

## Attitudes toward physical education and class preferences of Turkish secondary and high school students

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**ABSTRACT.** The aims of this study was to investigate attitudes toward physical education and class preferences of Turkish secondary and high school students related to gender and age. The participants were 302 female ( $M_{age} = 13.11 \pm 0.79$ ) and 332 male ( $M_{age} = 13.14 \pm 0.69$ ) students from secondary school education aged 12 to 14 and 290 female ( $M_{age} = 16.48 \pm 0.86$ ) and 316 male ( $M_{age} = 16.42 \pm 0.90$ ) student from high school aged 15 to 17. A total of 1240 students voluntarily participated in this study. The Attitudes Toward Physical Education Scale (ATPES) was applied. ANOVA was used to determine differences in attitude toward PE between students from secondary and high schools and between girls and boys. In order to test differences in PE class preferences of students with regard to school context and gender, chi square analysis was conducted. Men scores of ATPES for secondary school and high school girl and boy students were determined 3.95 point, 4.01 point, 3.40 point and 3.77 point, respectively. Generally of secondary school students (%66.6) preferred coed physical education class, while generally of high school students (%69) preferred single-sex physical education class. This research verifies that attitudes towards physical education and PE class preferences change according to gender and age.

**Key Words:** physical education, attitude, class preference

### SUMMARY

**Purpose and significance:** The aims of this study was to investigate attitudes toward physical education and class preferences in Turkish secondary and high school students related to gender and age. In spite of the growth in the studies on the effectiveness of PE, sport science literature that have investigated students' attitudes toward PE and on PE class preferences according to age and gender are limited.

**Methods:** The study was conducted during the 2006-2007 fall semester. Participants consisted of 1240 students from seven secondary and six high general schools of Bursa/Turkey. In this study, coeducational secondary and high schools were selected. The participants were 302 girls ( $M_{age} = 13.11 \pm 0.79$ ) and 332 boys ( $M_{age} = 13.14 \pm 0.69$ ) aged 12 to 14 from secondary education schools and 290 girls ( $M_{age} = 16.48 \pm 0.86$ ) and 316 boys ( $M_{age} = 16.42 \pm 0.90$ ) aged 15 to 17 from high schools. Two data collection instruments were administered. In the first section of the first personnel information, participants provide demographic related information such as age, grade, and gender. In the second section participants were asked: "Which PE class do you prefer? Coed PE or Single sex PE." The second instrument is the Attitude Toward PE Scale for Turkish students.

**Results:** Findings of this study indicated a significant gender difference in high school students attitudes toward PE ( $F = 29.361$ ;  $p < 0.01$ ). The attitude mean scores of boys ( $M = 3.77$ ) were higher than those of girls ( $M = 3.40$ ). Whereas secondary school girl and boys students scores on the Attitude Toward PE Scale were similarly ( $F = 2.158$ ;  $p > 0.05$ ). The attitude scores of secondary school boys and girls respectively was ( $M = 4.01$ ) and ( $M = 3.95$ ). In addition, the attitude scores of secondary school boys ( $M = 4.01$ ) were significantly higher ( $F = 26.245$ ;  $p < 0.05$ ) than those of high school boys ( $M = 3.77$ ), and the attitude scores of secondary school girls ( $M = 3.95$ ) were significantly higher ( $F = 33.752$ ;  $p < 0.05$ ) than those of high school girls ( $M = 3.40$ ). In order to test differences in PE class preferences of students with regard to school context and gender, chi square analysis was conducted. Significant differences in PE class preferences were found between students from secondary and high schools ( $\chi^2 = 62.634$ ;  $p < 0.05$ ). Most of the students from secondary schools (66.6%) preferred single-sex PE, whereas nearly most of the students from high schools (69%) preferred coed PE.

**Discussion and Conclusions:** This research verifies that attitudes towards physical education and PE class preferences change according to gender and age. Secondary school students show more positive attitudes towards physical education than high school students. Boys show more positive attitudes than girls. In addition secondary school students preferred single-sex PE, whereas high school students preferred coed PE. In order to improve the attitudes of girls towards physical education, Ministry of National Education have to make some changes in physical education course curriculum. This change has to be from competitive physical education course model to a model that encompasses life-time sport, health, physical fitness, and well-being. Physical education course curriculums should be re-arranged to enable students to obtain necessary knowledge, skills and attitudes for a healthy and happy daily life. Moreover, all students must have the confidence and skills to continue physical activities in their future lives.

