

## Assessment of Playfulness among the Children Aged 10-14 Years

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**ABSTRACT** The aim of the current study was to investigate the tendency to play games, including physical activities as well as to examine the place of residence and gender variables in terms of the level of playfulness among the secondary school children aged 10-14 years. A total of 894 students who studied at the secondary schools in Cankaya County (230 students), Kecioren County (358 students) and Yenimahalle County (358 students) were included in the study in order to determine the level of playfulness among the secondary school students during the 2013-2014 academic year. In terms of playfulness, the highest score was obtained in "social adaptation", whereas the lowest score was obtained in "game passion". Generally speaking, the "level of playfulness" was at a "good" level. In terms of the gender variable, there were significant differences among the groups in their "levels of playfulness" and the dimensions of "game passion", "social adaptation", "wish to play games", "wish to win" and "taking risk".

### INTRODUCTION

Contemporary research on children's play approaches it as a personality trait. A generally accepted definition of playfulness in young children is an internal predisposition to bring a playful quality to interactions within the environment and across a variety of contexts and episodes (Trevlas et al. 2003).

Playing games are children's real occupation. In games, children not only develop themselves physically, socially and mentally but also know and test themselves, learn their limits and skills. Games are indispensable for children. Games are the opportunities wherein they spend their energy and learn to struggle, to protect their rights, to respect and to love (Hazar 2006). Children love and enjoy play because activities require whole body movements (Boyer 1997; Trevlas et al. 2003). Children ordinarily play freely without inhibitions with only space, available materials and other children as constraints (Lopes et al. 2006). Girls and boys play games together until the age of eight and in the upcoming years after the age of eight, children prefer playmates of the same gender. Whereas boys choose the games that

require strength and courage, girls play calm, quiet and aesthetic games. Play is the focus for the child's behaviors for that reason, and the playfulness quality can be identified and measured (Barnett 1990).

The fact that family and the social environment (place of residence) have an effect upon the growth of the children, and children choose friends of the same gender to play games has brought about the question whether or not gender and the social environment (place of residence) of the children aged 10-14 years cause any difference in their levels of playfulness. The aim of the current study was to investigate the tendency to play games that included physical activities, as well as to examine the social environment (place of residence) and gender variables in terms of level of playfulness among the secondary school children aged 10-14 years. In this sense, answers for the following questions were sought:

1. What was the level of playfulness among the secondary school students?
2. Were there any differences among the students in terms of,
  - a. Inter-group gender variable,

- b. Intra-group gender variable,
- c. The environment where the children resided (place of residence).

from the Kecioren County (358 students), the second biggest number of the participants participated in the study from Yenimahalle County (306 students), and thirdly from Cankaya County (230 students).

## METHODOLOGY

### Research Model

A screening model was used in the study. The screening model is a research approach that aims to describe a situation either as it was before or as it is now (Karasar 2000). Besides, many people are interviewed, which makes the model stronger (Kus 2003).

### Study Group

For the personal information of the study group, a Crosstab, which is one of the descriptive analyses techniques, was designed for "frequency and percentage distributions of multivariate data".

A total of 894 students who studied at the secondary schools in Cankaya County (230 students, 25.7%), Kecioren County (358 students, 40%) and Yenimahalle County (306 students, 34.2%) were included in the study in order to determine the level of playfulness among them during the 2013-2014 academic year (Table 1).

In Table 1, when the participants were examined in terms of gender, it was seen that 50.9 percent of the participants were male (455 students), whereas 49.1 percent were female (439 students). It was noted that the number of the male and female students was similar. When the participants were examined in terms of the counties, the biggest number of the students came

### Data Collection

For the data collection, a scale to determine the level of playfulness designed by Hazar (2014) was employed in order to explore the level of playing physical games among the children aged 10-14 years. In the scale, there were 27 items that addressed personal information such as genders and place of residence and examined the level of playfulness of the children aged 10-14 years.

### Data Analyses and Interpretation

The data obtained from the study was assessed using a computer with SPSS 22.00 packet software. The items of the scale were scored as, "Strongly Agree" (5), "Agree" (4), "Neutral" (3), "Disagree" (2) and "Strongly Disagree" (1). Also, the 9<sup>th</sup>, 18<sup>th</sup>, 21<sup>st</sup> and 24<sup>th</sup> items were reversed. Before the analyses of the data, the Kolmogorov-Smirnov test was employed to find out whether or not the data followed a normal distribution. The result of the test was  $p=0.00$ ; in other words it was  $p < .05$  (Kalayci 2009). Therefore, for the analyses of the data obtained non-parametric statistics were used.

