

THE PHYSICAL EDUCATION LESSON IN TURKISH PRIMARY SCHOOLS: AFFECTIVE ENTRY CHARACTERISTICS AND GENDER

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ABSTRACT

In the study students' affective entry characteristics related to Physical Education lessons were examined based on three dimensions: interest towards the lesson, level of motivation in the lesson and educational gains. The study further aimed to investigate how these three dimensions were affected by the gender factor. Data were collected by means of a questionnaire developed by Yoncalik in 2006. A total of 1089 seventh grade pupils (530 girls; 559 boys) from 22 state primary schools in Konya and Ankara city centres participated in the study. The Statistical Package for Social Sciences 11.0 (SPSS) was used for the statistical analysis of the data. The t-test for independent groups was utilised to compare the participants' responses in terms of gender. The level of significance was set at $p < 0.05$. The research findings revealed that boys were more interested, more motivated and had more educational gains than girls in the Physical Education lesson.

Key words: Interest; Motivation; Physical Education; Primary school education.

INTRODUCTION

Students' affective entry characteristics towards school lessons may be considered as a complex intersection of interests, motivation, anxiety, attitudes and self-perceptions (Bloom, 1998:87). Among these characteristics, motivation is one of the strongest sources of power determining the direction, degree and consistency of student behaviours (Fidan, 1996:129). It may be argued that there are two sources of motivation; namely external and internal motivation. External motivation involves working for the purpose of appreciation and reward from an external source. As for internal motivation, it involves working hard for the purpose of gaining personal satisfaction that the person derives from personal development. For example, since students take an interest in practicing a skill with a partner, this motivates students internally (Pettifor, 1999:64-65).

Like motivation, interest is one of the affective entry characteristics and it is closely related to motivation, for it is a main factor that increases or decreases motivation that influences students' participation and success in learning activities (Hidi & Harackiewicz, 2000; Chen, 2001; Chen & Ennis, 2004; Subramaniam, 2009). Interest is an outcome of an individual-environment interaction and has two widely acknowledged dimensions (Krapp, 1992; Hidi & Renninger, 2006). The first is individual interest, which is acquired through a long process during personal development and forms a part of the personality. The second is the situational interest, which emerges owing to the fact that the situation is interesting. Situational interest has a special place in educational activities. It is thought that the more interesting the topic is

in terms of both content and techniques, the more the students' educational interest will increase. Despite the fact that it is difficult to differentiate situational and personal interest from each other in a clear-cut style, situational interest is considered to be a prerequisite for student success and knowledge acquisition (Krapp, 1992). Interest towards school and lessons is one of the significant factors affecting a student's success and knowledge acquisition (Krapp, 1992).

Limited research exists on interest towards Physical Education (PE). In one study, Lee *et al.* (1999) stated that individual interest towards physical activity is closely connected to gender. Similarly, Clifton and Gill (1994) suggested that boys and girls develop distinct individual interest towards physical activities from each other owing to social influences. For instance, boys show interest towards team sport at an early age but girls are more interested in rhythmic activities (Lee *et al.*, 1999). It can be concluded from these findings that boys and girls begin to show preferences for different physical activities at an early age and their preferences are affected by social influences. Besides these studies, Azzarito and Solmon (2009) emphasise that students are still suffering from the pressure concerning gender boundaries despite a great number of studies having been conducted in PE for more than 20 years.

Lee *et al.* (1999) found that the social acceptance level of an activity is closely related to students' interests in an activity. In their study, they concluded that boys are more interested in PE than girls since they are more interested in sport than girls. Similarly, Papacharisis and Goudas (2003) found that gender is a significant factor affecting internal motivation, which determines students' participation in physical activity. In addition to these studies, Gao (2009) investigated motivational levels in the lesson in terms of class and gender differences. He stated that boys' expectations, beliefs, and interest scores in PE lessons were higher than that of girls'. Furthermore, Oliver *et al.* (2009) pointed out that traditional PE lessons restrict girls' participation. In his study, fifth grade girls' self-identified barriers to physical activity in PE lessons are examined. These girls explained that sweating; messing up their hair and nails, as well as their 'nice' clothes irritated them and hindered their active participation in PE lessons.