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## INTRODUCTION

In the last years, the number of researches studying attitudes of students to physical education in schools have increased (Van Wersch, Trew, Turner, 1992; Carlson, 1995; Ennis, 1996; Portman, 1995; Koca, Aşçı, & Demirhan, 2005). Five aspects of physical education (PE) were identified, and examined in relation to pupils' interest. These aspects were PE connotation, PE status, PE teacher, PE curriculum, and adolescent disturbances in relation to the PE lesson (Van Wersch et al., 1992).

Since gender and age play an important role in attitudes towards physical education (PE), attitudes of girls and boys in different ages were compared in many researches (Colley, Berman, Millingen, 2005; Folsom-Meek, 1992; Smoll & Schultz, 1980, Birtwistle & Brodie, 1991; Hicks, Wiggins, Crist & Moode, 2001). Boys and girls have different patterns of sports participation (Scully & Clarke, 1997; Koca et al., 2005). Boys prefer team sports and masculine sports, especially soccer, more than girls, however girls prefer individual and aesthetic sports and physical education activities (Scully & Clarke, 1997; Folsom-Meek, 1992; Smoll & Schultz, 1980; Birtwistle & Brodie, 1991; Hicks et al., 2001). The most feminine sports are those with a strong aesthetic component, such as figure skating, gymnastics, and synchronized swimming, which do not compromise the stereotypes of feminine behavior and appearance. The most masculine sports entail bodily contact, strength, or high risk and include boxing, rugby, soccer, and motor sports (Colley et al., 2005).

Sport traditionally has been a domain of male achievement, and gender differences in sport participation have been the subject of research since the 1970s. However, despite the passage of several decades of heightened awareness of gender inequalities, girls take part in fewer sports than do boys (e.g., Scully & Clarke, 1997). Explanations for the gender gap in participation are based on the strong link between sports behavior and masculinity.

Gender difference increases in adolescence period. In adolescence period, girls interest in physical education decreases dramatically and drastically. There is abundant evidence that males and females approach and perceive sports in different ways. In general, males more than females value the competitive aspect of sports and perceive sports as a potential source of material reward and personal recognition (White, 1995). Tappe, Duda, and Menges- Ehrwald (1990) found that adolescent boys' and girls' personal incentives to participate in physical activities differed. Both boys and girls had health-related incentives, but these differed. For boys, they were improving strength and receiving more general health benefits; while for girls, they were improving flexibility and controlling weight. In addition, boys participated to experience competition, while girls participated to be out with friends. These different approaches relate directly to traditional gender-role differences in the form of females' communal, person focused orientation and males' instrumental, competitive orientation (Eagly, 1987).

Students have positive attitudes toward PE because of their desire to be successful or to spend their time without pressure of academic success in PE lessons (Koca et al., 2005). According to many researchers, coeducational physical education courses give equal opportunities to male and female students and allow them to effect each other socially (Colgate, 1999; Griffin, 1984; Knoppers, 1988).

Treanor, Graber, Housner, and Wiegand (1998) and Lirgg's (1993) reported that both boy and girls secondary school students showed preferences for single-sex PE. Osborne, Bauer & Sutliff (2002) found that secondary school students preferred single-sex PE. Koca et al. (2005) also indicated that both girls and boys in coed educational high school preferred coed PE class.

In Turkey, especially after 1997, Ministry of National Education have started to use "students" as target audience in all of the Physical Education course instruction programs in primary schools, high schools and equivalents. It is stressed that such units have to be practiced together to all students without girl-boy separation (excluding wrestling and soccer branches in girls). Thus, the possibility of different expectations from girls and boys with different physical and emotional status were not considered in the preparation of the program.

In spite of the growth in the studies on the effectiveness of PE, sport science literature that have investigated students' attitudes toward PE and on PE class preferences according to age and gender are limited. Therefore, based on the previous research, the first hypothesis was that secondary school students PE attitude score higher than high school students attitude score. The second hypothesis was that secondary school girls and boys students PE attitude score was similarly, whereas high school boy students PE attitude score higher than high school girl students. And third hypothesis was that secondary school students preference single-sex PE class, whereas high school students preference coeducation PE class.

The aims of this study was to investigate attitudes toward physical education and class preferences in Turkish secondary and high school students related to gender and age.

