Full Length Research Paper

Evaluation of fourth-grade primary school students' attitudes and self-efficacy towards physical education course using socio-cultural approach

Hayri Aydoğan

School of Physical Education and Sports, Recep Tayyip Erdoğan University, Rize, Turkey.

Changes in the national education system in Turkey have negative effects on the development of sports. Because, as classroom teachers teach Physical Education courses themselves, instead Physical Education teachers teach the course. This was because of a recent legislation released by the Ministry of National Education related to 4+4+4 compulsory schooling and the last resort for compulsory schooling model was made as 4+4+4 on 2012 to 2013 education season. In this context, the purpose of this research is to evaluate fourth-grade primary school students' attitudes and self-efficacy towards physical education course based on socio-cultural approach. Physical Education Predisposition Scale (BEYÖ in Turkish) was used as the data collection tool and "Explanatory Factor Analysis (EFA)", "Cronbach Alpha Coefficient" and "Item-Total Correlation Analysis" were conducted on fourth-grade students in order to maintain validity and reliability of the data collected. In the normality hypothesis analysis of the collected data, it is thought that "Kolmogorov-Smirnov Test" along with skewness and kurtosis coefficients will contribute to existing literature.

Key words: Attitude, self-efficacy, physical education, primary school.

INTRODUCTION

Franzoi (2003) defines the concept of attitude as "an individual's positive or negative evaluation of an object". When attitudes are categorized as positive or negative; having negative beliefs about ideas or objects, rejecting or disliking them, taking negative actions towards these might be considered as negative attitudes and having positive beliefs about ideas or objects, accepting and liking them might be considered as positive attitudes (Demirhan and Altay, 2001). People have their attitudes as a result of their previous experiences, thus, attitudes are not innate behaviors (Kağıtçıbaşı, 2005). According

to Sakallı (2006), there are various factors that affect our attitudes. Family, environment and direct personal experiences are major factors among these. Kağıtçıbaşı (2005) indicated that the age of a person is also an important factor in terms of attitudes. Many attitudes are formed especially during childhood (between 6 to 12 ages) by imitating parents' behaviors. In the first stage of adulthood (between 21 to 30 ages), these attitudes are reinforced. If an individual forms a positive attitude towards an object or an idea, he approaches to it and supports it; however if an individual forms a negative

attitude towards an object or an idea, he drifts away from it and even takes negative actions towards it. However, attitudes might change and new attitudes might be formed over time. For that reason, researches related to attitudes might provide useful findings for physical education and sports instructors (Şişko and Demirhan, 2002).

Another important factor which affects attitudes is self-efficacy. "Self-efficacy" is one of the major concepts in Bandura's social learning theory and Bandura (1997) defines self-efficacy as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave. Such beliefs produce these diverse effects through four major processes. They include cognitive, motivational, affective and selection processes. A strong sense of efficacy enhances human accomplishment and personal well-being in many ways. People with high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided. Such an efficacious outlook fosters intrinsic interest and deep engrossment in activities. They set themselves challenging goals and maintain strong commitment to them. They heighten and sustain their efforts in the face of failure. They quickly recover their sense of efficacy after failures or setbacks. They attribute failure to insufficient effort or deficient knowledge and skills which are acquirable. They approach threatening situations with assurance that they can exercise control over them. Such an efficacious outlook produces personal accomplishments, reduces stress and lowers vulnerability to depression (Bandura, 1994).

According to Seçkin and Başbay (2013), self-efficacy is an individual's self-evaluation of his random behaviors. Self-efficacy also affects emotional reactions and ways of thinking of individuals. People who have a high level of self-efficacy might be relatively comfortable and productive in difficult activities and tasks. Physical education is the whole of theoretical and consistent studies conducted in order to contribute to physical and body development of individuals, to prepare them for the conditions of daily life and work life and to enhance their national awareness and citizenship feelings (Yamaner, 2001). Physical education not only develops physical features, but also promotes a sense of self-respect, mutual respect, cooperation and teamwork and supports and enhances leadership abilities (Buck et al., 2004). Young children are leading increasingly sedentary lives, with physical activity frequently displaced by television viewing, Internet surfing, and video gaming (Myers et al., 1996). Much concern has surfaced for this lifestyle change as childhood obesity has risen greatly in the last 10 years (World Health Organization, 2000). Within the school context, incorporating physical activity or fitness training is a likely means to improve the physical health

status of children (Haskell, 1994) as well as cognitive performance (Sibley and Etnier, 2003) and attention and concentration (Hillman et al., 2005; Shephard, 1996; Taras, 2005). Students feel satisfaction when they participate in physical education activities during school. These physical education activities can greatly enhance students' learning experience and positively influence their physical, mental, social and interpersonal wellbeing (Huang, 2007). Physical education course aims to improve individuals' social competence and positive sense of self as well as basic motor skills (Göktaş and Arıkıran, 2007). In this way self-efficacy that students develop might be by means of their participation in physical education courses.

The basic resource which helps countries to develop socially, culturally and artistically is healthy manpower. In order for a country to raise a healthy generation, a modern education approach should be implemented and physical education classes should be integrated to the curriculums, which affect millions of primary and junior high school students are affected. It is of great importance to help contribute to personal development of millions of students through activities in physical education classes. Intra-curriculum and extra-curriculum physical education activities are among the most important activities that help primary and junior high school students, who have a high level of activity to use their energy in a positive way, to be stress free and socialize, adapt to rules, keep away from harmful habits, enhance their knowledge, skills and abilities (Akgün and İnan, 2010). Students generally have a receptive approach towards physical education classes. The findings of this study support this hypothesis. Taşmektepli et al (2006) also had similar findings. Their interpretation of those findings was that students generally show a higher level of interest in physical education classes and they have a receptive attitude.