For the analyses of the data, arithmetical means and standard deviations were employed for the level of playfulness. A non-parametric Mann Whitney-U test was employed to describe the binary variables, while the Kruskal-Wallis test was used to describe the relation among multi-

**Table 1: Personal information**

Personal information			Counties			Total
			Çankaya	Keçiören	Yenimahalle	
Gender	Male	<i>f</i>	112	184	159	455
		Gender %	24.6	40.4	34.9	100.0
		County %	48.7	51.4	52.0	50.9
	Female	Total	12.5	20.6	17.8	50.9
		<i>f</i>	118	174	147	439
		Gender %	26.9	39.6	33.5	100.0
Total	Total	County %	51.3	48.6	48.0	49.1
		<i>f</i>	13.2	19.5	16.4	49.1
		Gender %	230	358	306	894
	County %	Gender %	100.0	100.0	100.0	100.0
		County %	25.7	40.0	34.2	100.0

variable, that is, more than two. To determine the source of the difference that was discovered as the result of Kruskal-Wallis test, the Mann Whitney-U test was employed. The following score interval was used to interpret the data. Level of playfulness and score intervals of the sub-factors are given Table 2.

**Table 2: Level of playfulness and score intervals of the sub-factors**

<i>Level of playfulness and sub-factors</i>	<i>Score intervals</i>
Very weak	1.00- 1.79
Weak	1.80- 2.59
Moderate	2.60- 3.39
Good	3.40- 4.19
Very good	4.20- 5.00

## RESULTS

### Level of Playfulness

In Table 3, when the students' playfulness level was investigated, the highest score was obtained in "social adaptation" with  $\bar{X}=4.09$ , whereas the lowest score was obtained in "game passion" with  $\bar{X}=2.97$ . Dimensions of "wish to play game" ( $\bar{X}=3.71$ ) and "wish to win" ( $\bar{X}=3.44$ ) were at good level. The dimension of "taking risk" ( $\bar{X}=3.35$ ) was at moderate level. It was seen that in the playfulness general score, the participants' playfulness level ( $\bar{X}=3.61$ ) was at good level.

### Gender Variable and Playfulness Level

#### Inter-group Playfulness Level

Table 4 presented results of the Mann Whitney-U Test made in order to determine whether

**Table 4: Mann Whitney-U Test in terms of gender variable**

<i>Dimensions/Factors</i>	<i>Gender</i>	<i>n</i>	<i>Mean rank</i>	<i>Rank sum</i>	<i>U</i>	<i>P</i>
Game Passion	Male	455	480.41	218586.50	84898.500	0.00*
	Female	439	413.39	181478.50		
Social Adaptation	Male	455	414.77	188718.50	84978.500	0.00*
	Female	439	481.43	211346.50		
Wish to Play Game	Male	455	491.30	223543.00	79942.000	0.00*
	Female	439	402.10	176522.00		
Wish to Win	Male	455	494.95	225202.50	78282.500	0.00*
	Female	439	398.32	174862.50		
Taking Risk	Male	455	502.58	228676.00	74809.000	0.00*
	Female	439	390.41	171389.00		
Playfulness (General)	Male	455	486.04	221147.50	82337.500	0.00*
	Female	439	407.56	178917.50		

\* p<0.05

**Table 3: Level of playfulness of the secondary school students**

<i>Dimensions/ Factors</i>	<i>n</i>	$\bar{X}$	<i>sd</i>
Game passion	894	2.97	0.79
Social adaptation	894	4.09	0.74
Wish to play game	894	3.71	0.99
Wish to win	894	3.44	0.95
Taking risk	894	3.35	0.97
Playfulness (General)	894	3.61	0.56

or not the students' playfulness level differed significantly in terms of gender.

It was detected that the level of significance of the gender variable of the students aged 10-14 years was at p=0.05 for the "game passion", "social adaptation", "wish to play games", "wish to win" and "taking risk" dimensions. In light of that result, it may be argued that gender was an effective factor upon the tendency to play games with physical activities (playfulness).

According to mean rank, the level of playfulness of male students was higher than female students in "game passion" and "wish to play game", "wish to win", and "taking risk" dimensions, whereas level of playfulness in female students was higher than male students in "social adaptation". Scores of general playfulness in male students was higher than female students.