## METHOD

### *Participants*

The study was conducted during the 2006-2007 fall semester. Participants consisted of 1240 students from seven secondary and six high general schools of Bursa/Turkey. In this study, coeducational secondary and high schools were selected. The participants were 302 girls ( $M_{age} = 13.11 \pm 0.79$ ) and 332 boys ( $M_{age} = 13.14 \pm 0.69$ ) aged 12 to 14 from secondary education schools and 290 girls ( $M_{age} = 16.48 \pm 0.86$ ) and 316 boys ( $M_{age} = 16.42 \pm 0.90$ ) aged 15 to 17 from high schools. A total of 1240 students voluntarily participated in this study. Students from secondary school were seven and eight-grade, and students from high school were eleven and twelve-grade. Attention was focused on this age group because social environmental factors and biological development in adolescence and pre-adolescence was differed.

Each secondary and each high school follows the same national PE curriculum guidelines prescribed by the Ministry of Education which recommend a program consisting mainly of team sports such as soccer, volleyball, basketball, handball, and gymnastics. The current PE curriculum is based on traditional views of a competitive sports-based model. During the time of the study, students from secondary education schools were required to take PE 40 minutes per week, whereas students from high public schools were required to take 80 minutes.

### *Instrument*

Two data collection instruments were administered. In the first section of the first personnel information, participants provide demographic related information such as age, grade, and gender. In the second section participants were asked: "Which PE class do you prefer? Coed PE or Single sex PE." The second instrument is the Attitude Toward PE Scale, developed by Demirhan and Altay (2001) for Turkish students. This is a paper and pencil self-report instrument with a 5-point Likert-type scale with responses ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) summed across 24 items, resulting in a range from 24 to 120 points. A score of 24 indicates the most negative attitude; a score of 25-48 indicates a negative attitude; 49-72 a neutral attitude; 73-94 a positive attitude; and 95-120 the most positive attitude. The Cronbach Alpha reliability coefficient of the scale is 0.93, the intraclass correlation coefficient is 0.85, and the scale validity coefficient is 0.83. The following are sample statements for this scale: "I am bored with PE and sporting activities," "It is not necessary to include a PE course in school curriculum," "I am not interested in PE activities," "I am always afraid of PE lessons," "I am participating in PE since it is a compulsory course," "I am always interested in PE activities," and "I believe that PE contributes to the healthy development of a child." (Koca et al., 2005)

### *Procedure*

After the schools were selected, permission to conduct the study was requested from and granted by the Education Directorate of Bursa /Turkey. Students were then informed of the purpose of the study and asked if they would be willing to participate. An informed consent form was obtained from the students. The consent form briefly described the purposes, procedures, and potential outcomes of the study. All participants completed the questionnaire in their classroom settings and were collected by the researcher. Incomplete questionnaires were eliminated from the study. In all, data were analyzed for 1241 of the 1290 questionnaires returned by participants.

### *Data Analysis*

Statistical analysis was performed using the SPSS package for windows, version 13.0. A 2 X 2 (Gender, Girls/Boys x School Level, Secondary/High school) univariate analysis of variance (ANOVA) was used to determine differences in attitude toward PE between students from secondary and high schools and between girls and boys. In order to test differences in PE class preferences of students with regard to school context and gender, chi square analysis was conducted. A p values < 0.05 were considered to indicate statistical significance.

## RESULTS

Descriptive statistics for secondary and high school boys' and girls' attitudes toward PE are presented in Table 1 indicated a significant difference in attitudes toward PE between students in secondary and high schools ( $F = 31.421$ ;  $p < 0.05$ ). On the Attitude Toward PE Scale, mean scores were higher among students from the secondary schools ( $M = 3.98$ ) compared to those from the high schools ( $M = 3.59$ ).

Another finding indicated a significant gender difference in high school students attitudes toward PE ( $F = 29.361$ ;  $p < 0.01$ ). The attitude mean scores of boys ( $M = 3.77$ ) were higher than those of girls ( $M = 3.40$ ). Whereas secondary school girl and boys students scores on the Attitude Toward PE Scale were similarly ( $F = 2.158$ ;  $p > 0.05$ ). The attitude scores of secondary school boys and girls respectively was ( $M = 4.01$ ) and ( $M = 3.95$ ). In addition, the attitude scores of secondary school boys ( $M = 4.01$ ) were significantly higher ( $F = 26.245$ ;  $p < 0.05$ ) than those of high school boys ( $M = 3.77$ ), and the attitude scores of secondary school girls ( $M = 3.95$ ) were significantly higher ( $F = 33.752$ ;  $p < 0.05$ ) than those of high school girls ( $M = 3.40$ ).