METHOD

Population and sample

The population of this study includes fourth-grade primary school students. The sample of the study consists of 424 fourth-grade students from the following 12 primary schools: Kurtuluş Primary School located in Rize City Center; Karasu, Ambarlık, Şehit Nedim Çalık, and Dörtyol primary schools located in the Central District; Kıbledağı Şehit Metin Çetin, Başköy, Ulucami, and Adacami primary schools from villages of Güneysu District; İMKB Primary School located in Güneysu District Center; 28 Şubat primary schools located in Off District in Trabzon Province; Zeki Bilge Primary School and Uzungöl primary schools located in Çaykara District in Trabzon.

Data collection tools

"Personal Information Form" (Annex -2) and "Physical Education

Predisposition Scale" (Annex-3) were used as data collection tools in this research.

Personal information form

"Personal Information Form" developed by the researchers aims to collect data from students which constitute the sample of this research. This section includes information related to students' demographic and independent variables: gender, past injuries in PE classes, education level of the mother, education level of the father and location of the school.

Physical education predisposition scale (PEPS)

Physical Education Predisposition Scale (PEPS), which was developed by Hilland et al. (2009) and adapted to Turkish language by Öncü, Gürbüz, Küçükkılıç and Keskin (2015), was used to measure students' self-efficacy and attitudes towards physical education. The scale, which consists of 11 items, includes 2 factors. Factors of the scale are "Attitude" (6 items) and 'Self-efficacy' (5 items). Negative items included in the scale are scored reversely. The scale is a 5-point Likert-type scale with the following scoring system: "I strongly disagree (1)", "I disagree (2)", "I neither agree nor disagree (3)", "I agree (4)" and "I strongly agree (5)" The lowest score that can be achieved in the scale is 11 and the highest one is 55. The lowest and the highest scores of "Attitude" sub-dimension of the scale are 6 and 30, whereas the lowest and the highest scores of "Self-efficacy" sub-dimension of the scale are 5 and 25, respectively.

Statistical methods

Explanatory Factor Analysis (EFA), "Cronbach Alpha Coefficient", and "Item-Total Correlation Analysis" were conducted in order to confirm the validity and reliability of " PEPS" (or BEYÖ in Turkish), which was used on fourth grade students as a data collection tool in this research. Kolmogorov-Smirnov test and coefficient of skewness and kurtosis were used in normality analysis of the collected data. Number of groups was taken into consideration for comparison of attitude and self-efficacy scores of different groups. In accordance with this, "t test for independent groups", which is a parametric statistical method, was used for comparison of the average scores of two independent groups and "one way analysis of variance test (ANOVA)", which is another parametric statistical method, was used for comparison of the average scores of three or more groups. If ANOVA tests proved differences, Tukey multiple comparison test (Post Hoc) was used in order to determine which group is the source of these differences. IBM SPSS package program was used for application of aforementioned statistical methods within the scope of this research.

FINDINGS

Validity and reliability analyses

Factor analysis

Kaiser-Meyer-Olkin coefficient and Bartlett Test of Sphericity were used in order to determine whether conducting an explanatory factor analysis is compatible

with and sufficient for the data collected from the scale which consists of 11 items and is designated for fourth-grade students. The obtained results are given in Table 1. According to the findings listed in the Table 1, the obtained results are perfect since KMO coefficient is 0.868. For that reason, the sample size of the research is sufficient. Another test which determines whether explanatory factor analysis is compatible with a set of data is the sphericity test developed by Bartlett to determine the homoscedasticity of the sample. Factor analysis is conducted to detect high level of correlation between reverse floating variables of regression analysis. In this context, Bartlett test helps us to determine whether there is a significant correlation between variables in the main sample (Nakip, 2006). According to the results listed in the table, it is determined that the data collected are compatible with factor analysis (B=1413. 97; p = 0.000 < 0.05).

Results of factor analysis

After determining that the data collected are compatible with factor analysis, explanatory factor analysis was conducted using Principal Components Analysis and Varimax Rotation methods to determine the factor structure of the scale. Factors collected as a result of conducted explanatory factor analysis and factor weight values of items listed under these factors are listed in Table 2. It is understood that latent values of 2 factors listed in Table 2 are greater than 1. The most significant and prominent method for determining whether a factor should be included in the scale is based on the latent value of the factor (those greater than 1 are included as a factor). (Büyüköztürk, 2002). Variances of these two factors are 37.75 and 14.72% and total variance listed is 52.47%. According to these findings, it is understood that these two factors reflect 0.52% of total variance of the main structure. This value should be deemed acceptable according to Kline since it is over 40% (Ceyhan and Namlu, 2000). According to these results, it might be concluded that the scale proved valid results on fourth grade students and it has a solid factor structure.

Reliability analysis

If internal consistency determinant Cronbach α coefficient is lower than 0.40, the scale is "unreliable"; if it is between 0.40 to 0.59, the scale has a "low level of reliability" and if it is between 0.60 to 0.79, the scale has a "high level of reliability" (Tavşancıl, 2002). In this study, internal consistency of the PEPS (BEYÖ in Turkish) scale was analyzed measuring Cronbach Alpha coefficients of the whole scale and its sub-dimensions separately. Cronbach Alpha coefficients of each factor and the whole

Table 1. Collected data's compatibility with factor analysis.