### Intra-group Playfulness Level

#### Intra-group Playfulness Level of Female Students

Another analysis made in relation with the gender variable investigated intra-group playfulness levels of female students. The Kruskal

Wallis test was performed in order to discover playfulness levels of the female students and the results are demonstrated in Table 5.

According to the intra-group playfulness levels of the female students, it was observed that the level of significance of playfulness significantly differed at  $p=0.05$  in all dimensions except for "taking risk". The Mann Whitney-U test was employed in order to explore which age group caused this difference and the results are presented in Table 6.

In Table 6, it was seen that the female students aged 10-14 years caused the difference. When mean ranks were examined, the score for the female students aged 10 years was 53.15, while score of the female students aged 14 years was 31.63 in "game passion". The score of the female students aged 10 years was 53.30 while score of the female students aged 14 years was 29.63 in "social adaptation". Similarly, in mean ranks, the score of the female students aged 10 years was 50.18 while score of the female students aged 14 years was 34.40 in "wish to play game"; and score of the female students aged 10 years was 48.70

while score of the female students aged 14 years was 35.72 in "wish to win". The findings obtained in all these dimensions were the same as in "playfulness". In mean ranks, score of the female students aged 10 years was 56.25 while score of the female students aged 14 years was 28.74 in "playfulness". These findings indicated that playfulness level of the female students aged 10 years was higher than those aged 14 years.

#### *Intra-group Playfulness Level of Male Students*

Kruskall Wallis test was used in order to discover whether or not any significant difference existed among the male students (intra-group Kruskall Wallis test) and the results were shown in Table 7.

According to the intra-group playfulness levels of the male students, it was observed that no statistical significance existed in "taking risk" and "wish to win" at  $p=0.05$ , whereas it was noted that the level of significance considerably differed at  $p=0.05$  in dimensions of "game passion", "social adaptation", "wish to play game" and

**Table 5: Playfulness levels of the female students in terms of ages**

<i>Dimensions</i>	<i>Ages</i>	<i>n</i>	<i>Mean rank</i>	$\chi^2$	<i>sd</i>	<i>p</i>
<i>Game Passion</i>	10 Year	40	254.05	22.909	4	0.00*
	11 Year	171	232.78			
	12 Year	144	224.59			
	13 Year	41	201.38			
	14 Year	43	139.88			
<i>Social Adaptation</i>	10 Year	40	256.80	40.556	4	0.00*
	11 Year	171	240.14			
	12 Year	144	222.61			
	13 Year	41	205.96			
	14 Year	43	110.33			
<i>Wish to Play Game</i>	10 Year	40	220.65	28.989	4	0.00*
	11 Year	171	242.46			
	12 Year	144	229.36			
	13 Year	41	179.96			
	14 Year	43	136.88			
<i>Wish to Win</i>	10 Year	40	225.93	14.703	4	0.01*
	11 Year	171	230.70			
	12 Year	144	224.85			
	13 Year	41	224.56			
	14 Year	43	151.37			
<i>Taking Risk</i>	10 Year	40	243.83	6.413	4	0.17
	11 Year	171	209.90			
	12 Year	144	232.78			
	13 Year	41	225.15			
	14 Year	43	190.31			
<i>Playfulness (General)</i>	10 Year	40	252.70	45.644	4	0.00*
	11 Year	171	238.12			
	12 Year	144	230.17			
	13 Year	41	201.32			
	14 Year	43	101.27			

\*  $p<0.05$

**Table 6: Mann Whitney-U test Results**

<i>Dimensions/Factors</i>	<i>Gender</i>	<i>n</i>	<i>Mean rank</i>	<i>Rank sum</i>	<i>U</i>	<i>P</i>
<i>Game Passion</i>	10 Year	40	53.15	2126.00	414.000	00
	14 Year	43	31.63	1360.00		
<i>Social Adaptation</i>	10 Year	40	55.30	2212.00	328.000	00
	14 Year	43	29.63	1274.00		
<i>Wish to Play Game</i>	10 Year	40	50.18	2007.00	533.000	00
	14 Year	43	34.40	1479.00		
<i>Wish to Win</i>	10 Year	40	48.70	1948.00	592.000	01
	14 Year	43	35.77	1538.00		
<i>Playfulness (General)</i>	10 Year	40	56.25	2250.00	290.000	00
	14 Year	43	28.74	1236.00		