**Table 1.** Means Scores and Standard Deviations for Students on Attitudes Toward PE

<i>Group</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Secondary Schools			
Girls	302	3.95	0.59
Boys	332	4.01	0.57
Total	634	3.98	0.58
High Schools			
Girls	290	3.40	0.59
Boys	316	3.77	0.64
Total	606	3.59	0.62

In order to test differences in PE class preferences of students with regard to school context and gender, chi square analysis was conducted. Significant differences in PE class preferences were found between students from secondary and high schools ( $\chi^2 = 62.634$ ;  $p < 0.05$ ). Most of the students from secondary schools (66.6%) preferred single-sex PE, whereas nearly most of the students from high schools (69%) preferred coed PE.

There was no significant differences in PE class preferences between boys and girls from secondary school ( $\chi^2 = .279$ ;  $p > 0.05$ ) and between boys and girls from high school ( $\chi^2 = 1.186$ ;  $p > 0.05$ ). Most of the girls (%68.2) and boys (%65.1) from secondary school preferred single-sex PE and most of the girls (%67.2) and boys (%70.6) from high school preferred coed PE. There was significant differences in PE class preferences between girls from secondary school and girls from high school ( $\chi^2 = 25.777$ ;  $p < 0.05$ ) and between boys from secondary school and boys from high school ( $\chi^2 = 30.694$ ;  $p < 0.05$ ). Descriptive statistics for boys' and girls' preferences for coed or single-sex PE in the context of school type are presented in Table 2.

**Table 2.** PE Class Preferences of Secondary and High School Boy and Girls Students

<i>Group</i>	<i>Preferred Coed PE</i>		<i>Preferred Single-Sex PE</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Secondary Schools				
Girls	96	31.8	206	68.2
Boys	116	34.9	216	65.1
Total	212	33.4	422	66.6
High Schools				
Girls	195	67.2	95	32.8
Boys	223	70.6	93	29.4
Total	418	69.0	188	31.0

## DISCUSSION

In the present study results showed that attitudes toward PE was significantly different between high school and secondary school students. Secondary school students PE attitude score were higher than high school students' attitude score. These findings support the first hypothesis of the study given above. Results also indicated a significant gender difference in high school students' attitudes toward PE. The attitude scores of high school boys ( $M = 3.77$ ) were higher than those of girls ( $M = 3.40$ ). Whereas secondary school girl and boys students scores on the Attitude Toward PE Scale were no significantly different. The attitude scores of secondary school boys and girls respectively was  $M = 4.01$  and  $M = 3.95$ . And this finding supports the second hypothesis. In recently studies (Koca & Demirhan 2004; Anderssen, 1993; Tannehill, Romar, O'Sullivan, England, Rosenberg, 1994; Quaterman, Harris, Chew, 1996; Koca et al., 2005) were reported that high school boys had a higher mean Attitudes Toward Physical Education score than girls. Van Wersch et al. (1992) found that girls from 11 to 13 years of age had higher interest in sports than did boys, but at the age of 14 years, the situation reversed. Of the various school-related factors that were examined by Van Wersch et al. (1992), the most important contributor to interest was the status of physical education as a school subject. Thus, girls' decline in interest was attributed in part to their preference for concentrating on academic subjects at the point in their school career when preparation for "national General Certificate of Secondary Education examinations" commences. While status was also important for boys' interest, it appears that they regarded sports status differently, and Van Wersch et al. suggested that the importance with which male athletic prowess is regarded may account for their continuing interest after the age of 14.

A number of studies have identified family influence and support as a significant factor. Sports participation in preadolescent girls (Colley, Eglinton, & Elliot, 1992) and adolescent girls is related to parental participation (Gregson & Colley, 1986), and women who are successful in sports are more likely to have parents who participate (Greendorfer, 1983; Miller & Levy, 1996). However, peer influence is also important, particularly in late childhood and early adolescence, when friends provide a comparison for the assessment of personal competence (Horn & Amorose, 1998). Peers also influence enjoyment by providing companionship and recognition of achievements (Duncan, 1993).

Boys and girls have different patterns of sports participation. Boys are more likely than girls to play team sports, especially soccer, while girls' participation is concentrated in individual sports (Scully & Clarke, 1997). These differences in participation inevitably are influenced by stereotypes of male and female physical and psychological attributes. It is possible to place sports on a continuum from most masculine to most feminine on the basis of ratings of appropriateness for men and women (Colley, Nash, O'Donnell, & Restorick, 1987; Koivula, 1995).

Team sports cover much of the physical education in the curriculum Ministry of National Education. On the other hand, sports that require esthetical qualities for females are very limited. Therefore, girls' attitudes towards physical education, especially in adolescence period are lower than boys.