Kaiser-Meyer-Olkin (KMO) Variance Sufficiency of the Sample	0.868	
Bartlett Test	Ki-Square Value	1413.97
	S.d	55
	P	0.000

Table 2. Factor analysis results.

Scale sub-dimension	Items	Factor weight value	Latent Value	Variance (%)	Cumulative Variance (%)
Attitude	Item 1	0.643	4.153	37.75	37.75
	Item 3	0.440			
	Item 6	0.723			
	Item 8	0.614			
	Item 10	0.567			
	Item 11	0.719			
Self-Efficacy	Item 2	0.803	1.619	14.72	52.47
	Item 4	0.758			
	Item 5	0.783			
	Item 7	0.696			
	Item 9	0.770			

Table 3. Internal consistency coefficients of the whole scale and all sub-dimensions.

Factors	Number of items	Cronbach alpha coefficient (α)
Factor 1- Attitude	6	0.700
Factor 2- Self-efficacy	5	0.841
Total	11	0.814

scale are listed in Table 3 accordingly. According to the values listed on the table, Cronbach α reliability coefficient of PEPS (BEYÖ in Turkish) sub dimensions are 0.700 for Factor 1 and 0.841 for Factor 2, respectively. Based on this, it might be concluded that "self-efficacy" factor has an acceptable level of reliability and "attitude" factor has a good level of reliability. Cronbach α reliability coefficient of 11 items listed in the scale is 0.814. Based on this value, it might be suggested that the scale has a good level of reliability.

Item-total score correlation analysis

Item-total score correlation analysis is an objective control mechanism which explains the relation between scores obtained from items and total scores obtained

from the test (Tezbaşaran, 1996). In other words, it displays whether each item of a scale samples similar behaviors or not. In this context, item-total score correlation is expected to be greater than 0.25. Significant correlation coefficients between scale item or sub-dimension scores and total scale scores are deemed as a sign of internal consistency. High correlation coefficients show the high compatibility of the respective item with measured theoretical structure. In case correlation coefficient is lesser than 0.25, it is suggested to remove these items from the scale (Karataş, 2014).

According to the findings listed in Table 4, item-total correlation coefficients of all 11 items are greater than 0.25. Based on this, it might be suggested that all items have a high correlation with the whole of the scale and they move in the same direction with the fundamental structure measured by the scale. In this case, there is no

Table 4. Item-total correlation coefficients.

Parameter	Item-total correlation	Cronbach alpha coef. if there are any Items Deleted
Item 1	0.260	0.813
Item 2	0.498	0.783
Item 3	0.441	0.789
Item 4	0.508	0.783
Item 5	0.547	0.778
Item 6	0.328	0.800
Item 7	0.526	0.780
Item 8	0.603	0.773
Item 9	0.586	0.774
Item 10	0.507	0.782
Item 11	0.380	0.795

Table 5. Statistics related to attitude dimension.

Parameter	N	Mean	ss.	Skewness	Kurtosis	Minimum	Maximum
Attitude	424	23.52	4.50	-0.519	-0.051	6	30

Table 6. K-S normality test results.

Parameter	Kolmogorov-Smirnov		
	Statistics	sd	Sig.(p)
Attitude	0.075	424	0.000

need to remove any items from the scale and it might be suggested that PEPS (BEYÖ in Turkish) maintains the number of items on fourth grade student population Table 5.

Comparison of fourth grade student behaviors based on demographic variables

Kolmogorov-Smirnov test was used to determine whether total attitude score variable obtained from the attitude sub-dimension of the scale has a normal distribution Table 6. According to Kolmogorov-Smirnov Test, total attitude scores of fourth-grades are not distributed evenly (p<0.05). In this case, normality of the data collected using the Likert scale is tested using another criterion commonly accepted in literature whose skewness and kurtosis coefficients are between -1.5 and +1.5 (Fidell et al., 2013). Based on this and taking into account skewness and kurtosis coefficients of attitude variable, it might be considered to be distributed evenly (normal). In this case, parametric methods are used to determine

whether attitude scores have any significant differences based on certain demographic variables.

Comparison of attitude scores based on gender

T test was used in independent groups to determine whether attitude sub-dimension scores of fourth grade students have a significant difference based on gender. The results are presented in Table 7.
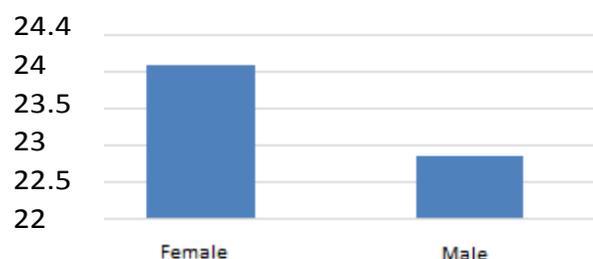
Based on the results listed in the Table 7 and Figure 1, fourth-grade students' attitudes towards physical education have a significant statistical difference (t=2.875; p<0.05). Analyzing the average scores of genders, it is understood that female students have a more positive attitude towards physical education compared to males.