\* p&lt;0.05

**Table 7: Intra group playfulness levels of the male students in terms of ages**

<i>Dimensions/Factors</i>	<i>Year</i>	<i>n</i>	<i>Mean rank</i>	<i>F<sup>2</sup></i>	<i>sd</i>	<i>p</i>
<i>Game Passion</i>	10 Year	26	259.33	15.814	4	0.00*
	11 Year	171	232.80			
	12 Year	153	241.69			
	13 Year	44	225.35			
	14 Year	61	168.75			
<i>Social Adaptation</i>	10 Year	26	200.58	13.518	4	0.01*
	11 Year	171	249.05			
	12 Year	153	233.25			
	13 Year	44	185.75			
	14 Year	61	197.99			
<i>Wish to Play Game</i>	10 Year	26	290.42	19.251	4	0.00*
	11 Year	171	246.30			
	12 Year	153	224.09			
	13 Year	44	189.55			
	14 Year	61	187.62			
<i>Wish to Win</i>	10 Year	26	229.50	.546	4	0.96
	11 Year	171	225.70			
	12 Year	153	228.10			
	13 Year	44	221.42			
	14 Year	61	238.29			
<i>Taking risk</i>	10 Year	26	209.15	8.454	4	0.08
	11 Year	171	209.15			
	12 Year	153	248.19			
	13 Year	44	244.95			
	14 Year	61	226.02			
<i>Playfulness (General)</i>	10 Year	26	240.52	13.020	4	0.01*
	11 Year	171	237.52			
	12 Year	153	242.45			
	13 Year	44	198.81			
	14 Year	61	180.79			

\* p&lt;0.05

“playfulness”. Mann Whitney-U test was employed in order to explore which age group caused this difference and the results were presented in Table 8.

As the result of the Mann Whitney-U test analyses, the differences were between the male students aged 10-11 and 14 years in “game passion” and “playfulness” and between the male

students aged 11-13 and 14 years in “social adaptation”.

When mean ranks were examined, the score of the male students aged 10 years was 56.56 while score of the male students aged 14 years was 38.65 in “game passion”; and score of the male students aged 11 years was 125.14 while score of the male students aged 14 years was

**Table 8: Mann Whitney-U test Results**

<i>Dimensions/Factors</i>	<i>Year</i>	<i>n</i>	<i>Mean rank</i>	<i>Rank total</i>	<i>U</i>	<i>p</i>
<i>Game Passion</i>	10 Year	26	56.56	1470.50	466.500	0.00
	14 Year	61	38.65	2357.50		
	11 Year	171	125.14	21399.00		
<i>Social Adaptation</i>	14 Year	61	92.28	5629.00	2758.500	0.01
	11 Year	171	113.87	19471.50		
	13 Year	44	85.19	3748.50		
	11 Year	171	123.21	21069.50		
	14 Year	61	97.68	5958.50		
<i>Wish to Play Game</i>	10 Year	26	57.71	1500.50	436.500	0.00
	14 Year	61	38.16	2327.50		
	11 Year	171	124.18	21234.50		
	14 Year	61	94.98	5793.50		
<i>Playfulness (General)</i>	10 Year	26	52.23	1358.00	3902.500	0.01
	14 Year	61	40.49	2470.00		
	11 Year	171	124.27	21250.00		
	14 Year	61	94.72	5778.00		

\* p&lt;0.05

92.28 in “game passion”. As for “social adaptation”, mean rank score of the male students aged 11 years was 113.87 while mean rank score of the male students aged 13 years was 85.19. On the other hand, mean rank score of the male students aged 11 was 123.21 while mean rank score of the male students aged 14 was 97.68 in “social adaptation”. Mean rank score of the male students aged 10 was 57.71 while mean rank score of the male students aged 14 was 38.16 in “wish to play game”, and mean rank score of the male students aged 11 was 124.18 while mean rank score of the

male students aged 14 was 94.98 in “wish to play game”. In the “playfulness” general score, the mean rank score of the male students aged 10 was 52.23 while mean rank score of the male students aged 14 was 40.49 and mean rank score of the male students aged 11 was 124.27 while mean rank score of the male students aged 14 was 94.72.