Other possible explanations include the greater rigidity of the female gender role in adolescence than in childhood. Before adolescence, girls have more flexibility in their gender-related behaviors and interests than boys have and they receive less reinforcement for cross-gender-typed behavior. After adolescence, girls are guided by the gender-role requirements of adulthood, and adopt behaviors and interests that enable them to attract boyfriends and prepare them for domestic responsibilities. Thus, interest in sports, which is perceived as a masculine domain, declines (Archer, 1984).

This study has also examined the preferences of secondary and high school students for coed or single-sex PE. The results indicate that age and gender seem to be important factors that influence these preferences. Significant differences in PE class preferences were found between secondary and high school students. Most of the students from secondary schools (66.6%) preferred single-sex PE, whereas nearly most of the students from high schools (69%) preferred coed PE. In the study by Koca et al. (2005), 72.8% of girls and 72.7% of boys from coeducational high school preferred coed PE. But, Lirgg (1993) found that girls and boy secondary school students preferred single sex PE, whereas high school students preferred coed PE class.

Results indicated that no significant differences in PE class preferences between boys and girls from secondary school ( $\chi^2 = .279$ ;  $p > 0.05$ ) and between boys and girls from high school ( $\chi^2 = 1.186$ ;  $p > 0.05$ ). Most of the girls (%68.2) and boys (%65.1) from secondary school preferred single-sex PE and most of the girls (%67.2) and boys (%70.6) from high school preferred coed PE. There was significant differences in PE class preferences between girls from secondary school and girls from high school ( $\chi^2 = 25.777$ ;  $p < 0.05$ ) and between boys from secondary school and boys from high school ( $\chi^2 = 30.694$ ;  $p < 0.05$ ). These results are supported by the previous research findings maintained above.

This research verifies that attitudes towards physical education and PE class preferences change according to gender and age. Secondary school students show more positive attitudes towards physical education than high school students. Boys show more positive attitudes than girls. In addition secondary school students preferred single-sex PE, whereas high school students preferred coed PE.

In order to improve the attitudes of girls towards physical education, Ministry of National Education have to make some changes in physical education course curriculum. This change has to be from competitive physical education course model to a model that encompasses life-time sport, health, physical fitness, and well-being. Physical education course curriculums should be re-arranged to enable students to obtain necessary knowledge, skills and attitudes for a healthy and happy daily life. Moreover, all students must have the confidence and skills to continue physical activities in their future lives.

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### İLKÖĞRETİM VE LİSE ÖĞRENCİLERİNİN BEDEN EĞİTİMİ DERSİNE KARŞI TUTUMLARI VE SINIF TERCİHLERİ (TÜRKİYE ÖRNEĞİ)

**ÖZ.** Bu araştırmanın amacı, ilköğretim ve lise öğrencilerinin beden eğitimi dersine karşı tutumlarını ve sınıf tercihlerini araştırmaktır. İlköğretimde okuyan 12- 14 yaş arasında 302 kız ( $M_{yaş} = 13.11 \pm 0.79$ ) ve 332 erkek ( $M_{yaş} = 13.14 \pm 0.69$ ) ile lisede okuyan 15-17 yaş arasında 290 kız ( $M_{yaş} = 16.48 \pm 0.86$ ) ve 316 erkek ( $M_{yaş} = 16.42 \pm 0.90$ ) öğrenci araştırmaya katıldı. Bu araştırmaya toplam 1240 öğrenci gönüllü olarak katıldı. Ölçme aracı olarak Beden Eğitime Karşı Tutum Ölçeği (BEKTO) kullanıldı. Öğrencilerin beden eğitime karşı tutumlarının farkını belirlemek için ANOVA ve sınıf tercihleri arasındaki farklılıkları belirlemek için Ki Kare istatistiksel testleri uygulandı. BEKTO'ndan elde edilen ortalama skorlar; ilköğretimde okuyan kız öğrenciler için (3.95) ve erkek öğrenciler için (4.01), lisede okuyan kız öğrenciler için (3.40) ve erkek öğrenciler için (3.77) olarak belirlendi. İlköğretim öğrencilerinin çoğunluğu (%66.6) kız-erkek ayrı sınıflarda, oysa lise öğrencilerinin çoğunluğu (%69) karma sınıflarda beden eğitimi dersinin yapılmasını tercih etmektedir. Bu araştırmadan elde edilen bulgulara göre beden eğitime karşı tutumlar ve sınıf tercihleri cinsiyete ve yaşa göre değiştiği söylenebilir.

**Anahtar Sözcükler:** beden eğitimi, turum, sınıf tercihi

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