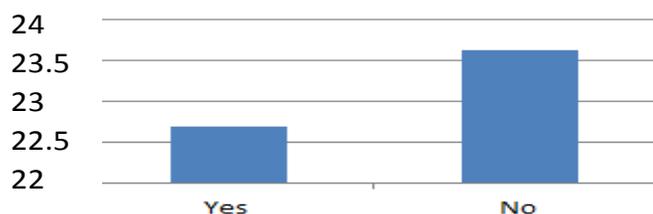## Comparison of attitude scores based on past injuries in PE classes

T test was used in independent groups to determine

Table 7. (t) Test results of attitude score averages based on gender.

Gender	N	Mean	ss	T	p
Female	228	24.11	4.04	2.875	0.004
Male	196	22.84	4.90		

Figure 1. Average attitude scores based on gender.

Table 8. (t) Test results of attitude score averages based on past injuries in PE classes.

Past injuries	N	Mean	ss	t	p
Yes	49	22.69	3.93	-1.365	0.173
No	375	23.63	4.56		

Figure 2. Attitude score averages based on past injuries in PE classes.

whether fourth grade students' past injuries in physical education classes cause a significant difference in their attitudes towards physical education. The results are given in Table 8 and Figure 2. According to t test results on this chart, fourth grade students' attitudes towards physical education classes do not differ significantly based on whether they have past injuries in PE classes (t=-1.365; p>0.05). In this case, fourth grade students' negative past experiences in PE classes do not affect their attitudes towards this class.

Comparison of attitude scores based on education level of mother
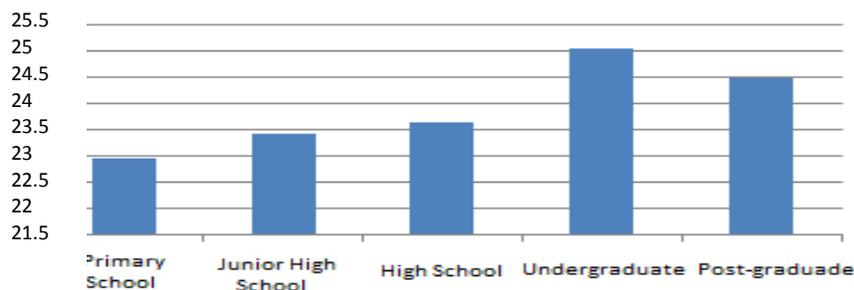
One way variance analysis (ANOVA) was used to

determine whether education level of mothers of fourth grade students significantly affects their attitude scores towards physical education classes. The test results are as given in Table 9 and Figure 3. According to ANOVA test results on this chart, fourth grade students' attitudes towards physical education classes do not differ significantly based on education level of their mothers (F=2.105; p>0.05).

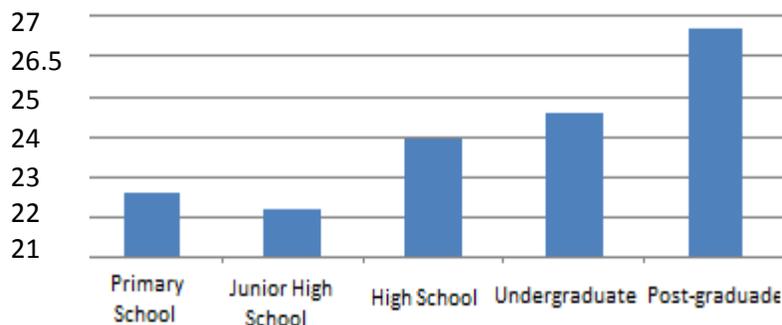**Comparison of attitude scores based on education level of father**

One way variance analysis (ANOVA) was used to determine whether education level of fathers of fourth grade students significantly affects their attitude scores

Table 9. Anova test related to attitude score averages based on education level of mothers.

Education level of mother	N	Mean	ss	F	p
Primary	147	22.97	4.980		
Junior high school	128	23.42	4.534		
High school	93	23.65	3.917	2.105	0.079
Undergraduate	50	25.04	3.779		
Post-graduate	6	24.50	3.728		

Figure 3. Average attitude scores based on education level of mothers.

Table 10. Anova test related to attitude score averages based on education level of fathers.

Education level of father	N	Mean	ss	F	p
Primary	61	22.61	4.514		
Junior high school	115	22.21	4.545		
High school	134	23.97	3.983	6.603	0.000
Undergraduate	102	24.58	4.723		
Post-graduate	12	26.67	3.473		

Figure 4. Average attitude scores based on education level of fathers.

towards physical education classes. The test results are seen in Table 10 and Figure 4. According to ANOVA test results on this chart, fourth grade students' attitudes towards physical education classes differ significantly based on education level of their fathers (F=6.603;

p<0.05). Tukey multiple comparison test (Post Hoc) was used in order to determine which group is the source of difference and the following results were obtained Table 11. According to the findings in this table, there are significant differences between primary-undergraduate,

Table 11. Tukey multiple comparison test results based on education level of fathers.