Moreover, Lentillon *et al.* (2006) suggested that school causes gender inequality due to the nature of courses like PE. In fact, boys and girls get the awards in PE in a totally different amount and manner: The marks girls are awarded are always lower than that of boys; and teachers' interferences are more frequently in favour of boys than girls. To overcome these gender boundaries in PE lessons at schools, Azzarito and Katzew (2010) stressed the importance of the necessity to improve the PE curriculum by which gender equality is taken into consideration. With reference to the results obtained from other studies, Şişko and Demirhan (2002) mentioned that social factors such as religion and gender roles taught to them by society may cause girls to participate in PE activities to a lesser degree than boys. This may be the reason why the girls' mean score to be lower than that of boys. Hamzeh (2007) observed that Muslim girls' participation in physical activities was limited and these students seemed to be disinterested, as well as unenthusiastic. In addition he stated that the relationship between gender and religion is a factor that regulates and affects the clothes of the girls, as well as their relationships with boys in the public sphere. To manage such social obstacles, Oliver and Hamzeh (2010) stressed that the support of school administrators and

PE teachers plays a significant role in girls' participation in physical activities at school. They also stated that PE instructors actually determine the factors that cause girls to be less active in PE lessons.

Among the variables influencing a student's affective entry characteristics towards PE lessons, alternatives are available or can be created for the teaching method, PE teacher, class schedule and sport area. However, the same cannot be argued for gender, as the students' gender is a constant variable. Since one cannot make any changes in the gender variable, it may be argued that PE lessons and all the other variables should be organised according to the gender variable. Considering this, research into how gender affects students' affective entry characteristics towards PE lessons is significant. In this study, students' affective entry characteristics towards PE lessons are examined in three sub-dimensions. These sub-dimensions are: (1) interests towards the lesson; (2) level of motivation in the lesson upon which the teacher, teaching method, teaching environment and lesson content are effective; and (3) gains from the PE lesson. The aim of the research is to document how these three dimensions are affected by the gender variable.

METHODOLOGY

Questionnaire

A questionnaire developed by Yoncalik (2006) and used in Yoncalik *et al*, (2009) and Yoncalik *et al*, (2010) was adopted for this research.

In the first phase of data collection, 28 students of similar socio-economic status, studying in the sixth grade in a primary school, which was not in the scope of the study, were required to write an essay about their feelings, ideas and attitudes towards PE lessons. Content analysis was applied to the essays collected. Positive and negative items were selected to be included in the questionnaire.

Based on data collected from a related local and foreign literature review, new items were selected to be included in the questionnaire (Matthews, 1978; Demirhan & Altay, 2001; Özer & Aktop, 2003). An items pool was generated by adding items gathered from the literature review to the items selected out of the student essays. All the written items were presented to five specialists, three of whom have doctoral degrees in PE and two who have doctoral degrees in psychological counselling and guidance. After these specialists checked all the items, the 60-item questionnaire was finalised. Half of these 60 items was positive and the other 30 items were negative. A 5-point Likert-type scale was used in the questionnaire and applied as follows: 'I completely agree' = 5; 'I agree' = 4; 'I am undecided' = 3; 'I do not agree' = 2; 'I completely disagree' = 1. Later, the points of the negative items were 'recoded': 5's as 1, 4's as 2, 2's as 4, 1's as 5.

In the first application, the 60 items were put into a random order. This application was administered in three primary schools in Kırıkkale city centre to 310 students in the spring term of the 2004 and 2005 school years. One hundred and forty (140) of the students were girls and 160 were boys, while 10 did not mention their gender. Approximately 25-30 minutes was required to complete the questionnaire.