#### Variable of County and Playfulness Level

Kruskal-Wallis analyses were made in order to discover whether or not playfulness level of

**Table 9: Results of Kruskal-Wallis analyses of playfulness level of the participant students in terms of county variable**

<i>Dimensions/Factors</i>	<i>Country variable</i>	<i>n</i>	<i>Mean rank</i>	<i>sd</i>	$\chi^2$	<i>p</i>
<i>Game Passion</i>	A. Cankaya	230	524.11	2	33.542	0.00*
	B. Kecioren	358	397.93			
	C. Yenimahalle	306	447.92			
<i>Social Adaptation</i>	A. Cankaya	230	503.04	2	16.916	0.00*
	B. Kecioren	358	413.52			
	C. Yenimahalle	306	445.50			
<i>Wish to Play Game</i>	A. Cankaya	230	487.63	2	9.936	0.01*
	B. Kecioren	358	419.47			
	C. Yenimahalle	306	450.13			
<i>Wish to Win</i>	A. Cankaya	230	460.47	2	0.881	0.07*
	B. Kecioren	358	445.81			
	C. Yenimahalle	306	439.73			
<i>Taking Risk</i>	A. Cankaya	230	502.92	2	15.135	0.00*
	B. Kecioren	358	436.54			
	C. Yenimahalle	306	418.66			
<i>Playfulness (General)</i>	A. Cankaya	230	531.39	2	35.220	0.00*
	B. Kecioren	358	403.73			
	C. Yenimahalle	306	435.65			

\* p&lt;0.05



the participant students differed in terms of county variable. The counties were coded as A. Çankaya, B. Keçiören and C. Yenimahalle and were presented in Table 9.

As seen in Table 9, there were significant differences in the playfulness levels of the students at  $p=0.05$  in all the dimensions except “wish to win”. When mean ranks were examined, the mean rank scores for Cankaya County was 524.11 in “game passion”, 503.04 in “social adaptation”, 487.63 in “wish to play game”, 460.47 in “wish to win” and 502.92 in “taking risk”. It was seen that these mean rank scores of the students who studied in Cankaya County were higher than those of the students who studied at Yenimahalle and Kecioren Counties. Mann Whitney-U test was employed in order to understand which age group caused this difference and the results were presented in Table 10.

According to mean ranks, it was found that “playfulness” levels of the students who studied in Cankaya County were higher than those who studied in Kecioren and Yenimahalle Counties, and playfulness levels of the students who studied in Yenimahalle County were higher than those who studied in Kecioren. When Table 10 was analyzed, the cause of difference at  $p=0.05$  resulted from the students who studied in Cankaya County in dimensions of “game passion”, “social adaptation”, “wish to play game”, “taking risk” and in the “playfulness” general score

## DISCUSSION

It was an expected outcome that “playfulness” levels of the students aged 10-14 years were at good level. However, according to the researchers their “social adaptation” was high but “game passion” was low, and this may have resulted from the transition from adolescence to youth. Therefore, as a result of the inter-group analyses made among the female and male students, male students had higher “playfulness” in “game passion”, “wish to play game”, “wish to win” and “taking risk” dimensions while female students had higher “playfulness” in “social adaptation” dimension.

When the same gender was examined in terms of age variable, the intra-group comparisons made for the female students demonstrated no difference in the “taking risk” dimension while the female students aged 10 years had higher scores in “game passion”, “social adaptation” and “wish to play game” dimensions and “playfulness” as compared to those aged 14 years, which the researchers thought may have resulted from becoming an adult caused by the transition period from childhood to maidenhood.

When the same gender was examined in terms of age variable, the intra-group comparisons made for the male students pointed out that there were no differences in “wish to win” and “taking risk” dimensions whereas significant differences were found in “game passion”, “social adap-

**Table 10: Mann Whitney-U Test**

<i>Dimensions/factors</i>	<i>County variable</i>	<i>n</i>	<i>Mean rank</i>	<i>Rank total</i>	<i>U</i>	<i>p</i>
<i>Game Passion</i>	Cankaya	230	295.22	67901.00	29044.000	0.00*
	Kecioren	306	248.42	76015.00		
	Cankaya	230	344.39	79209.50		
	Yenimahalle	358	262.45	93956.50		
<i>Social Adaptation</i>	Cankaya	230	287.86	66208.50	30736.500	0.00*
	Kecioren	306	253.95	77707.50		
	Cankaya	230	330.68	76056.50		
	Yenimahalle	358	271.26	97109.50		
<i>Wish to Play Game</i>	Çankaya	230	281.08	64649.00	32296.000	0.01*
	Kecioren	306	259.04	79267.00		
	Cankaya	230	322.05	74071.00		
	Yenimahalle	358	276.80	99095.00		
<i>Taking Risk</i>	Cankaya	230	296.58	68214.50	28730.500	0.00*
	Kecioren	306	247.39	75701.50		
	Cankaya	230	321.84	74023.00		
	Yenimahalle	358	276.94	99143.00		
<i>Playfulness (General)</i>	Cankaya	230	300.91	69208.50	27736.500	0.00*
	Kecioren	306	244.14	74707.50		
	Cankaya	230	345.98	79575.50		
	Yenimahalle	358	261.43	93590.50		

tation” and “wish to play game” dimensions and “playfulness”. The differences came from the children aged 10 and 11 years in “game passion”, “wish to play game” and “playfulness” as compared with those aged 14 years. It was thought that this finding emerged from the psychology of becoming an adult.