Parameter		Mean difference	Sig (p)
Primary	Junior high school	0.398	0.979
	High school	-1.364	0.262
	Undergraduate	-1.972[*]	0.045
	Post-graduate	-4.060[*]	0.029
Junior high school	Primary	-0.398	0.979
	High school	-1.761[*]	0.015
	Undergraduate	-2.370[*]	0.001
	Post-graduate	-4.458[*]	0.008
High School	Primary	1.364	0.262
	Junior high school	1.761[*]	0.015
	Undergraduate	-0.608	0.830
	Post-graduate	-2.697	0.249
Undergraduate	Primary	1.972[*]	0.045
	Junior high school	2.370[*]	0.001
	High school	0.608	0.830
	Post-graduate	-2.088	0.525
Post-graduate	Primary	4.060[*]	0.029
	Junior high school	4.458[*]	0.008
	High school	2.697	0.249
	Post-graduate	2.088	0.525

Table 12. Anova test related to attitude score averages based on locations of schools.

Locations of School	N	Mean	ss	F	p
City center	27	23.63	3.835		
City center village	123	23.07	4.555	5.669	0.001
District center	173	24.51	4.706		
District village	101	22.35	3.905		

primary-postgraduate, junior high school-high school, junior high school-postgraduate groups based on education level of their fathers. In addition, when analyzing the average scores of the groups, students' attitude scores increase as their fathers' education level changes from primary to post-graduate. Therefore, it might be concluded that students' attitudes towards physical education classes increase positively in parallel with education level of their fathers.

Comparison of attitude scores based on locations of schools

One way variance analysis (ANOVA) was used to determine whether school locations of fourth grade students significantly affect attitude scores towards physical education classes. Test results are given in Table 12 and Figure 5. According to ANOVA test results

on this chart, fourth grade students' attitudes towards physical education classes differ significantly based on locations of their schools (F=5.669; p<0.05). Tukey multiple comparison tests were used to determine which group is the source of difference and following results were obtained Table 13. According to the findings in Table 14, there are significant differences between city center village-district center and district village-district center location groups. In addition, average scores of groups indicate that the attitudes of fourth grade students attending schools in district centers are more positive towards physical education classes.

Comparison of self-efficacy levels of fourth grade students based on demographic variables

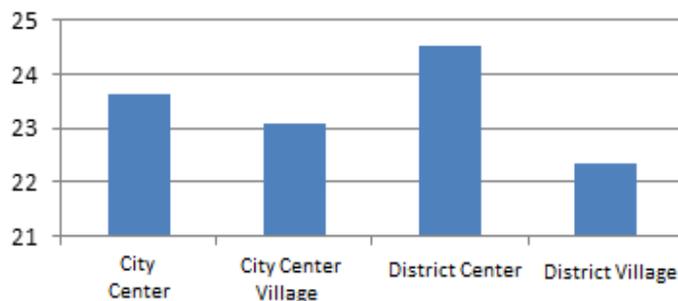Kolmogorov-Smirnov test was used to determine whether total self-efficacy score variable obtained from the self-

Figure 5. Average attitude scores based on locations of schools.

Table 13. Tukey multiple comparison test results based on locations of schools.

Parameter		Mean difference	Sig. (p)
City center	City center village	0.565	0.932
	District center	-0.879	0.773
	District village	1.283	0.540
City center village	City center	-0.565	0.932
	District center	-1.444*	0.030
	District village	0.719	0.622
District center	City center	0.879	0.773
	City center village	1.444*	0.030
	District village	2.162*	0.001
District village	City center	-1.283	0.540
	City center village	-0.719	0.622
	District center	-2.162*	0.001

Table 14. Statistics related to self-efficacy dimension.

Parameter	N	Mean	ss.	Skewness	Kurtosis	Minimum	Maximum
Self-efficacy	424	19.95	4.16	-0.833	0.511	5	25

Table 15. K-S normality test results.

Parameter	Kolmogorov-Smirnov		
	Statistic	sd	Sig.(p)
Self-efficacy	0.113	424	0.000

efficacy sub-dimension of the scale has a normal distribution Table 15. According to Kolmogorov-Smirnov Test, total self-efficacy scores of fourth grades are not distributed evenly (p<0.05). In this case, normality of the data collected using the Likert scale is tested using another criterion common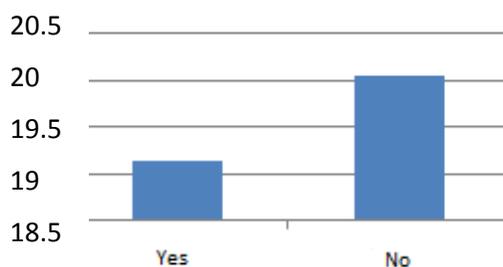ly accepted in literature whose skewness and kurtosis coefficients are between -1.5 and +1.5 (Fidell et al., 2013). Based on this and taking into account skewness and kurtosis coefficients of attitude variable, it might be considered to be distributed evenly (normal). In this case, just as in attitude sub-dimension, parametric methods are used to determine whether self-

Table 16. (t) test results of self-efficacy score averages based on gender.

Gender	N	Mean	ss	t	p
Female	228	19.82	3.80	-0.708	0.479
Male	196	20.11	4.56		

Figure 6. Average self-efficacy scores based on gender.

Table 17. (t) test results of self-efficacy score averages based on past injuries in PE classes.

Past injuries	N	Mean	ss	t	p
Yes	49	19.14	4.64	-1.45	0.194
No	375	20.06	4.09		

Figure 7. Self-efficacy scores based on past injuries.

efficacy scores have any significant differences based on certain demographic variables.

Comparison of self-efficacy scores based on gender

T test was used in independent groups to determine whether self-efficacy sub-dimension scores of fourth grade students have a significant difference based on gender. The results are given in Table 16 and Figure 6. Based on the results listed on this chart, fourth grade students' self-efficacy perceptions of physical education classes do not have a significant statistical difference (t= -0.708; p>0.05).