Data obtained were transferred to the Statistical Package for Social Sciences 11.0 (SPSS). Descriptive factor analysis was adopted to explain the relationship between variables and the emerging factors; however, before performing the factor analysis in order to obtain more reliable results, the internal consistency (Cronbach's alpha) coefficient was calculated. At this stage, the items whose total item correlation was lower than 0.30 and those which had minus value were excluded from the questionnaire. This application was repeated three times and continued until no item with a total item correlation lower than 0.30 was left. As a result of applications, 21 items were accepted to remain in the questionnaire.

Factor analysis was applied to the remaining 21 items and a five-factor structure emerged. The common factor variance of this structure was found to be at the level of 54.676%. In order to interpret the emerging factors to maintain conceptual meaningfulness, factor rotation was used and orthogonal (Varimax) rotation was applied. A three-factor structure common factor variance of 43.991% was found.

As a result of the three-factor rotation operation, the first factor contained 6 items, the second factor had 7 and the third factor had 8 items. When the items in the first factor were examined, the items in this factor such as "If possible, I do not attend PE classes" and "I look forward to the days on which we have PE classes" were decided to be named as the *Interest* dimension owing to the fact that these items mainly show the students' moods and feelings towards the PE lessons. The items in the second factor such as "I trust myself more through PE classes" and "PE class makes me love sports" were labelled as *Gain* in terms of lesson aims and student development, as these items indicate what the students learn and gain from the PE lessons. As for the items in the third factor such as "Most of the things I do in PE class are a waste of time" and "I like the way course subjects are taught to us in the classes", were loaded under the label *Motivation* considering the student's active participation in the lesson. Moreover, these items are related to the students' attitudes towards the PE lessons and their willingness to take part in the activities in the lessons at schools.

The Cronbach's Alpha reliability coefficient of the scale, which consisted of 21 items and three dimensions, was 0.86. The internal consistency of the 6 items in *Interest* dimension was 0.81. The Cronbach's Alpha internal reliability coefficient of the 8 items in the *Motivation* dimension was 0.72 and the 7 items in the *Gain* dimension had an internal consistency coefficient of 0.75. The questionnaire consisted of two sections. The first included demographic information (gender, race, age).

Sample

One thousand and eighty nine (1 089), 7th grade pupils (boys, n=559; girls, n=530; 14-15 years old) studying in 22 state primary schools in Ankara (n=14) and Konya (n=8) city centres participated in the study during the fall semester of the 2009 and 2010 school years.

Data analysis

The SPSS 11.0 was used for statistical analysis of the data. The t-test for independent groups was applied to compare the participants' responses in terms of their gender. The level of significance accepted was $p < 0.05$.

FINDINGS

The mean values of the responses given to each item by the pupils are presented in Table 1.

TABLE 1: MEAN VALUES OF STUDENT RESPONSES TO EACH ITEM

STATEMENTS	Mean	
	Girls (n=530)	Boys (n=559)
<i>Interest</i>		
If possible, I do not attend PE classes.	1.93	1.79
I do not have any expectations from the PE course.	2.47	2.00
I can't think of any schools in which PE classes are not taught.	3.81	4.00
I look forward to the days on which we have PE classes.	3.55	3.95
I want to have more PE classes	3.70	4.13
I feel sad on the days we have PE classes at school.	1.74	1.67
<i>Motivation</i>		
I learn something new in each PE class.	3.01	3.40
It makes me bored to repeat the movements during the classes.	2.94	3.03
Most of the things I do in PE class are a waste of time.	2.10	2.01
In PE classes, I feel as if time never passed.	1.74	1.57
PE is a class that enables me to show my abilities.	3.42	3.92
I like the way course subjects are taught to us in the classes.	3.37	3.66
I do not learn the course subjects well.	2.01	1.97
I forget what we are taught in PE classes in a short time.	2.06	1.94
<i>Gain</i>		
PE course teaches me to respect my friends.	3.01	3.41
I understand the importance of working through helping each other in PE classes.	3.39	3.58
PE classes help me understand what I can achieve on my own.	3.44	3.73
I trust myself more through PE classes.	3.44	3.79
I understand the importance of obeying rules in PE classes.	3.57	3.88
PE class makes me love sports.	4.02	4.24
I am in a better harmony in PE classes.	3.81	4.05

In Table 1 it is evident that the mean values of the girls were higher than the boys in negative statements, whereas the mean values of the boys were higher in positive statements. It was found that the mean of the responses to "PE class makes me love sports" proved to be high for both genders (boys=4.24; girls=4.02).