It is known that girls prefer sympathetic, gentle, flexible and elegant games while boys choose games that require strength and courage.

Among other research similar results were obtained. Barnett and Kleiber (1982) indicated that a significant relationship between the playfulness factors and divergent thinking scores exists for females but not for males. Barnett and Fiscella (1985) found that significant sex differences, with boys demonstrating more physical exuberance, active play patterns, teasing and joking during play, and less variety. Barnett (2007) found that playful people were identified by both men and women as possessing the characteristics of being active, adventurous, cheerful, clowning around, energetic, friendly, funny, happy, humorous, impulsive, humorous, outgoing, sociable, spontaneous, and unpredictable.

It was thought that the fact that there were significant differences in “playfulness” and all the dimensions except for “wish to win”, in terms of social environment variable (county) on behalf of those living in Cankaya County was correlated not only with socio-economic structures of the counties but also with family structures.

Other researches have examined the different results obtained. Many researchers found a high correlation between playfulness and creativity and also divergent thinking in children (Cleland 1994; Berretta and Privette 1990; Cristie and Johnson 1983; Barnett and Kleiber 1982; Dansky and Silverman 1975; Lieberman 1965). Playfulness affects children positively because children become physically active, social and imaginative (Singer and Singer 1978; Singer et al. 1980). Trevlas et al. (2003) found that there was a significant correlation between motor fluency and total playfulness and between motor flexibility and total playfulness. Boyer (1997) indicated that providing support for a model of teaching and learning that includes the enhancement of playfulness. Barnett and Fiscella (1985) indicated the gifted children demonstrated higher degrees of physical, social, and cognitive play styles but were equivalent to the non-gifted group in their sense of humor and characteristic

to manifest joy. Proyer (2011) found that a positive relation between playfulness in adults and academic achievement existed.

## CONCLUSION

As a conclusion,

1. In terms of playfulness, the highest score of the students’ aged 10-14 was obtained in “social adaptation” whereas the lowest score was obtained in “game passion”. Generally speaking, the “level of playfulness” was at a “good” level.
2. It was detected that as a result of the inter-group analyses made in terms of the gender variable of the students aged 10-14 years, there were significant differences in “game passion”, “social adaptation”, “wish to play game”, “wish to win” and “taking risk” dimensions and in “playfulness”. Therefore, it may be suggested that gender was an effective factor upon the tendency to play games among the children aged 10-14 years.
3. In terms of inter-group comparisons of the female and male students, male students had higher scores in “playfulness” and the dimensions of “game passion”, “wish to play game”, “wish to win” and “taking risk” whereas female students had higher scores in “social adaptation”.
4. In intra-group comparisons, two different results were obtained, one being among the male students and the other one being among the female students. No difference was seen in “taking risk” in terms of intra-group comparisons made for the female students. Yet, as for the “playfulness” general score and the dimensions of “game passion”, “social adaptation” and “wish to play game”, female students aged 10 years had higher scores than those aged 14 years. Another result came from intra-group comparisons made among the male students. There were no differences in terms of “wish to win” and “taking risk” dimensions among the male students whereas significant differences existed in the “playfulness” general score and dimensions of “game passion”, “social adaptation” and “wish to play game”. The difference resulted from the “playfulness” general score and “game passion”, “wish to play game” and male stu-



dents aged 10-11 years had higher scores as compared to those aged 14 years in terms of level of “playfulness”. In “social adaptation” dimension, male students aged 11 years had higher scores of level of “playfulness” than those aged 13-14.

5. In terms of the place of residence where the children resided, significant differences existed in the “playfulness” general score and in all of the dimensions except for “wish to win”, and the source of the difference came from the students who resided in Çankaya County (place of residence).

### RECOMMENDATIONS

The future studies may examine the correlation between playfulness level and educational level, family structure, family income level, family education level, tendency to do sports and sportive success.

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