Comparison of self-efficacy scores based on past injuries in PE classes

T test was used in independent groups to determine whether fourth grade students' past injuries in physical education classes cause a significant difference in their self-efficacy perceptions of physical education. The results are given in Table 17 and Figure 7. According to t test results on this chart, fourth grade students' self-efficacy perceptions of physical education classes do not differ significantly based on whether they have past injuries in PE classes (t=-1.45; p>0.05). In this case, fourth grade students' negative past experiences in PE classes do not affect their self-efficacy perceptions of

Table 18. Anova test related to self- efficacy score averages based on education level of mothers.

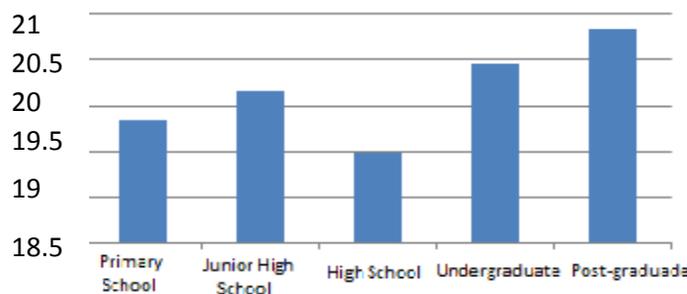| Education level of mother	N	Mean	ss	F	p
Primary	147	19.85	4.350		
Junior high school	128	20.16	3.983		
High school	93	19.49	4.127	0.630	0.641
Undergraduate	50	20.46	4.282		
Post-graduate	6	20.83	3.125		

Figure 8. Self-efficacy scores based on education level of mothers

Table 19. Anova test related to self-efficacy score averages based on education level of fathers.

Education Level of Father	N	Mean	ss	F	p
Primary	61	19.64	4.191		
Junior high school	115	19.14	4.279		
High school	134	20.51	3.805	2.564	0.038
Undergraduate	102	20.08	4.407		
Post-graduate	12	22.00	3.464		

this class.

Comparison of self-efficacy scores based on education level of mother

One way variance analysis (ANOVA) was used to determine whether education level of mothers of fourth grade students significantly affects self-efficacy scores towards physical education classes. Test results are given in Table 18 and Figure 8.

According to ANOVA test results on this chart, fourth grade students' self-efficacy perceptions of physical education classes do not differ significantly based on education level of their mothers (F=0,630; p>0.05).

Comparison of Self-Efficacy Scores Based on Education Level of Fathers

One way variance analysis (ANOVA) was used to

determine whether education level of fathers of fourth grade students significantly affects self-efficacy scores towards physical education classes. Test results are given in Table 19 and Figure 9. According to ANOVA test results on this chart, fourth grade students' self-efficacy perceptions of physical education classes differ significantly based on education level of their fathers (F=2.564; p<0.05). In addition, group averages indicate that self-efficacy perceptions of students who have fathers with a highest level of education are the highest.

Comparison of self-efficacy scores based on locations of schools

One way variance analysis (ANOVA) was used to determine whether school locations of fourth grade students significantly affect self-efficacy scores towards physical education classes. Test results are given in Table 20 and Figure 10. According to ANOVA test results
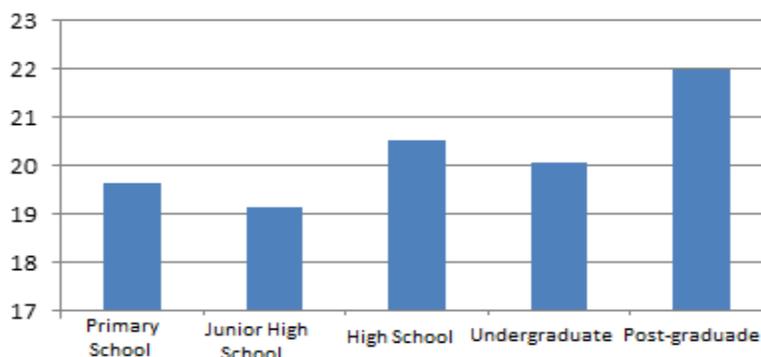
Figure 9. Self-efficacy scores based on education level of fathers.

Table 20. Anova test related to self-efficacy score averages based on locations of schools.

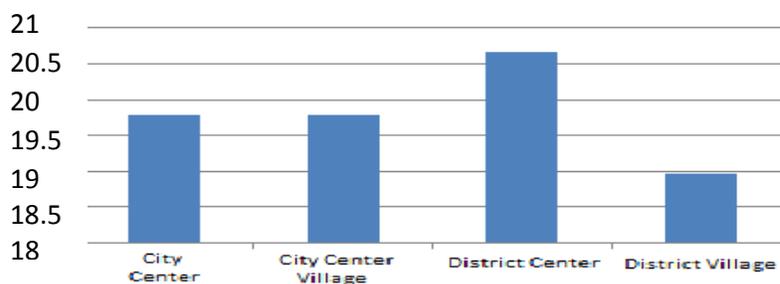| Locations of school	N	Mean	ss	F	p
City center	27	19.78	4.734		
City center village	123	19.79	4.289	3.709	0.012
District center	173	20.66	3.949		
District village	101	18.97	4.046		

Figure 10. Average self-efficacy scores based on locations of schools.

on this chart, fourth grade students' self-efficacy perceptions of physical education classes differ significantly based on locations of their schools (F=3.709; p<0.05). Tukey multiple comparison test was used to determine which group is the source of the difference and the following results were obtained Table 21. Based on the findings listed in the table, locations of schools cause a significant difference only between villages and city centers.