Among the items comprising the *Interest* factor, the statements where differences between genders were clearly apparent included: "I do not have any expectations from the PE course"; "I can't think of any schools in which PE classes are not taught"; "I look forward to the days on which we have PE classes"; and "I want to have more PE classes".

Regarding the items in the *Motivation* factor where differences between genders were obvious included: "I learn something new in each PE class"; "In PE classes, I feel as if time never passed"; "PE is a class that enables me to show my abilities"; and "I like the way course subjects are taught to us in the classes".

In the *Gain* factor, all the items, there were clear differences between genders in favour of the boys, relating to all the items, namely: “PE course teaches me to respect my friends”; “I understand the importance of working through helping each other in PE classes”; “PE classes help me understand what I can achieve on my own”; “I trust myself more through PE classes”; “I understand the importance of obeying rules in PE classes”; “PE class makes me love sports”; and “I am in a better harmony in PE classes”.

When considering the mean scores of the *Interest* dimension, there were significant differences between boys and girls for four of the six items ($p=0.00$ to $p=0.02$). It can be concluded from the mean scores for the item, “I do not have any expectations from PE course”, that girls (mean=2.47) were indecisive while the boys on average did not agree with the statement (mean=2.00). A significant difference ($p=0.00$) was found between the mean scores of the girls (3.55) and the boys (3.95) for the item, “I look forward to the days on which we have PE classes”. It can be said that boys were more enthusiastic than the girls considering their interest level towards PE lessons. Similarly, from the mean scores for the item, “I can’t think of any schools in which PE classes are not taught”, the difference between the mean scores of the boys and the girls was significant ($p=0.02$) regarding interest level towards PE (girls=3.70; boys=4.13).

Considering the *Motivation* dimension, boys and girls had similar mean scores for some items such as “It makes me bored to repeat the movements during the classes”, “Most of the things I do in PE class are a waste of time”, “I do not learn the course subjects well” and “I forget what we are taught in PE classes in a short time”. When compared to the girls, the boys believed they found opportunities to show their abilities in a more definite way (girls=3.42; boys=3.92). Furthermore, the boys were more positive about the way courses were taught than the girls (girls=3.37; boys=3.66). Similarly, from the mean scores for the item (girls=3.01; boys=3.40), “I learn something new in each PE class”, the difference was also significant ($p=0.00$).

In the *Gain* dimension boys have higher mean scores in all the items than the girls. From these scores, it can be concluded that the boys gain more than the girls.

TABLE 2: t-TEST ANALYSIS ON SCALE DIMENSIONS OF THE INDEPENDENT GROUPS

DIMENSIONS	MEANS		t-VALUE	p
	Girls (n=530)	Boys (n=559)		
Interest	3.82	4.09	-5.166	0.00
Motivation	3.61	3.80	-4.088	0.00
Gain	3.53	3.81	-4.838	0.00
Attitude	2.98	3.13	-5.492	0.00

$p < 0.01$

The results of Table 2 indicate that the lowest of the three dimensions for the girls was *Gain* according to the mean scores (3.53). The mean score of the girls in the *Motivation* dimension (3.61) was higher than the *Gain* dimension. For the girls, the highest mean scores emerged in the *Interest* dimension (3.82). In other words, although interest towards PE lessons in the case of the girls was quite good, their motivation level was not as high as their interest level.

