	38.8	75	33.4	64	28.5	85	37.9
15	138	45.1	86	28.1	82	26.8	70	31.2	84	37.5	70	31.2
16	134	43.8	95	31	77	25.1	66	29.4	86	38.4	72	21.5
17	132	43.1	79	25.8	95	31	75	33.5	78	34.8	71	31.7
18	144	47	78	25.5	84	27.4	63	28.1	86	38.4	75	33.4
19	147	48	88	28.7	71	23.2	71	31.7	86	38.4	67	29.9
20	112	36.6	102	33.3	92	30	63	28.1	84	37.5	77	34.3

\*Items

9= I like physical education better when boys and girls are:

10= I play and perform skills better in physical education when boys and girls are:

11= I get more turns to play or practice in physical education when boys and girls are:

12= I am most afraid that someone might get hurt in physical education when boys and girls are:

13= I follow rules and behave better when boys and girls are:

14= I try to think of ways to get out of physical education most when boys and girls are:

15= I try harder in physical education when boys and girls are:

16= I learn more in physical education when boys and girls are:

17= I cooperate with other students better in physical education when boys and girls are:

18= I compete harder when boys and girls are:

19= I like playing team sports like football, basketball, soccer, volleyball, and softball better when boys and girls are:

20= I like playing individual sports like badminton, golf, tennis, bowling, track, and so on, when boys and girls are:

a= in the same class

b= in different classes

c= in the same or different classes; it doesn't really matter



Table 4.  
Descriptive Data for Boys' and Girls' Responses for Self-Perception Items

Items	Girls								Boys							
	a		b		c		d		a		b		c		D	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1	148	58.7	92	36.5	10	3.9	2	0.8	221	79.5	50	17.9	2	0.7	5	1.8
2	109	43.2	123	48.8	18	7.1	2	0.7	179	64.3	80	28.7	11	3.9	8	2.8
3	117	4.6	120	47.6	11	4.3	4	1.5	141	50.7	114	41	17	6.1	6	2.1
4	74	29.4	115	45.8	57	22.7	5	1.1	155	55.7	102	36.7	18	6.5	3	1
5	43	17	86	34.1	97	38.5	26	10.3	122	43.8	114	41	34	12.2	8	2.8
6	72	28.5	130	51.5	41	16.2	9	3.5	153	55	105	37.7	16	5.7	4	1.4
7	59	23.4	111	44	68	26.9	14	5.5	82	29.5	105	37.7	68	24.4	23	8.2
8	10	3.9	36	14.2	79	31.3	127	50.4	18	6.4	48	17.2	85	30.5	127	45.6

Table 5.  
Descriptive Data for Boys' and Girls' Responses on Preferences for Coeducational or Same Sex Physical Education Classes

Items	Girls						Boys					
	a		b		c		a		b		C	
	n	%	n	%	n	%	n	%	n	%	n	%
9	86	34.1	77	30.5	89	35.3	122	43.8	84	30.21	72	25.9
10	59	23.4	106	42	87	34.5	136	48.9	76	27.3	66	23.7
11	67	26.5	115	45.6	70	27.7	104	37.4	112	40.2	62	22.3
12	115	45.6	38	15	99	39.2	137	49.2	54	33	87	31.3
13	81	32.1	65	25.8	106	42	130	46.7	75	26.9	73	26.2
14	89	35.3	61	24.2	102	40.4	90	32.3	86	30.9	102	36.7
15	79	31.3	83	32.9	90	35.7	129	46.4	87	31.3	62	22.3
16	74	29.3	90	35.7	88	34.9	126	45.3	91	32.7	61	21.9
17	82	32.5	80	31.7	90	35.7	125	44.9	77	27.7	76	27.3
18	77	30.5	83	32.9	92	36.5	130	46.7	81	29.1	67	24.1
19	92	36.5	86	34.1	74	29.3	126	45.3	88	31.6	64	23
20	75	29.7	95	37.7	82	32.5	100	35.9	91	32.7	87	31.3

Although students have preconceived ideas of their own physical abilities and the abilities of the opposite sex, coeducational physical education is an opportunity to enjoy physical education together for boys and girls (Hutchinson, 1995). Specifically, physical educators are responsible for providing such a flexible environment where both genders have a chance to develop self-esteem and their physical abilities (Griffin, 1984).

In general, students' preferences in the present study depended largely upon the situation. In fact, the boys and girls have different ideas regarding preferences for coeducational or same sex physical education classes. Not surprisingly, with respect to the type of school, both public and private school students' responses varied for

each of the items and situations. Students preferred coed physical education classes in some situations and preferred same sex physical education classes in other situations. These differences may be explained by having various self-perceptions, beliefs and previous experiences of physical education. Moreover, their preferences could be influenced by their own physical abilities (Treanor et al., 1998). Another reason may be due to the students participating in coeducational physical education classes and having no experience of single sex PE classes. For this reason, they may not be able to adequately compare coed PE with single sex PE classes. However, there is a clear need for qualitative studies of students' perceptions of coed versus non-

coed PE classes in order to determine the factors affecting students' preferences.

It should be noted that the majority of research studies on coed versus non-coed PE are concerned with achievement levels in physical education. Clearly, information about the students' preferences is significantly necessary for coaches, teachers and administrators to create a positive learning environment where students feel safe. In addition, students' perceptions affect the students' level of participation in physical education. Although students' preferences were different for some situations in the present study, it is suggested that coed physical education may have the potential to provide a socially integrated environment for students. Furthermore, physical education classes help students to learn and appreciate the differences between girls and boys and the uniqueness of each individual (Holiday, 1999). On the other hand, single-sex physical education classes have the potential to increase the participation levels of students in the class (Derry & Phillips, 2004). In the Physical Educators' handbook (MEB, 2000), it is recommended that PE classes should be single sex. In fact, the best way to give physical education may not be clearly identified without research that examines all the aspects of coed and non-coed PE classes (Lirgg, 1993).

### Conclusion and Recommendations

This study is the first attempt to determine students' perceptions of coed versus non-coed PE classes in primary schools in Ankara. Based on the findings, it is recommended that students' perceptions of themselves should be considered while preparing the physical education classroom settings. Physical education teachers should be aware of the effect of gender differences physically, psychologically and cognitively in order to ensure the maximum participation of all students. In particular, during the period of adolescence, students should be provided with comfortable activities that they will enjoy and participate in together.

It is also suggested that additional research is needed, not only because of the obvious complexity and the importance of the issue but also because of the limited generalizability of the findings.

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