DISCUSSION AND CONCLUSION

In this study, statistical calculations related to fourth-grade primary school students' attitudes and self-efficacy towards physical education classes were made and the details were included in charts. Summarized interpretation of the collected data shows that students' attitudes and self-efficacy perceptions do not differ greatly in terms of demographic variables. Analysis of average scores indicate that female students show greater interest in physical education classes when compared to male students. According to the findings of the study, fourth-grade students' attitudes and self-efficacy perceptions do not differ greatly based on their past injuries in PE classes. Hence, it might be concluded that past injuries do not change fourth-grade students' attitudes towards physical education classes. Another finding suggests that students' attitudes do not differ greatly based on education level of their mothers. However, education level of fathers creates a significant difference (F=6.603; p<0.05). According to the findings of

Table 21. Tukey multiple comparison test results based on locations of schools.

Parameter		Mean difference	Sig. (p)
City center	City center village	-0.011	1.000
	District center	-0.887	0.727
	District village	0.807	0.803
City center village	City center	0.011	1.000
	District center	-0.876	0.274
	District village	0.818	0.452
District center	City center	0.887	0.727
	City center village	0.876	0.274
	District village	1.694[*]	0.006
District village	City center	-0.807	0.803
	City center village	-0.818	0.452
	District center	-1.694[*]	0.006

this study, there are significant differences between primary-undergraduate and junior high school -post-graduate education level groups. In addition, when group averages are taken into consideration, as fathers' education level increases from primary school to under-graduate, attitude score averages generally increase.

According to this, it might be suggested that the better fathers' education level is the more positive students' attitudes towards the class are. On the other hand, it might also be suggested that locations of schools create a significant difference in attitudes towards PE classes (F=5.669; p<0. 05). According to the results of this research, there are significant differences between villages in city center-district centers and villages in district centers-district centers. In a study conducted by Yıldırım and İlhan (2010), average scores of groups indicated that the attitudes of fourth grade students attending schools in district centers are more positive towards physical education classes and this is also supported by our findings. Moreover, findings of Endler et al. (2001) suggested that gender does not create significant differences in terms of overall self-efficacy. Analyzing the self-efficacy dimension of the study, it is suggested that fourth grade students' self-efficacy perceptions of physical education classes do not have any significant differences. Hence, the results of our study are parallel to the findings of Endler et al. (2001).

In a study of Lorraine B. Robbins et al. (2004), the significant increase for both boys and girls in self-efficacy after completing the exercise task supports the importance of successful performance for enhancing self-efficacy or confidence in a particular behavioral domain. Interventions to increase PA self-efficacy should focus on: (a) providing positive PA experiences that minimize perceptions of discomfort, (b) mobilizing social sources of efficacy enhancement, such as modeling of PA by significant others (Bandura, 1986; e.g., peers, family members, educators, and health professionals), and (c) persuading children and adolescents that regular PA is an important and enjoyable part of everyday life. Research findings of a positive correlation between support for PA from parents and siblings and youth PA involvement (Aarnio et al., 1997; Zakarian et al., 1994) suggest that combining social support, selfefficacy, and positive experiential components in interventions to increase PA may be promising (Robbins et al., 2004).

According to our study, fourth- grade students' past negative experiences do not affect their self-efficacy perceptions of PE classes. It is also understood that self-efficacy perceptions of fourth- grade students do not differ significantly based on education level of their mothers; however, it is based on education level of their fathers. Furthermore, group averages indicate that self-efficacy perceptions of students who have fathers with a highest level of education are the highest. It is understood that self-efficacy perceptions of physical education classes do not differ significantly based on locations of schools (F=3.709; p<0.05). In conclusion, primary school students are accompanied by other branch teachers such as English teachers and religious culture and moral knowledge teachers in addition to guidance counselors after the second grade. Physical Education and Sports classes have a vital importance on children's personal and moral development as suggested earlier. In this context, if Physical Education specialists instruct children's PE classes as a requirement of a more professional approach. This will help children have a healthier education life and it will also contribute to the development of sports in the country; also, increased weekly hours of Physical Education and Sports classes will provide students with the opportunity to participate in sports activities more frequently.

Conflict of interests

The author has not declared any conflict of interest.

REFERENCES

Akgün İB, İnan M (2010). Evaluation of Teachers' Views on Optional Sports Activities Program at Primary Schools. 9th National Elementary Teacher Education Symposium, 20-22 May, Elazığ. TÜBİTAK, pp. 406-411.

Aarnio M, Winter T, Kujala UM, Kaprio J (1997). Familial aggregation of leisure-time physical activity—a three generation study. Int. J. Sports Med. 18:549-556.

Bandura A (1986). Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.

Bandura A (1994). Self-efficacy. In: V. S. Ramachaudran (Ed.), Encyclopedia of human behavior, New York: Academic Press. (Reprinted in H. Friedman [Ed.], Encyclopedia of mental health. San Diego: Academic Press, 1998) 4:71-81.

Bandura A (1997). Self-efficacy: The exercise of control. New York: W. H. Freeman.