Like the girls, the *Interest* dimension of the boys was the highest scored dimension. The boys' interest towards PE lessons was at quite high levels. The average mean score of the boys for the *Motivation* dimension was 4.09. Similarly, the motivation level for both girls and boys was low when compared to their interest level in PE lessons. In addition, their Motivation and Gain levels were similarly above average (3.80; 3.81) respectively.

Regardless of the dimensions, in the analysis of all the responses of the pupils to the items in the questionnaire, it can be noted that the boys had a more positive attitude towards PE lessons than the girls.

DISCUSSION

The findings of this research indicated that boys were more interested in and motivated by PE lessons. They also experienced more gains than girls. In comparison with girls, boys displayed a more positive attitude towards PE lessons. These findings seem to be in line with previous studies in Turkey (Şişko & Demirhan, 2002; Hünük & Demirhan, 2003; Koca & Aşçı, 2004; Koca & Demirhan, 2004; Balyan *et al.*, 2005; Koca *et al.*, 2005; Koca & Aşçı, 2006; Taşgın & Tekin, 2009). A possible reason for these results is that in Turkey, both women and men PE teachers interacted with boys more frequently and that co-education in PE lessons did not provide equal opportunity for girls (Koca, 2009).

In studies conducted in other countries, similar results were found (Couturier *et al.*, 2007; Silva *et al.*, 2008; Constantinou *et al.*, 2009; Liang *et al.*, 2010). For example, Constantinou *et al.* (2009) stated that boys' behaviours affect girls' participation in PE lessons and their attitudes towards the PE course is negative. In the researchers' opinion, girls' perception towards the factors that form a safe environment and safe sport is an important factor. Silva *et al.* (2008) suggested that boys and girls perceive gender relationships differently from each other. Half of the girls in their study complained about boys' behaviours and attitudes that irritated them, embarrassed them and finally caused them not to participate in the activities. These girls also stated that the relationships between boys and girls in the PE lessons were not good. In the study conducted with over 5000 students, Couturier *et al.* (2007) believes that the reason why girls showed less interest and participation in the lessons was that the PE lesson curriculum is traditionally filled with common team and individual sports, whereas girls preferred cooperative, less competitive activities like fitness and dance.

Similarly, in other studies it was stated that girls usually preferred sport and activities such as dance, gymnastics, yoga, modified games and volleyball unlike boys who mostly preferred sport like football, ice hockey, martial arts and motor-cross (Klomsten *et al.*, 2005; Azzarito & Solmon, 2009). This refers both to conformity to gendered views of activity, such as defining football and rugby as inappropriate for girls, and to culturally specific views, such as perceptions of mixed gender physical activity as inappropriate for adolescent girls. The

exclusion of traditionally 'boy' activities, such as football and cricket, from the girls' PE curriculum actually disadvantaged these girls more than those who do have access to a wider range of out-of-school activity options (Williams & Bedward, 2001). Liang *et al.* (2010) determined that boys were more active than girls in the boy-dominant activities (football) in the PE lessons. In addition to this, they found that both boys and girls are equally active in the gender-free activities (fitness). Moreover, they observed that girls were more active in the 'feminine' activities like aerobics and dance. The same could be argued in the case of girls in Turkey.

In the study of Yıldırım *et al.* (1996) among secondary school students, it was concluded that the expectations of girls centred on social, mental, ethical, aesthetic, rhythmic and coordinative features. Boys, who, in contrast, had overriding concerns for the need for competition, rivalry and victory, regarded these values as the least important. Hannon (2010) stressed what students will undergo, and that the grading system in the lessons affect students' single-gendered or co-education preferences in the PE lessons.

Couturier *et al.* (2007) state that the environment and social obstacles are other significant factors causing girls to be unwilling to participate in the activities in PE lessons. They found that girls were more affected by environmental factors such as showering, messing up their hair, being sweaty, bringing a sport outfit to school and changing it in front of others. They emphasised that this decreased girls' interest and participation in PE lessons. For this reason, though unwillingly, they argued that the PE lesson has become more advantageous for boys. Bibik *et al.* (2007) stress the importance of comfort in dressing rooms in affecting the satisfaction level in PE lesson. Lodewyk *et al.* (2009) argue that in PE settings, body image may be an important motivational consideration. Barr-Anderson *et al.* (2008) also recommend helping girls feel more positive about their bodies in the PE environment to increase enjoyment. It could be argued that the PE lesson in Turkish primary schools is far behind the expected level in terms of equipment and other facilities. These environmental factors create more negative effects regarding girls in comparison with boys. It could be alleged that in Turkey, PE lessons work in favour of boys with regard to content (program) and facilities.

Considering all the results obtained, it is not logical to ask PE teachers to favour girls more than boys. In such a situation, PE lessons, which are more positive for boys at present, can become negative for both boys and girls. For an effective solution (only in primary schools), it is believed that PE lessons can be planned and designed separately for boys and girls rather than being co-educational. Designing a PE programme that is compatible with girls' needs and expectations can provide them with a more suitable PE learning environment in which they can be more active during PE lessons.

The results obtained from the study conducted by Hannon and Ratliffe (2007) support the fact that girls will be able to get much more opportunities and chances to participate in soccer, frisbee and football in single-gendered PE classes. The results show that in these classes, PE teacher's oral communication with the girls seems to be at a higher rate. The logical reason why single-gendered PE classes increase girls' participation is that in such classes there is no boy dominance during the activities in the lessons. Co-educational PE classes provide boys

with the opportunity to dominate girls in both frisbee and soccer, and restrict girls' participation.

In PE lessons, it may be useful to separate girls from the boys during participation in team sport. Girls and boys can start the lessons together and separated from each other just for the games. The philosophy behind this application is to provide both boys and girls in high schools with equal participation opportunities in PE lessons. Although single-gendered games include much more practice and teacher interaction, the co-educational type still has advantages. Especially, athletic and competitive girls with high talent can benefit from playing together with and against boys. However, such girls are in the minority.

Planning separate PE curricula for boys and girls is significant. This is not easy to realise but not impossible. Preparing different PE content weekly and two distinct curricula for the same course cannot be easily realised in a short time. This puts extra responsibilities and workload on the shoulders of the PE teachers. The number of PE teachers working at schools should be doubled owing to the fact that the weekly lesson hours are at least doubled. An important point is that according to the interests of the girls and boys, there should be PE teachers who are experts in different sport areas.

Another significant issue is environmental factors related to the PE lessons at schools. The environmental factors such as the situation of the gymnasiums, equipment and school gardens should be designed in a more positive way because of the fact that PE lessons cannot be instructed in the same way for the boys and girls. In such a situation, girls and boys take the PE lessons separately from each other. In other words, when boys have a PE lesson, girls stay in class, and when girls have a PE lesson, boys stay in class. Therefore, what the students who stay in class are engaged with can be a question, which should be answered attentively and planned carefully while the others have a PE lesson in the school garden or gymnasium. For instance, for the students staying at class, the guidance and counselling unit of the school can give some lectures or establish some workshops with respect to their needs. Such an application makes the psychological counselling and guidance service more formal and as a result of this, the service becomes more beneficial to the students. Consequently, giving up the mixed education in the PE lessons requires an entirely new system besides its contribution to a more effective PE course for the students.

RECOMMENDATIONS

This study has some limitations with respect to the participants' ages and the questionnaire designed to collect data. The participants of this study were of the ages of 14 and 15 years. The author designed the questionnaire used to collect the related data. Therefore, by means of different and more comprehensive instruments, more data can be collected regarding the topic on participants from different ages and grade levels. On the other hand, international and intercultural studies can contribute well in the field. Future studies on mixed or single gender application of PE lessons in primary schools will provide more beneficial information on the topic. A variety of multidimensional studies investigating the kind of environment with regard to PE lessons desirable for girls may also prove to be beneficial.

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