Tabachnick BG, Fidell LS (2013). Using Multivariate Statistics (Sixth Ed.)Pearson, Boston.

Buck MM, Jable JT, Floyd PA (2004). Introduction to Physical Education and Sport: Foundations and Trends. Belmont: Wadsworth-Thomson Learning.

Büyüköztürk Ş (2002). Data Analysis Guidebook for Social Sciences (2). Ankara: Pegem Publishing.

Ceyhan E, Namlu AG (2000). The Validity and Reliability Studies of the Computer Anxiety Scale (CAS). Anadolu University J. Educ. 2:77-93.

Demirhan G, Altay F (2001). Attitude Scale of High School First Graders towards Physical Education and Sport. J. Sport Sci. 12(2):9-20.

Endler G, Christine M, Heike SP, Wolfgang L, Sonja K, Markus Exner, Nelli J, Susanne M, Freja K, Oswald W, Kurt H (2001). Homozygosity for the C→T polymorphism at nucleotide 46 in the 5′ untranslated region of the factor XII gene protects from development of acute coronary syndrome. Bri. J. Haematology. 115(4):1007-1009.

Fidell S, Tabachnick B, Mestre V, Fidell L (2013) Aircraft noise-induced awakenings are more reasonably predicted from relative than from absolute sound exposure levels. The Journal of the Acoustical Society of America.

Franzoi SL (2003). Social Psychology. (Third Ed.). Boston: Mc. Graw Hill.

Göktaş Z, Arıkıran AN Comparison of Expectations of Elementary and Secondary School Students for Physical Education Classes According to their Genders. Balıkesir University J. Soc. Sci. Institute, 17(1):1-11.

Haskell WL (1994). J.B. Wolffe memorial lecture. Health consequences of physical activity: Understanding and challenges regarding dose-response. Med. Sci. Sports Exercise 26:649-660.

Hilland TA, Stratton G, Vinson D, Fairclough S (2009). The physical education predisposition scale: preliminary development and validation. J. Sport Sci. 27(14):1555-1563.

Hillman CH, Castelli DM, Buck SM (2005). Aerobic fitness and neurocognitive function in healthy preadolescent children. Med. Sci. Sports Exercise 37:1967-1974

Huang RY (2007). The effects of teaching styles, learning motivation, and learning strategies on college students' learning satisfaction in table tennis course [Abstract]. Bulletin of Sport and Exercise Psychol. Taiwan, 10:15-36 Abstract retrieved from http:// www.airitilibrary.com

Kağıtçıbaşı Ç (2005). New Person and People. (Tenth Ed.). İstanbul: Evrim Press.

Karataş Z (2014). Advanced Statistical Applications Courses in Social Services: Regression, Correlation, and Factor Analysis. 19.06.2016. Retrieved from.

Myers L, Strikmiller PK, Webber LS, Berenson GS (1996). Physical and sedentary activity in school children grades 5-8: The Boglusa heart study. Med. Sci. Sports Exercise 28:852-859.

Nakip M (2006). Marketing Research: Techniques and Applications with SPSS. Ankara: Seçkin Press

Öncü E, Gürbüz B, Küçük Kılıç S, Keskin N (2015). Psychometric Properties of the Turkish Version of the Physical Education Predisposition Scale. In: İ. Önder (Eds.), ERPA International Health and Sports Science Education Congress (Pp. 179). Athens: ERPA.

Robbins LB, Pender NJ, Ronis DL, Kazanis ASB, Pis MB (2004). Physical Activity, Self-Efficacy, and Perceived Exertion Among Adolescents. Res. Nursing Health, 2004, 27:435-446

Sakallı N (2006). Social Effects. Ankara: İmge Press.

Seçkin A, Başbay M (2013). Investigation of Physical Education and Sport Teacher Candidates' Self Efficacy Beliefs Related to Teaching Profession. International Periodical for the Languages, Literature and History Turk. Turkic 8(8):253-270.

Sibley BA, Etnier JL (2005). The relationship between physical activity and cognition in children: A meta-analysis. Pediatric Exercise Sci. 75:243-256.

Şişko M, Demirhan G (2002). The Attitudes of Male and Female Students from Primary and Secondary Schools towards Physical Education Courses. Hacettepe University J. Educ. 23:205-210.

Tasmektepligil Y, Yılmaz C, İmamoglu O, Kilcigil E (2006). Realization Level of Physical Education Lessons' Purposes in Primary Education Schools. Spormetre J. Physical Educ. Sport Sci. 4(4):139-147.

Tavşancıl E (2002). Measurement of Attitudes and Data Analysis Using SPSS. Ankara: Nobel Press.

Tezbaşaran A (1996). Guidebook to Develop Likert-Type Scale. Ankara: Publication of Turkish Psychological Association.

World Health Organization (WHO) (2000). Obesity: Preventing and managing a global epidemic. Report of WHO consultation. World Health Organization Technical Report Series. 894 A-253.

Yamaner F (2001). Basic Principles of Physical Education and Sport, Bursa: Ekin Publishing.

Yıldırım F, İlhan İÖ (2010). The Validity and Reliability Studies of the Turkish Version of General Self-Efficacy (GSE) Scale. Turk. J. Psychiatry 21(4):301-308.

Zakarian JM, Hovell MF, Hofstetter CR, Sallis JF, Keating KJ (1994). Correlates of vigorous exercise in a predominantly low SES and minority high school population. Preventive Med. 23:314-321.